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A female Western Toad (*Anaxyrus boreas*) from Garibaldi Provincial Park, British Columbia, Canada. This large bufonid occurs throughout much of Western North America. The IUCN lists it as Near Threatened because it is probably in significant decline (> 30% over 10 years) due to disease. (Photographed by C. Kenneth Dodd).

A Bibliography of the Anurans of the United States and Canada (1734-2012).

Monograph 4.

C. Kenneth Dodd, Jr.

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A BIBLIOGRAPHY OF THE ANURANS OF THE UNITED STATES AND CANADA (1734-2012).

MONOGRAPH 4.

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PREFACE: A SEARCHABLE BIBLIOGRAPHY FOR NORTH AMERICAN ANURANS

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Many of us can recall a time before the age of computers when it was necessary to search for specific herpetological literature by visiting a library and thumbing through many issues of Biological Abstracts, Wildlife Review, and Zoological Record. That was a laborious, time-consuming task with no guarantee of finding all pertinent publications available on a particular topic. Now, with the advent and ease of online search engines, practically any published citation can be found simply by stroking a keyboard. However, older references tend to be difficult to find or retrieve. And, given the numerous composite literature online resources available at your fingertips, the job of obtaining key information by paging through any hard copy resource volume for subject material seems passé. In those previous days, however, printed bibliographies of any kind were considered treasure troves of vital information.

In this special monograph of Herpetological Conservation and Biology (HCB), we are very pleased to publish a true anthology of anuran bibliography for the United States and Canada by Ken Dodd. This remarkable compendium of literature spans over two centuries (1734 – 2012). The HCB Governing Board decided to subject this manuscript to editorial review only rather than send it out for peer review because of the unique nature of this sort of a publication. Multiple editors on the staff of HCB reviewed the manuscript and the Special Publications Editor (SET) and Managing Editor (MLM) checked references for accuracy. Any views expressed in this manuscript are those of the author and do not necessarily reflect those views of the editorial staff or the Journal.

So why publish a bibliography on a particular herpetological subject in Herpetological Conservation and Biology? There are many solid reasons to do this, but the primary one is to make available this valuable resource to our readership. As a downloaded PDF, researchers will be able to use standard search-engine options to gather specific information from it. The PDF of this manuscript is fully searchable by using the PDF search function available in Adobe Reader or Adobe Acrobat, as well as many online web browsers is a feature not available elsewhere. We extend a special thanks to Ken Dodd for selecting HCB as the outlet for this most useful resource.

A BIBLIOGRAPHY OF THE ANURANS OF THE UNITED STATES AND CANADA (1734-2012)

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Abstract.—The literature on frogs in North America is rich and complex, beginning with the illustrations of Seba (1734), Linneaus' (1758) descriptions, the illustrations and short text of Catesby (1771), and continuing to the present. Today, hundreds of papers and notes are published each year on virtually every aspect of anuran biology. During the course of writing *Frogs of the United States and Canada* (Johns Hopkins University Press, 2013), I read thousands of pages of text and included more than 4,500 citations within the Literature Cited. Despite this, most routine papers on distribution and range extensions, anatomy, physiology, cellular biology and genetics, sampling techniques, and herpetoculture were excluded. Many additional papers on the topics covered by the book (i.e., systematics and evolution, life history, parasites, reactions to stressors, conservation biology) were not cited, particularly due to redundancy (i.e., the information had been presented or summarized elsewhere). Naturally some papers were overlooked, and the book only covered the literature through mid-2010, although a few citations were added after this date mostly for taxonomic reasons.

Much information, even that published in obscure sources, is now available through electronic media. Sorting through thousands of citations, however, is tedious. As a result, many potentially important, relevant, or insightful papers may be overlooked. Literature citations are frequently incomplete (admittedly often in the name of reducing publication costs), leaving readers with an inadequate understanding of the scope and history of publications surrounding the topic under consideration. Another problem with publishing in the electronic age is that researchers frequently neglect older literature altogether, or cite older publications incorrectly. In order to assist researchers, I decided to update the Literature Cited section of *Frogs* by expanding its coverage through December 2012, and by including many previously omitted citations. Some of these citations are quite obscure, but reading them may lend insight and perspective to certain fields of study, such as biogeography and conservation biology. The bibliography presented here includes the same topics as those covered in *Frogs*; I will leave it to others to expand the topics to those currently excluded. I also generally avoid gray literature, minor geographic range extensions (see *Herpetological Review* for an extensive listing), individually authored accounts in larger edited works (e.g., Jensen et al. 2008), popular articles and magazines, publications from regional herpetological societies, and species accounts in the *Catalogue of American Amphibians and Reptiles*. A large number of theses and dissertations are included, but by no means all. It seems unlikely that every single citation on the ecology of frogs of the United States and Canada will ever be assembled, but I hope that the bibliography will assist both new graduate students and experienced scientists in awareness of the extent of research on the anuran fauna north of the United States-Mexico border. Finally, note that some publications listed as online first in 2012 may not be published until 2013.

Key Words.—*Amphibia, Anura, bibliography, frogs, toads, herpetology*

-
- Abbott, C.C. 1882. Notes on the habits of the "Savannah Cricket Frog." *American Naturalist* 16:707-711.
- Abbott, C.C. 1884. Recent studies of the Spadefoot Toad. *American Naturalist* 18:1075-1080.
- Abbott, C.C. 1904. One explanation of reported showers of toads. *Proceedings of the American Philosophical Society* 43:163-164.
- AbuBakr, S., and S.S. Crupper. 2010. Prevalence of cadmium resistance in *Staphylococcus sciuri* isolated from the Gray Treefrog, *Hyla chrysoscelis* (Anura: Hylidae). *Phylomedusa* 9:141-146.
- Acker, P.M., K.C. Kruse, and E.B. Krehbiel. 1986. Aging *Bufo americanus* by skeletochronology. *Journal of Herpetology* 20:570-574.
- Ackroyd, J.F., and R.L. Hoffman. 1946. An albinistic specimen of *Pseudacris feriarum*. *Copeia* 1946:257-258.
- Adam, M.D., and M.J. Lacki. 1993. Factors affecting amphibian use of road-rut ponds in Daniel Boone National Forest. *Transactions of the Kentucky Academy of Science* 54:13-16.
- Adama, D., K. Lansley, and M.-A. Beaucher. 2004. Northern Leopard Frog (*Rana pipiens*) recovery: captive rearing and reintroduction in southeast British Columbia, 2003. Columbia Basin Fish and Wildlife Compensation Program, Nelson, British Columbia.
- Adams, C.K., and D. Saenz. 2012. Leaf litter of invasive Chinese Tallow (*Triadica sebifera*) negatively affects hatching success of an aquatic breeding anuran, the Southern Leopard Frog (*Lithobates sphenocephalus*). *Canadian Journal of Zoology* 90: 991-998.

- Adams, M.J. 1993. Summer nests of the Tailed Frog (*Ascaphus truei*) from the Oregon Coast Range. *Northwestern Naturalist* 74:15-18.
- Adams, M.J. 1999. Correlated factors in amphibian decline: exotic species and habitat change in western Washington. *Journal of Wildlife Management* 63:1162-1171.
- Adams, M.J. 2000. Pond permanence and the effects of exotic vertebrates on anurans. *Ecological Applications* 10:559-568.
- Adams, M.J., and S. Claeson. 1998. Field response of tadpoles to conspecific and heterospecifics alarm. *Ethology* 104:955-961.
- Adams, M.J., and R.B. Bury. 2002. The endemic headwater stream amphibians of the American Northwest: associations with environmental gradients in a large forested preserve. *Global Ecology & Biogeography* 11:169-178.
- Adams, M.J., R.B. Bury, and S.A. Swarts. 1998. Amphibians of the Fort Lewis Military Reservation, Washington: sampling techniques and community patterns. *Northwestern Naturalist* 79:12-18.
- Adams, M.J., S.D. West, and L. Kalmbach. 1999. Amphibian and reptile surveys of U.S. Navy lands on the Kitsap and Toandos peninsulas, Washington. *Northwestern Naturalist* 80:1-7.
- Adams, M.J., N.D. Chelgren, D. Reinitz, R.A. Cole, L.J. Rachowicz, S. Galvan, B. McCreary, C.A. Pearl, L.L. Bailey, J. Bettaso, E.L. Bull, and M. Leu. 2010. Using occupancy models to understand the distribution of an amphibian pathogen, *Batrachochytrium dendrobatidis*. *Ecological Applications* 20:289-302.
- Adams, S.B., and C.A. Frissell. 2001. Thermal habitat use and evidence of seasonal migration by Rocky Mountain Tailed Frogs, *Ascaphus montanus*, in Montana. *Canadian Field-Naturalist* 115:251-256.
- Adams, S.B., D.A. Schmetterling, and M.K. Young. 2005. Instream movements by Boreal Toads (*Bufo boreas boreas*). *Herpetological Review* 36:27-33.
- Adamson, M.L. 1981a. Development and transmission of *Gyrinicola batrachiensis* (Walton, 1929) (Pharyngodonidae: Oxyuroidea). *Canadian Journal of Zoology* 59:1351-1367.
- Adamson, M.L. 1981b. Seasonal changes in populations of *Gyrinicola batrachiensis* (Walton, 1929) in wild tadpoles. *Canadian Journal of Zoology* 59:1377-1386.
- Adamson, M.L. 1981c. *Gyrinicola batrachiensis* (Walton, 1929) n. comb. (Oxyuroidea; Nematoda) from tadpoles in eastern and central Canada. *Canadian Journal of Zoology* 59:1344-1350.
- Ade, C.M., M.D. Boone, and H.J. Puglis. 2010. Effects of an insecticide and potential predators on Green Frogs and Northern Cricket Frogs. *Journal of Herpetology* 44:591-600.
- Adkins-Giese, C.L. 2012. Protecting rare amphibians under the U.S. Endangered Species Act. *Froglog* (102):21-23.
- Adolph, E.F. 1931a. Body size as a factor in the metamorphosis of tadpoles. *Biological Bulletin* 61:376-386.
- Adolph, E.F. 1931b. The size of the body and the size of the environment in the growth of tadpoles. *Biological Bulletin* 61:350-375.
- AFCC. 1936. A future in frogs. *American Frog Canning Company*, New Orleans.
- Agassiz, L. 1850. Lake Superior: its physical character, vegetation, and animals, compared with those of other and similar regions. With a narrative of the tour by J. Elliot Cabot and contributions by other scientific gentlemen. Part 7. Description of some new species of reptiles from the region of Lake Superior. Gould, Kendall and Lincoln, Boston, 378-382 + plate 6.
- Aitchison, S.W., and D.S. Tomko. 1974. Amphibians and reptiles of Flagstaff, Arizona. *Plateau* 47:18-25.
- Akers, E.C. 1997. Effects of predators and water color on growth, shape, and coloration of the tadpoles of *Hyla chrysoscelis* (Anura: Hylidae). M.S. thesis, Mississippi State University, Mississippi State.
- Akers, E.C., C.M. Taylor, and R. Altig. 2008. Effects of clay-associated organic material on the growth of *Hyla chrysoscelis* tadpoles. *Journal of Herpetology* 42:408-410.
- Akin, G.C. 1966. Self-inhibition of growth in *Rana pipiens* tadpoles. *Physiological Zoology* 39:341-356.
- Alexander, D.G. 1966. An ecological study of the Swamp Cricket Frog, *Pseudacris nigrita feriarum* (Baird), with comparative notes on two other hylids of the Chapel Hill, North Carolina, region. Ph.D. diss., University of North Carolina, Chapel Hill.
- Alexander, L.G., J.H.K. Pechmann and P.J. DeVries. 2012. Effects of salinity on early life stages of the Gulf Coast Toad, *Incilius nebulifer* (Anura: Bufonidae). *Copeia* 2012:106-114.

Herpetological Conservation and Biology

- Alexander, T.R. 1965. Observations on the feeding behavior of *Bufo marinus* (Linne). *Herpetologica* 20:255-259.
- Alford, R.A. 1985. Effects of parentage on competitive ability and vulnerability to predation in *Hyla chrysoscelis* tadpoles. *Oecologia* 68:199-204.
- Alford, R.A. 1986. Habitat use and positional behavior of anuran larvae in a northern Florida temporary pond. *Copeia* 1986:408-423.
- Alford, R.A. 1989a. Variation in predator phenology affects predator performance and prey community composition. *Ecology* 70:206-219.
- Alford, R.A. 1989b. Competition between larval *Rana palustris* and *Bufo americanus* is not affected by variation in reproductive phenology. *Copeia* 1989:993-1000.
- Alford, R.A., and M.L. Crump. 1982. Habitat partitioning among size classes of larval Southern Leopard Frogs, *Rana utricularia*. *Copeia* 1982:367-373.
- Alford, R.A., and H.W. Wilbur. 1985. Priority effects in experimental pond communities: competition between *Bufo* and *Rana*. *Ecology* 66:1097-1105.
- Ali, M.F., K.R. Lips, F.C. Knoop, B. Fritzsch, C. Miller, and J.M. Conlon. 2002. Antimicrobial peptides and protease inhibitors in the skin Secretions of the Crawfish frog, *Rana areolata*. *Biochimica et Biophysica Acta—Proteins and Proteomics* 1601:55-63.
- Allaback, M.L., D.M. Laabs, D.S. Keegan, and J.D. Harwayne. 2010. *Rana draytonii* (California Red-legged Frog). Dispersal. *Herpetological Review* 41:204-206.
- Allan, D.M. 1973. Some relationships of vocalization to behavior in the Pacific Treefrog, *Hyla regilla*. *Herpetologica* 29:366-371.
- Allan, S.J., and A.M. Simmons. 1994. Temporal features mediating call recognition in the Green Treefrog, *Hyla cinerea*: amplitude modulation. *Animal Behaviour* 47:1073-1086.
- Allard, H.A. 1908. *Bufo fowleri* (Putnam) in northern Georgia. *Science* 28:655-656.
- Allen, A.C. 1963. The amphibia of Wayne County, Ohio. *Journal of the Ohio Herpetological Society* 4:23-30.
- Allen, J.A. 1868. Catalogue of the reptiles and batrachians found in the vicinity of Springfield, Massachusetts, with notices of all other species known to inhabit the state. *Proceedings of the Boston Society of Natural History* 12:3-38.
- Allen, E.R. 1938. Notes on Wright's Bullfrog, *Rana heckscheri* (Wright). *Copeia* 1938:50.
- Allen, E.R. 1941. The value of toads. *All-Pets Magazine*. [reprinted by The Florida Reptile Institute, Silver Springs, FL]
- Allen, E.R., and W.T. Neill. 1953. The treefrog, *Hyla septentrionalis*, in Florida. *Copeia* 1953:127-128.
- Allen, M.J. 1932. A survey of the amphibians and reptiles of Harrison County, Mississippi. *American Museum Novitates* 542:1-20.
- Allen, W.R. 1932. Further comment on the activity of the spade-foot toad. *Copeia* 1932:104.
- Allran, J.W., and W.H. Karasov. 2001. Effects of atrazine on embryos, larvae, and adults of anuran amphibians. *Environmental Toxicology and Chemistry* 20:769-775.
- Altig, R. 1970. A key to the tadpoles of the continental United States and Canada. *Herpetologica* 26:180-207.
- Altig, R. 1972a. Notes on the larvae and premetamorphic tadpoles of four *Hyla* and three *Rana* with notes on tadpole color patterns. *Journal of the Elisha Mitchell Scientific Society* 88:113-119.
- Altig, R.A. 1972b. Defensive behavior in *Rana areolata* and *Hyla avivoca*. *Quarterly Journal of the Florida Academy of Sciences* 35:212-216.
- Altig, R., and E.D. Brodie Jr. 1968. Albinistic and cyanistic frogs from Oregon. *Wasmann Journal of Biology* 26:241-242.
- Altig, R., and E.D. Brodie Jr. 1972. Laboratory behavior of *Ascaphus truei* tadpoles. *Journal of Herpetology* 6:21-24.
- Altig, R., and M.T. Christensen. 1981. Behavioral characteristics of the tadpoles of *Rana heckscheri*. *Journal of Herpetology* 15:151-154.
- Altig, R., and C.K. Dodd, Jr. 1987. The status of the Amargosa Toad (*Bufo nelsoni*) in the Amargosa River drainage of Nevada. *Southwestern Naturalist* 32:276-278.
- Altig, R., and R.W. McDiarmid. 1999. Body plan. Development and morphology. Pp. 24-51 *In* R.W. McDiarmid and R.G. Altig (eds.), *Tadpoles. The Biology of Anuran Larvae*. University of Chicago Press, Chicago.
- Alvarez, J.A. 2011. *Bufo boreas* (Western Toad). Davian behavior. *Herpetological Review* 42:408-409.
- Amburgey, S., W.C. Funk, M. Murphy and E.

- Muths. 2012. Effects of hydroperiod duration on survival, developmental rate, and size at metamorphosis in Boreal Chorus Frog tadpoles (*Pseudacris maculata*). *Herpetologica* 68:456-467.
- Andersen, M.L. 1973. Thermal relations in *Acris crepitans*. M.A. thesis, University of Kansas, Lawrence.
- Anderson, A.L., and W.D. Brown. 2009. Plasticity of hatching in Green Frogs (*Rana clamitans*) to both egg and tadpole predators. *Herpetologica* 65:207-213.
- Anderson, A.M., D.A. Haukos, and J.T. Anderson. 1999. Habitat use by anurans emerging and breeding in playa wetlands. *Wildlife Society Bulletin* 27:759-769.
- Anderson, A.R., and J.W. Petranka. 2003. Odonate predator does not affect hatching time or morphology of embryos of two amphibians. *Journal of Herpetology* 37:65-71.
- Anderson, G.A., S.C. Schell, and I. Pratt. 1965. The life cycle of *Bunoderella metteri* (Allocreadidae: Bunoderinae), a trematode parasite of *Ascaphus truei*. *Journal of Parasitology* 51:579-582.
- Anderson, J.D., K.A. Hawthorne, J.M. Galandak, and M.J. Ryan. 1978. A report on the status of the endangered reptiles and amphibians of New Jersey. *Bulletin of the New Jersey Academy of Science* 23:26-33.
- Anderson, J.L., and B.W. Buttrey. 1962. Enteric protozoa of four species of frogs from the Lake Itasca region of Minnesota. *Proceedings of the South Dakota Academy of Science* 41:73-82.
- Anderson, K., and P.E. Moler. 1986. Natural hybrids of the Pine Barrens Treefrog, *Hyla andersonii* with *H. cinerea* and *H. femoralis* (Anura: Hylidae): morphological and chromosomal evidence. *Copeia* 1986:70-76.
- Anderson, L.R., and J.A. Arruda. 2006. Land use and anuran biodiversity in southeast Kansas, USA. *Amphibian and Reptile Conservation* 4:46-59.
- Anderson, M.T., J.M. Kiesecker, D.P. Chivers and A.R. Blaustein. 2001. The direct and indirect effects of temperature on a predator-prey relationship. *Canadian Journal of Zoology* 79: 1834-1841.
- Anderson, P.K. 1942. Amphibians and reptiles of Jackson County, Missouri. *Bulletin of the Chicago Academy of Science* 6:203-220.
- Anderson, P.K. 1951. Albinism in tadpoles of *Microhyla carolinensis*. *Herpetologica* 7:56.
- Anderson, P.K. 1954. Studies in the ecology of the narrow-mouthed toad, *Microhyla carolinensis carolinensis*. *Tulane Studies in Zoology* 2:15-46.
- Anderson, P.K., E.A. Liner, and R.E. Etheridge. 1952. Notes on amphibian and reptile populations in a Louisiana pineland area. *Ecology* 33:274-278.
- Anderson, R.C., and G.F. Bennett. 1963. Ophthalmic myiasis in amphibians in Algonquin Park, Ontario, Canada. *Canadian Journal of Zoology* 41:1169-1170.
- Andrews, J.S. 2001. *The Atlas of the Reptiles and Amphibians of Vermont*. Privately Published, Middlebury, VT.
- Andrews, K.D., R.L. Lampley, M.A. Gillman, D.T. Corey, S.R. Ballard, M.J. Blasczyk, and W.G. Dyer. 1992. Helminths of *Rana catesbeiana* in southern Illinois with a checklist of helminths in Bullfrogs of North America. *Transactions of the Illinois State Academy of Sciences* 85:147-172.
- Angermann, J.E., G.M. Fellers, and F. Matsumura. 2002. Polychlorinated biphenyls and toxaphene in Pacific Tree Frog tadpoles (*Hyla regilla*) from the California Sierra Nevada, USA. *Environmental Toxicology and Chemistry* 21:2209-2215.
- Anholt, B.R., D.K. Skelly, and E.E. Werner. 1996. Factors modifying antipredator behavior in larval toads. *Herpetologica* 52:301-313.
- Anholt, B.R., E. Werner, and D.K. Skelly. 2000. Effect of food and predators on the activity of four larval ranid frogs. *Ecology* 81:3509-3521.
- ANLFRT (Alberta Northern Leopard Frog Recovery Team). 2005. Alberta Northern Leopard Frog Recovery Plan, 2005-2010. Alberta Sustainable Resource Development, Fish and Wildlife Division, Alberta Species at Risk Recovery Plan No. 7, Edmonton.
- Anonymous. 1892. Bullfrogs for market. *The Evening Star*, Washington, DC [2 January].
- Anonymous. 1899. Miss Seldon's frog farm. *The Evening Star*, Washington, DC [4 February].
- Anonymous. 1907. Frogs. Okoboji Protective Association Bulletin 3:5.
- Anonymous. 1918. The batrachians of Rhode Island. Part 2. Toads and frogs. Roger Williams Park, Park Museum Bulletin 10(4):93-96.
- Anonymous. 2007. Rare blue frog discovered at Corkscrew Swamp Sanctuary. *Florida Naturalist* (Spring):11.
- Anzalone, C.R., L.B. Kats, and M.S. Gordon. 1998. Effects of solar UV-B radiation on embryonic development in *Hyla cadaverina*,

- Hyla regilla*, and *Taricha torosa*. Conservation Biology 12:646-653.
- Applegate, R.D. 1990. *Rana catesbeiana*, *Rana palustris* (Bullfrog, Pickerel Frog). Predation. Herpetological Review 21:90-91.
- Aresco, M.J. 1996. Geographic variation in the morphology and lateral stripe of the Green Treefrog (*Hyla cinerea*) in the southeastern United States. American Midland Naturalist 135:293-298.
- Aresco, M.J. 2004. River frog *Rana heckscheri* (Wright). Pp. 17-18 In R.E. Mirarchi, M.A. Bailey, T.M. Haggerty, and T.L. Best (eds.), Alabama Wildlife. Vol. 3. Imperiled Amphibians, Reptiles, Birds, and Mammals. University of Alabama Press, Tuscaloosa.
- Arndt, R.G. 1977. A blue variant of the Green Frog, *Rana clamitans melanota* (Amphibia, Anura, Ranidae) from Delaware. Journal of Herpetology 11:102-103.
- Arnold, H.L. 1968. Poisonous Plants of Hawaii. Tong Publishing, Honolulu.
- Arnold, S.J., and R.J. Wassersug. 1978. Differential predation on metamorphic anurans by garter snakes (*Thamnophis*): social behavior as a possible defense. Ecology 59:1014-1022.
- Aronson, L.R. 1943a. The sexual behavior of Anura. 5. Oviposition in the Green Frog, *Rana clamitans*, and the bull frog, *Rana catesbeiana*. American Museum Novitates 1224:1-6.
- Aronson, L.R. 1943b. The sexual behavior of anura. 4. Oviposition in the Mink Frog, *Rana septentrionalis* Baird. American Midland Naturalist 29:242-244.
- Aronson, L.R. 1944. The sexual behavior of Anura. 6. The mating pattern of *Bufo americanus*, *Bufo fowleri*, and *Bufo terrestris*. American Museum Novitates 1250:1-15.
- Asay, M.J., P.G. Harowicz, and L. Su. 2005. Chemically mediated mate recognition in the Tailed Frog (*Ascaphus truei*). Chemical Signals in Vertebrates 10:24-31.
- Ashley, E.P., and J.T. Robinson. 1996. Road mortality of amphibians, reptiles and other wildlife on the Long Point causeway, Lake Erie, Ontario. Canadian Field-Naturalist 110:403-412.
- Ashton, A.D., and F.C. Rabalais. 1978. Helminth parasites of some anurans of northwestern Ohio. Proceedings of the Helminthological Society of Washington 45:141-142.
- Ashton, D.T. 2002. A comparison of abundance and assemblage of lotic amphibians in late-seral and second-growth redwood forests in Humboldt County, California. M.A. thesis, Humboldt State University, Arcata, CA.
- Ashton, D.T., S.B. Marks, and H.H. Welsh Jr. 2006. Evidence of continued effects from timber harvesting on lotic amphibians in redwood forests of northwestern California. Forest Ecology and Management 221:183-193.
- Ashton, K.G., and A.C.S. Knipps. 2011. Effects of fire history on amphibian and reptile assemblages in rosemary scrub. Journal of Herpetology 45:497-503.
- Ashton, R.E. Jr., and P.S. Ashton. 1988. Handbook of Reptiles and Amphibians of Florida. Part 3. The Amphibians. Windward Publishing, Inc., Miami.
- Ashton, R.E. Jr., S.I. Guttman, and P. Buckley. 1973. Notes on the distribution, coloration, and breeding of the Hudson Bay Toad, *Bufo americanus copei* (Yarrow and Henshaw). Journal of Herpetology 7:17-20.
- Asquith, A. 1986. Implications of variation in the mating call of the Green Treefrog, *Hyla cinerea*. M.S. thesis, Mississippi State University, Mississippi State, MS.
- Atlas, M. 1935. The effect of temperature on the development of *Rana pipiens*. Physiological Zoology 8:290-310.
- Atwood, M.A. 2011. Effects of basal resources on the food web of temporary freshwater pools: implications for amphibians and restoration efforts. M.S. thesis, State University of New York, Syracuse, NY.
- Aubry, K.B., and P.A. Hall. 1991. Terrestrial amphibian communities in the southern Washington Cascade Range. Pp. 327-340 In L.F. Ruggiero, K.B. Aubry, A.B. Carey, and M.H. Huff (coordinators). Wildlife and Vegetation of Unmanaged Douglas-fir Forests. USDA Forest Service General Technical Report PNW-GTR-285, Portland, OR.
- Auburn, J.S., and D.H. Taylor. 1979. Polarized light perception and orientation in larval Bullfrogs *Rana catesbeiana*. Animal Behaviour 27:658-668.
- Auffenberg, W. 1956. Remarks on some Miocene anurans from Florida, with a description of a new species of *Hyla*. Breviora (52):1-11.
- Ault, K.K., J.E. Johnson, H.C. Pinkart, and R.S. Wagner. 2012. Genetic comparison of watermolds from embryos of amphibians *Rana cascadae*, *Bufo boreas* and *Pseudacris regilla*.

- Diseases of Aquatic Organisms 99:127-137.
- Austin, D.F. 1973. Range expansion of the Cuban Tree Frog in Florida. *Florida Naturalist* 46:28.
- Austin, D.F., and A. Schwartz. 1975. Another exotic amphibian in Florida, *Eleutherodactylus coqui*. *Copeia* 1975:188.
- Austin, J.D., and K.R. Zamudio. 2008. Incongruence in the pattern and timing of intra-specific diversification in Bronze Frogs and Bullfrogs (Ranidae). *Molecular Phylogenetics and Evolution* 48:1041-1053.
- Austin, J.D., S.C. Lougheed, L. Niedrauer, A.A. Chek, and P.T. Boag. 2002. Cryptic lineages in a small frog: the post-glacial history of the Spring Peeper, *Pseudacris crucifer* (Anura: Hylidae). *Molecular Phylogenetics and Evolution* 25:316-329.
- Austin, J.D., S.C. Lougheed, P.E. Moler, and P.T. Boag. 2003a. Phylogenetics, zoogeography, and the role of dispersal and vicariance in the evolution of the *Rana catesbeiana* (Anura: Ranidae) species group. *Biological Journal of the Linnean Society* 80:601-624.
- Austin, J.D., J.A. Dávila, S.C. Lougheed, and P.T. Boag. 2003b. Genetic evidence for female-biased dispersal in the Bullfrog, *Rana catesbeiana* (Ranidae). *Molecular Ecology* 12:3165-3172.
- Austin, J.D., S.C. Lougheed, and P.T. Boag. 2004a. Discordant temporal and geographic patterns in maternal lineages of eastern North American frogs, *Rana catesbeiana* (Ranidae) and *Pseudacris crucifer* (Hylidae). *Molecular Phylogenetics and Evolution* 32:799-816.
- Austin, J.D., S.C. Lougheed, and P.T. Boag. 2004b. Controlling for the effects of history and nonequilibrium conditions in gene flow estimates in Northern Bullfrog (*Rana catesbeiana*) populations. *Genetics* 168:1491-1506.
- Austin, J.D., T.A. Gorman, and D. Bishop. 2011. Assessing fine-scale genetic structure and relatedness in the micro-endemic Florida Bog Frog. *Conservation Genetics* 12:833-838.
- Awan, A.R., and G.R. Smith. 2007a. The effect of group size on the responses of Wood Frog tadpoles to fish. *American Midland Naturalist* 158:79-84.
- Awan, A.R., and G.R. Smith. 2007b. The effect of group size on the activity of leopard (*Rana pipiens*) tadpoles. *Journal of Freshwater Ecology* 22:355-357.
- Awbrey, F.T. 1963. Homing and home range in *Bufo valliceps*. *Texas Journal of Science* 15:127-141.
- Awbrey, F.T. 1965. An experimental investigation of the effectiveness of anuran mating calls as isolating mechanisms. Ph.D. diss., University of Texas, Austin.
- Awbrey, F.T. 1972. "Mating call" of a *Bufo boreas* male. *Copeia* 1972:579-581.
- Awbrey, F.T. 1978. Social interaction among chorusing Pacific Tree Frogs, *Hyla regilla*. *Copeia* 1978:208-214.
- Axtell, C.B. 1976. Comparisons of morphology, lactate dehydrogenase, and distribution of *Rana blairi* and *Rana utricularia* in Illinois and Missouri. *Transactions of the Illinois State Academy of Science* 69:37-48.
- Axtell, R.W. 1958. Female reaction to the male call in two anurans (Amphibia). *Southwestern Naturalist* 3:70-76.
- Axtell, R.W., and N. Haskell. 1977. An interhalial population of *Pseudacris streckeri* from Illinois, with an assessment of its postglacial dispersion history. *Natural History Miscellanea* (202):1-8.
- Babbitt, K.J., and G.W. Tanner. 1997. Effects of cover and predator identity on predation of *Hyla squirella* tadpoles. *Journal of Herpetology* 31:128-130.
- Babbitt, K.J., and G.W. Tanner. 1998. Effects of cover and predator size on survival and development of *Rana utricularia* tadpoles. *Oecologia* 114:258-262.
- Babbitt, K.J., and G.W. Tanner. 2000. Use of temporary wetlands by anurans in a hydrologically modified landscape. *Wetlands* 20:313-322.
- Babbitt, K.J., M.J. Baber, and T.L. Tarr. 2003. Patterns of larval amphibian distribution along a wetland hydroperiod gradient. *Canadian Journal of Zoology* 81:1539-1552.
- Babbitt, K.J., M.J. Baber, and G.W. Tanner. 2005. The impact of agriculture on temporary wetland amphibians in Florida. Pp. 48-55 In W.E. Meshaka Jr. and K.J. Babbitt (eds.), *Amphibians and Reptiles. Status and Conservation in Florida*. Krieger Publishing, Malabar, FL.
- Babbitt, K.J., M.J. Baber, and L.A. Brandt. 2006. The effect of woodland proximity and wetland characteristics on larval anuran assemblages in an agricultural landscape. *Canadian Journal of Zoology* 84:510-519.
- Babbitt, L.H. 1937. The amphibia of Connecticut. *Connecticut State Geological and*

- Natural History Survey Bulletin No. 57.
- Baber, M.J. 2001. Understanding anuran community structure in temporary wetlands: the interaction and importance of landscape and biotic processes. Ph.D. diss., Florida International University, Miami.
- Baber, M.J., and K.J. Babbitt. 2003. The relative impacts of native and introduced predatory fish on a temporary wetland tadpole assemblage. *Oecologia* 136:289-295.
- Baber, M.J., and K.J. Babbitt. 2004. Influence of habitat complexity on predator-prey interactions between the fish (*Gambusia holbrooki*) and tadpoles of *Hyla squirella* and *Gastrophryne carolinensis*. *Copeia* 2004:173-177.
- Baber, M.J., E. Fleishman, K.J. Babbitt, and T.L. Tarr. 2004. The relationship between wetland hydroperiod and nestedness patterns in assemblages of larval amphibians and predatory macroinvertebrates. *Oikos* 107:16-27.
- Baber, M.J., K.J. Babbitt, F. Jordan, H.L. Jelks, and W.M. Kitchens. 2005. Relationships among habitat type, hydrology, predator composition, and distribution of larval anurans in the Florida Everglades. Pp. 154-160 In W.E. Meshaka Jr. and K.J. Babbitt (eds.), *Amphibians and Reptiles. Status and Conservation in Florida*. Krieger Publishing, Malabar, FL.
- Bachmann, K. 1969. Temperature adaptations of amphibian embryos. *American Naturalist* 103:115-130.
- Backus, R.H. 1954. Notes on the frogs and toads of Labrador. *Copeia* 1954:226-227.
- Bacon, E.J., and Z.M. Anderson. 1976. Distributional records of amphibians and reptiles from Coastal Plain of Arkansas. *Proceedings of the Arkansas Academy of Science* 30:14-15.
- Bagdonas, K.R., and D. Pettus. 1976. Genetic compatibility in wood frogs (Amphibia, Anura, Ranidae). *Journal of Herpetology* 10:105-112.
- Bagnara, J.T., and J.S. Frost. 1977. Leopard frog supply. *Science* 197:106-107.
- Bahlman, A. 2010. Variation in six local populations of the Western Toad (*Anaxyrus boreas*) in the Great Basin: A common garden experiment. M.S. thesis, University of Nevada, Reno.
- Bailey, M.A. 1989. Migration of *Rana areolata sevosa* and associated winter-breeding amphibians at a temporary pond in the lower coastal plain of Alabama. M.S. thesis, Auburn University, Auburn, AL.
- Bailey, M.A. 1990. Movement of the Dusky Gopher Frog (*Rana areolata sevosa*) at a temporary pond in the lower Coastal Plain of Alabama. Pp. 27-43 In C.K. Dodd Jr., R.E. Ashton Jr., R. Franz, and E. Wester (eds.), Burrow Associates of the Gopher Tortoise. Proceedings of the 8th Annual Meeting, Gopher Tortoise Council, Gainesville, FL.
- Bailey, M.A. 1991. The Dusky Gopher Frog in Alabama. *Journal of the Alabama Academy of Science* 62:28-34.
- Bailey, M.A., and D.B. Means. 2004. Gopher Frog *Rana capito* Leconte and Mississippi Gopher Frog *Rana sevosa* Goin and Netting. Pp. 15-17 In R.E. Mirarchi, M.A. Bailey, T.M. Haggerty, and T.L. Best (eds.), *Alabama Wildlife. Vol. 3. Imperiled Amphibians, Reptiles, Birds, and Mammals*. University of Alabama Press, Tuscaloosa.
- Bailey, M.A., J.N. Holmes, K.A. Buhlmann, and J.C. Mitchell. 2006. Habitat Management Guidelines for Amphibians and Reptiles of the Southeastern United States. Partners in Amphibian and Reptile Conservation, Technical Publication HMG-2, Montgomery, AL.
- Bailey, R.M. 1943. Four species new to the Iowa herpetofauna, with notes on their natural histories. *Proceedings of the Iowa Academy of Science* 50:347-352.
- Bailey, R. M. 1944a. Iowa's Frogs and Toads. Part 1. *Iowa Conservationist* 3(3):17-20.
- Bailey, R. M. 1944b. Iowa's Frogs and Toads. Part 2. *Iowa Conservationist* 3(4):25, 27-30.
- Bailey, R. M. and M. K. Bailey. 1941. The distribution of Iowa toads. *Iowa State College Journal of Science* 15:169-177.
- Bailey, V. 1933. Cave life of Kentucky. *American Midland Naturalist* 14:385-635.
- Baird, S.F. 1854. Descriptions of new genera and species of North American frogs. *Proceedings of the Academy of Natural Sciences of Philadelphia* 7:59-62.
- Baird, S.F. 1859. Reptiles of the boundary, with notes by the naturalists of the survey. Pp. 1-35 In *United States and Mexican Boundary Survey*, under the order of Lieut. Col. W.H. Emory. U.S. Government Printing Office, Washington, DC.
- Baird, S.F., and C. Girard. 1852. Descriptions on new species of reptiles, collected by the U.S. Exploring Expedition under the command of

- Capt. Charles Wilkes, U.S.N. Part 1.including the species from the west coast of North America. Proceedings of the Academy of Natural Sciences of Philadelphia 6:174-177.
- Baird, S.F., and C.H. Girard. 1853. Descriptions of new species of reptiles collected by the U.S. Exploring Expedition under the command of Capt. Charles Wilkes, U.S.N. 2nd part. Proceedings of the Academy of Natural Sciences of Philadelphia 6:378-379.
- Baker, B.J., and J.M.L. Richardson. 2006. The effect of artificial light on male breeding-season behaviour in Green Frogs, *Rana clamitans melanota*. Canadian Journal of Zoology 84: 1528-1532.
- Baker, M.R. 1977. Redescription of *Oswaldocruzia pipiens* (Nematoda: Trichostrongylidae) from amphibians of eastern North America. Canadian Journal of Zoology 55:104-109.
- Baker, M.R. 1978a. Morphology and taxonomy of *Rhabdias* sp. (Nematoda: Rhabdiasidae) from reptiles and amphibians of southern Ontario. Canadian Journal of Zoology 56:2127-2141.
- Baker, M.R. 1978b. Transmission of *Cosmocercoides dukae* (Nematoda: Cosmocercoidea) to amphibians. Journal of Parasitology 64:765-766.
- Baker, M.R. 1978c. Development and transmission of *Oswaldocruzia pipiens* Walton, 1929 (Nematoda: Trichostrongylidae) in amphibians. Canadian Journal of Zoology 56:1026-1031.
- Baker, M.R. 1979a. The free-living and parasitic development of *Rhabdias* sp. (Nematoda: Rhabdiassidae) in amphibians. Canadian Journal of Zoology 57:161-178.
- Baker, M.R. 1979b. Seasonal population changes in *Rhabdias ranae* Walton, 1929 (Nematoda: Rhabdiasidae) in *Rana sylvatica* of Ontario. Canadian Journal of Zoology 57:179-183.
- Baker, M.R. 1987. Synopsis of the Nematoda parasitic in amphibians and reptiles. Memorial University of Newfoundland Occasional Papers in Biology No. 11.
- Baker, R.H. 1942. The bullfrog, a Texas wildlife resource. Texas Game, Fish and Oyster Commission, Bulletin No. 23.
- Balas, C.J. 2008. The effects of conservation programs on amphibians of the Prairie Pothole Region's glaciated plain. M.S. thesis, Humboldt State University, Arcata, CA.
- Baldwin, R.F., and P.G. deMaynadier. 2009. Assessing threats to pool-breeding amphibian habitat in an urbanizing landscape. Biological Conservation 142:1628-1638.
- Baldwin, R.F., A.J.K. Calhoun, and P.G. deMaynadier. 2006a. Conservation planning for amphibian species with complex habitat requirements: a case study using movements and habitat selection of the Wood Frog *Rana sylvatica*. Journal of Herpetology 40:442-453.
- Baldwin, R.F., A.J.K. Calhoun and P.G. deMaynadier. 2006b. The significance of hydroperiod and stand maturity for pool-breeding amphibians in forested landscapes. Canadian Journal of Zoology 84: 1604-1615.
- Baldwin, R.F., P.G. deMaynadier, and A.J.K. Calhoun. 2007. *Rana sylvatica* (Wood Frog). Predation. Herpetological Review 38:194-195.
- Ball, R.W., and D.L. Jameson. 1966. Premating isolating mechanisms in sympatric and allopatric *Hyla regilla* and *Hyla californiae*. Evolution 20:533-551.
- Ball, R.W., and D.L. Jameson. 1970. Biosystematics of the Canyon Tree Frog *Hyla cadaverina* Cope (= *Hyla californiae* Gorman). Proceedings of the California Academy of Science 37:363-380.
- Ball, S.C. 1936. The distribution and behavior of the spadefoot toad in Connecticut. Transactions of the Connecticut Academy of Arts and Science 32:351-379.
- Ballinger, R.E., and C.O. McKinney. 1966. Developmental temperature tolerance of certain anuran species. Journal of Experimental Zoology 161:21-28.
- Ballinger, R.E., J.D. Lynch and P.H. Cole. 1979. Distribution and natural history of amphibians and reptiles in western Nebraska with ecological notes on the herptiles of Arapaho Prairie. Prairie Naturalist 11:65-74.
- Ballinger, R.E., J.W. Meeker, and M. Thies. 2000. A checklist and distribution maps of the amphibians and reptiles of South Dakota. Transactions of the Nebraska Academy of Sciences 26:29-46.
- Ballinger, R.E., J.D. Lynch, and G.R. Smith. 2010. Amphibians and Reptiles of Nebraska. Rusty Lizard Press, Oro Valley, AZ.
- Bancroft, B.A., N.J. Baker and A.R. Blaustein. 2007. A meta-analysis of the effects of ultraviolet B radiation and its synergistic interactions with pH, contaminants, and disease on amphibian survival. Conservation Biology 22: 987-996.

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- Bancroft, B.A., N.J. Baker, C.L. Searle, T.S. Garcia, and A.R. Blaustein. 2008. Larval amphibians seek warm temperatures and do not avoid harmful UVB radiation. *Behavioral Ecology* 19:879-886.
- Bancroft, B.A., B.A. Han, C.L. Searle, L.M. Biga, D.H. Olson, L.B. Kats, J.J. Lawler and A.R. Blaustein. 2011. Species-level correlates of susceptibility to the pathogenic amphibian fungus *Batrachochytrium dendrobatidis* in the United States. *Biodiversity and Conservation* 20: 1911-1920.
- Bancroft, G.T., J.S. Godley, D.T. Gross, N.N. Rojas, D.A. Sutphen, and R.W. McDiarmid. 1983. The herpetofauna of Lake Conway: species accounts. U.S. Army Corps of Engineers Aquatic Plant Control Research Program, Miscellaneous Paper A-83-5.
- Bank, M.S., J. Crocker, B. Connery, and A. Amirbahman. 2007. Mercury bioaccumulation in Green Frog (*Rana clamitans*) and Bullfrog (*Rana catesbeiana*) tadpoles from Acadia National Park, Maine, USA. *Environmental Toxicology and Chemistry* 26:118-125.
- Banta, A.M. 1914. Sex recognition and the mating behavior of the Wood Frog, *Rana sylvatica*. *Biological Bulletin* 26:171-183.
- Banta, B.H. 1961. On the occurrence of *Hyla regilla* in the lower Colorado River, Clark County, Nevada. *Herpetologica* 17:106-108.
- Banta, B.H. 1962. A preliminary account of the herpetofauna of the Saline Valley Hydrographic Basin, Inyo County, California. *Wasmann Journal of Biology* 20:161 – 251.
- Banta, B.H. 1974. Death-feigning in *Hyla regilla* on Santa Cruz Island, Santa Barbara County, California. *Bulletin of the Maryland Herpetological Society* 10:88.
- Banta, B.H., and D. Morafka. 1966. An annotated check list of the recent amphibians and reptiles inhabiting the city and county of San Francisco, California. *Wasmann Journal of Biology* 24:223-236.
- Banta, B.H., and G. Carl. 1967. Death-feigning behavior in the Eastern Gray Treefrog *Hyla versicolor versicolor*. *Herpetologica* 23:317-318.
- Barbeau, T.R., and H.B. Lillywhite. 2005. Body wiping behaviors associated with cutaneous lipids in hylid tree frogs of Florida. *Journal of Experimental Biology* 208:2147-2156.
- Barber, P.H. 1999. Phylogeography of the Canyon Treefrog, *Hyla arenicolor* (Cope) based on mitochondrial DNA sequence data. *Molecular Ecology* 8:547-562.
- Barbour, R.W. 1953. The amphibians of Big Black Mountain, Harlan County, Kentucky. *Copeia* 1953:84-89.
- Barbour, R.W. 1956a. *Pseudacris brachyphona* in Tennessee. *Copeia* 1956:54.
- Barbour, R.W. 1956b. The salientia of Kentucky: Identification and distribution. *Transactions of the Kentucky Academy of Science* 17:81-86.
- Barbour, R.W. 1957. Observations on the Mountain Chorus Frog, *Pseudacris brachyphona* (Cope) in Kentucky. *American Midland Naturalist* 57:125-128.
- Barbour, R.W. 1971. *Amphibians & Reptiles of Kentucky*. University Press of Kentucky, Lexington.
- Barbour, R.W., and E.P. Walters. 1941. Notes on the breeding habits of *Pseudacris brachyphona*. *Copeia* 1941:116.
- Barbour, T. 1910. *Eleutherodactylus ricordii* in Florida. *Proceedings of the Biological Society of Washington* 23:100.
- Barbour, T. 1931. Another introduced frog in North America. *Copeia* 1931:140.
- Barr, T.C. Jr. 1953. Notes on the occurrence of ranid frogs in caves. *Copeia* 1953:60-61.
- Barrett, K., C. Guyer, and D. Watson. 2010. Water from urban streams slows growth and speeds metamorphosis in Fowler's Toad (*Bufo fowleri*) larvae. *Journal of Herpetology* 44:297-300.
- Barron, M.G., and K.B. Woodburn. 1995. Ecotoxicology of chlorpyrifos. *Reviews of Environmental Contamination and Toxicology* 144:1-93.
- Barry, D.S., T.K. Pauley, and J.C. Maerz. 2008. Amphibian use of man-made pools on clear-cuts in the Allegheny Mountains of West Virginia, USA. *Applied Herpetology* 5:121-128.
- Barta, J.R., and S.S. Desser. 1984. Blood parasites of amphibians from Algonquin Park, Ontario. *Journal of Wildlife Diseases* 20:180-189.
- Bartareau, T.M. 2004. PVC pipe diameter influences the species and sizes of treefrogs captured in a Florida coastal scrub community. *Herpetological Review* 35:150-152.
- Bartelt, P.E. 1998. *Bufo boreas* (Western Toad). Mortality. *Herpetological Review* 29:96.
- Bartelt, P.E. 2000. A biophysical analysis of habitat selection in Western Toads (*Bufo boreas*) in southwestern Idaho. Ph.D. diss., Idaho State University, Pocatello.

- Bartelt, P.E., and C.R. Peterson. 2005. Physically modeling operative temperatures and evaporative rates in amphibians. *Journal of Thermal Biology* 30:93-102.
- Bartelt, P.E., C.R. Peterson, and R.W. Klaver. 2004. Sexual differences in the post-breeding movements and habitats selected by Western Toads (*Bufo boreas*) in southeastern Idaho. *Herpetologica* 60:455-467.
- Bartlett, R.D., and P.P. Bartlett. 1999. A Field Guide to Florida Reptiles and Amphibians. Gulf Publishing Company, Houston.
- Bartlett-Healy, K., W. Crans, and R. Gaugler. 2008. Phonotaxis to amphibian vocalizations in *Culex territans* (Diptera: Culicidae). *Annals of the Entomological Society of America* 101:95-103.
- Bartram, W. 1791. Travels through North and South Carolina, Georgia, East and West Florida, the Cherokee Country, the Extensive Territories of the Muscogulges, or Creek Confederation, and the Country of the Chactaws. James and Johnson, Philadelphia.
- Basey, H.E. 1976. Discovering Sierra Reptiles and Amphibians. Yosemite Association, Yosemite National Park, California. [3rd printing in 1991 with different cover]
- Bastien, H., and R. Leclair, Jr. 1992. Aging Wood Frogs (*Rana sylvatica*) by skeletochronology. *Journal of Herpetology* 26:222-225.
- Baud, D.R., and M.L. Beck. 2005. Interactive effects of UV-B and copper on Spring Peeper tadpoles (*Pseudacris crucifer*). *Southeastern Naturalist* 4:15-22.
- Bauer Dial, C.A., and N.A. Dial. 1995. Lethal effects of the consumption of field levels of paraquat-contaminated plants on frog tadpoles. *Bulletin of Environmental Contamination and Toxicology* 55:870-877.
- Baughman, B., and B.D. Todd. 2007. The role of substrate cues in habitat selection by juvenile *Bufo terrestris* and *Scaphiopus holbrookii*. *Journal of Herpetology* 41:154-157.
- Baxley, D., and C. Qualls. 2009. Habitat associations of reptile and amphibian communities in longleaf pine habitats of south Mississippi. *Herpetological Conservation and Biology* 4:295-305.
- Baxter, G.T. 1952. Notes on growth and the reproductive cycle of the leopard frog, *Rana pipiens* Schreber, in southern Wyoming. *Journal of the Colorado-Wyoming Academy of Science* 4:91.
- Baxter, G.T., and M.D. Stone. 1985. *Amphibians and Reptiles of Wyoming*. 2nd ed. Wyoming Game and Fish Department, Cheyenne. [first edition, 1980]
- Baxter, G.T., M.R. Stromberg, and C.K. Dodd Jr. 1982. The status of the Wyoming Toad (*Bufo hemiophrys baxteri*). *Environmental Conservation* 9:348, 338.
- Bayless, L.E. 1966. Comparative ecology of two sympatric species of *Acris* (Anura; Hylidae) with emphasis on interspecific competition. Ph.D. diss., Tulane University, New Orleans.
- Bayless, L.E. 1969a. Post-metamorphic growth of *Acris crepitans*. *American Midland Naturalist* 81:590-592.
- Bayless, L.E. 1969b. Ecological divergence and distribution of sympatric *Acris* populations (Anura: Hylidae). *Herpetologica* 25:181-187.
- Bayne, K.A. 2004. The natural history and morphology of the Eastern Cricket Frog, *Acris crepitans crepitans*, in West Virginia. M.S. thesis, Marshall University, Huntington, West Virginia, USA.
- Bazazi, S., K. S. Pfennig , N. O. Handegard, and I. D. Couzin. 2012. Vortex formation and foraging in polyphenic spadefoot toad tadpoles. *Behavioral Ecology and Sociobiology* 66:879-889.
- Beane, J.C. 1990. *Rana palustris* (Pickerel Frog). Predation. *Herpetological Review* 21:59.
- Beane, J.C. 1998. Status of the river frog, *Rana heckscheri* (Anura: Ranidae), in North Carolina. *Brimleyana* 25:69-79.
- Beane, J.C., and L.T. Pusser. 2005. *Bufo terrestris* (Southern Toad). Diet and scavenging. *Herpetological Review* 36:432.
- Beane, J.C., T.J. Thorp, and D.A. Jackan. 1998. *Heterodon simus* (Southern Hognose Snake). Diet. *Herpetological Review* 29:44-45.
- Beane, J.C., A.L. Braswell, J.C. Mitchell, W.M. Palmer, and J.R. Harrison III. 2010. *Amphibians & Reptiles of the Carolinas and Virginia*. University of North Carolina Press, Chapel Hill. [first edition with different authorship in 1980]
- Beard, K.H. 2007. Diet of the invasive frog, *Eleutherodactylus coqui*, in Hawaii. *Copeia* 2007:281-291.
- Beard, K.H., and E.M. O'Neill. 2005. Infection of an invasive frog *Eleutherodactylus coqui* by the chytrid fungus *Batrachochytrium dendrobatidis* in Hawaii. *Biological Conservation* 126:591-595.
- Beard, K.H., and W.C. Pitt. 2005. Potential

- consequences of the Coqui Frog invasion in Hawaii. *Diversity and Distributions* 11:427-433.
- Beard, K.H., and W.C. Pitt. 2006. Potential predators of an invasive frog (*Eleutherodactylus coqui*) in Hawaiian forests. *Journal of Tropical Ecology* 22:345-347.
- Beard, K.H., R. Al-Chokhachy, N.C. Tuttle and E. M. O'Neill. 2008. Population density and growth rates of *Eleutherodactylus coqui* in Hawaii. *Journal of Herpetology* 42:626-636.
- Beard, K.H., E. A. Price and W. C. Pitt. 2009. Biology and impacts of Pacific island invasive species. 5. *Eleutherodactylus coqui*, the Coqui Frog (Anura: Leptodactylidae). *Pacific Science* 63:297-316.
- Beard, K.H., C.A. Olson and W.C. Pitt. 2012. Biology and impacts of Pacific island invasive species: 8. *Eleutherodactylus planirostris*, the Greenhouse Frog (Anura: Eleutherodactylidae). *Pacific Science* 66:255-270.
- Bergstrom, T. M. 2010. A natural history study of *Bufo a. americanus*, the Eastern American Toad, and the phenology of spring breeders in southwest West Virginia. M.S. thesis, Marshall University, Huntington, WV.
- Beasley, V.R., S.A. Faeh, B. Wikoff, C. Staehle, J. Eisold, D. Nichols, R. Cole, A.M. Schotthoefer, M. Greenwell, and L.E. Brown. 2005. Risk factors and declines in Northern Cricket Frogs (*Acris crepitans*). Pp. 75-86 In M.J. Lannoo (ed.), *Amphibian Declines. The Conservation Status of United States Species*. University of California Press, Berkeley.
- Beauclerc, K.B., B. Johnson, and B.N. White. 2010. Distinctiveness of declining northern populations of Blanchard's Cricket Frog (*Acris blanchardi*) justifies recovery efforts. *Canadian Journal of Zoology* 88:553-566.
- Beaudry, F. 2007. *Rana sylvatica* (Wood Frog). Predation. *Herpetological Review* 38:195.
- Beauregard, N., and R. Leclair Jr. 1988. Multivariate analysis of the summer habitat structure of *Rana pipiens* Schreber, in Lac Saint Pierre (Québec, Canada). Pp. 129-143 In R.C. Szaro, K.E. Severson, and D.R. Patton (technical coordinators), *Management of Amphibians, Reptiles, and Small Mammals in North America. Proceedings of a Symposium*. USDA Forest Service, General Technical Report RM-166.
- Bechtel, H.B. 1995. *Reptile and Amphibian Variants. Colors, Patterns, and Scales*. Krieger Publishing, Malabar, FL.
- Beck, C.W., and J.D. Congdon. 1999. Effects of individual variation in age and size at metamorphosis on growth and survivorship of Southern Toads (*Bufo terrestris*) metamorphs. *Canadian Journal of Zoology* 77:944-951.
- Beck, C.W., and J.D. Congdon. 2000. Effects of age and size at metamorphosis on performance and metabolic rates of Southern Toad, *Bufo terrestris*, metamorphs. *Functional Ecology* 14:32-38.
- Beck, W.M. Jr. 1948. An ecological study of the cold-blooded vertebrates of a north Florida lake. M.S. thesis, University of Florida, Gainesville.
- Becker, C.G., C.R. Fonseca, C.F.B. Haddad, R.F. Batista, and P.I. Prado. 2007. Habitat split and the global decline of amphibians. *Science* 318:1775-1777.
- Becker, S.N. 2009. Hanging out with the cool frogs: do operative and body temperatures explain population response to disease? M.S. thesis, Southern Illinois University, Carbondale, IL.
- Bee, M.A. 2001. Habituation and sensitization of aggression in Bullfrogs (*Rana catesbeiana*): testing the dual-process theory of habituation. *Journal of Comparative Psychology* 115:307-316.
- Bee, M.A. 2002. Territorial male Bullfrogs (*Rana catesbeiana*) do not assess fighting ability based on size-related variation in acoustic signals. *Behavioral Ecology* 13:109-124.
- Bee, M.A. 2003. Experience-based plasticity of acoustically evoked aggression in a territorial frog. *Journal of Comparative Physiology* 189A:485-496.
- Bee, M.A. 2004. Within-individual variation in Bullfrog vocalizations: implications for an acoustically mediated social recognition system. *Journal of the Acoustical Society of America* 116: 3770-3781.
- Bee, M.A. 2007a. Sound source segregation in grey treefrogs: spatial release from masking by the sound of a chorus. *Animal Behaviour* 74:549-558.
- Bee, M.A. 2007b. Selective phonotaxis by male Wood Frogs (*Rana sylvatica*) to the sound of a chorus. *Behavioral Ecology and Sociobiology* 61:955-966.
- Bee, M.A. 2008a. Parallel female preferences for call duration in a diploid ancestor of an allotetraploid treefrog. *Animal Behaviour*

- 76:845-853.
- Bee, M.A. 2008b. Finding a mate at a cocktail party: spatial release from masking improves acoustic mate recognition in Grey Treefrogs. *Animal Behaviour* 75:1781-1791.
- Bee, M.A. 2010. Spectral preferences and the role of spatial coherence in simultaneous integration in Gray Treefrogs (*Hyla chrysoscelis*). *Journal of Comparative Psychology* 124:412-424.
- Bee, M.A., and S.A. Perrill. 1996. Responses to conspecific advertisement calls in the Green Frog (*Rana clamitans*) and their role in male-male communication. *Behaviour* 133:283-301.
- Bee, M.A., and T.R. Schachtman. 2000. Is habituation a mechanism of neighbor recognition in Green Frogs? *Behavioral Ecology and Sociobiology* 48:165-168.
- Bee, M.A., and H.C. Gerhardt. 2001a. Neighbour-stranger discrimination by territorial male Bullfrogs (*Rana catesbeiana*). 1. Acoustic basis. *Animal Behaviour* 62:1129-1140.
- Bee, M.A., and H.C. Gerhardt. 2001b. Neighbour-stranger discrimination by territorial male Bullfrogs (*Rana catesbeiana*). 2. Perceptual basis. *Animal Behaviour* 62:1141-1150.
- Bee, M.A., and H.C. Gerhardt. 2001c. Habituation as a mechanism of reduced aggression between adjacently territorial male Bullfrogs (*Rana catesbeiana*). *Journal of Comparative Psychology* 115:68-82.
- Bee, M.A., and A.C. Bowling. 2002. Socially-mediated pitch alteration by territorial male Bullfrogs, *Rana catesbeiana*. *Journal of Herpetology* 36:140-143.
- Bee, M.A., and H.C. Gerhardt. 2002. Individual voice recognition in a territorial frog (*Rana catesbeiana*). *Proceedings of the Royal Society, London* 269B:1443-1448.
- Bee, M.A., and E.M. Swanson. 2007. Auditory masking of anuran advertisement calls by road traffic noise. *Animal Behaviour* 74:1765-1776.
- Bee, M.A., and K.K. Riemersma. 2008. Does common spatial origin promote the auditory grouping of temporally separated signal elements in Grey Treefrogs? *Animal Behaviour* 76:831-843.
- Bee, M.A., and J.J. Schwartz. 2009. Behavioral measures of signal recognition thresholds in frogs in presence and absence of chorus-shaped noise. *Journal of the Acoustical Society of America* 126:2788-2801.
- Bee, M.A., S.A. Perrill, and P.C. Owen. 1999. Size assessment in simulated territorial encounters between male Green Frogs (*Rana clamitans*). *Behavioral Ecology and Sociobiology* 45:177-184.
- Bee, M.A., S.A. Perrill, and P.C. Owen. 2000. Male green frogs lower the pitch of acoustic signals in defense of territories: a possible dishonest signal of size? *Behavioral Ecology* 11:169-177.
- Bee, M.A., C.E. Kozich, K.J. Blackwell, and H.C. Gerhardt. 2001. Individually distinct advertisement calls of territorial male Green Frogs, *Rana clamitans*: implications for individual discrimination. *Ethology* 107: 65-84.
- Bee, M.A., J.M. Cook, E.K. Love, L.R. O'Bryan, B.A. Pettitt, K. Schrode and A. Vélez. 2010. Assessing acoustic signal variability and the potential for sexual selection and social recognition in Boreal Chorus Frogs (*Pseudacris maculata*). *Ethology* 116: 564-576.
- Bee, M.A., A. Vélez, and J.D. Forester. 2012. Sound level discrimination by Gray Treefrogs in the presence and absence of chorus-shaped noise. *Journal of the Acoustical Society of America* 131:4188-4195.
- Behle, W.H., and R.J. Erwin. 1962. The Green Frog (*Rana clamitans*) established at West Ogden, Weber County, Utah. *Utah Academy of Sciences, Arts, and Letters Proceedings* 39:74-76.
- Behler, J.L., and F.W. King. 1979. The Audubon Society Field Guide to North American Reptiles and Amphibians. Alfred A. Knopf, New York.
- Beiswenger, R.E. 1975. Structure and function in aggregations of tadpoles of the American toad, *Bufo americanus*. *Herpetologica* 31:222-233.
- Beiswenger, R.E. 1977. Diel patterns of aggregative behavior in tadpoles of *Bufo americanus*, in relation to light and temperature. *Ecology* 58:98-108.
- Beiswenger, R.E. 1981. Predation by Grey Jays on aggregating tadpoles of the Boreal Toad (*Bufo boreas*). *Copeia* 1981:274-276.
- Beiswenger, R.E. 1986. An endangered species, the Wyoming Toad *Bufo hemiophrys baxteri*—the importance of an early warning system. *Biological Conservation* 37:59-71.
- Belden, J.B., S.T. McMurry, L.M. Smith, and P. Reilley. 2010. Acute toxicity of fungicide

- formulations to amphibians at environmental relevant concentrations. Environmental Toxicology and Chemistry 29:2477-2480.
- Belden, L.K. 2006. Impact of eutrophication on Wood Frog, *Rana sylvatica*, tadpoles infected with *Echinostoma trivolis* cercariae. Canadian Journal of Zoology 84:1315-1321.
- Belden, L.K., and J.M. Wojdak. 2011. The combined influence of trematode parasites and predatory salamanders on Wood Frog (*Rana sylvatica*) tadpoles. Oecologia 166:1077-1086.
- Belden, L.K., E.L. Wildy, A.C. Hatch, and A.R. Blaustein. 2000. Juvenile Western Toads, *Bufo boreas*, avoid chemical cues of snakes fed juvenile, but not larval, conspecifics. Animal Behaviour 59:871-875.
- Belden, L.K., I.T. Moore, R.T. Mason, J.C. Wingfield, and A.R. Blaustein. 2003. Survival, the hormonal stress response and UV-B avoidance in Cascades Frog tadpoles (*Rana cascadae*) exposed to UV-B radiation. Functional Ecology 17:409-416.
- Belden, L.K., I.T. Moore, J.C. Wingfield and A.R. Blaustein. 2005. Corticosterone and growth in Pacific treefrog (*Hyla regilla*) tadpoles. Copeia 2005:424-430.
- Bellis, E.D. 1953. The effects of temperature on the breeding calls of some Oklahoma salientians. M.S. thesis, University of Oklahoma, Norman.
- Bellis, E.D. 1957a. An ecological study of the Wood Frog *Rana sylvatica* LeConte. Ph.D. diss., University of Minnesota, Minneapolis.
- Bellis, E.D. 1957b. The effects of temperature on salientian breeding calls. Copeia 1957:85-89.
- Bellis, E.D. 1961. Growth of the Wood Frog, *Rana sylvatica*. Copeia 1961:74-77.
- Bellis, E.D. 1962a. The influence of humidity on Wood Frog activity. American Midland Naturalist 68:139-148.
- Bellis, E.D. 1962b. Cover value and escape habits of the Wood Frog in a Minnesota bog. Herpetologica 17:228-231.
- Bellis, E.D. 1965. Home range and movements of the Wood Frog in a northern bog. Ecology 46:89-98.
- Beltz, E. 2007. Scientific and common names of the reptiles and amphibians of North America explained.
<http://ebeltz.net/herps/etymain.html>.
- Benard, M.F. 2007. Predators and mates: conflicting selection on the size of male Pacific Treefrogs (*Pseudacris regilla*). Journal of Herpetology 41:317-320.
- Benard, M.F., and J.M. Maher. 2011. Consequences on intraspecific niche variation: phenotypic similarity increases competition among recently metamorphosed frogs. Oecologia 166:585-592.
- Bennett, D.W. 2008. Amphibian responses to forest management practices in southwestern Georgia. M.S. thesis, University of Florida, Gainesville.
- Bennett, L. 2003. The miracle of the toads. Alberta Naturalist 33:72-73.
- Bennett, R.S., E.E. Klaas, J.R. Coats, M.A. Mayse, and E.J. Kolbe. 1983. Fenvalerate residues in nontarget organisms from treated cotton fields. Bulletin of Environmental Contamination and Toxicology 31:61-65.
- Bennett, S.H., J.W. Gibbons, and J. Glanville. 1980. Terrestrial activity, abundance and diversity of amphibians in differently managed forest types. American Midland Naturalist 103:412-416.
- Bergeron, C.M., C.M. Bodinof, J.M. Unrine and W.A. Hopkins. 2010a. Mercury accumulation along a contamination gradient and nondestructive indices of exposure in amphibians. Environmental Toxicology and Chemistry 29: 980-988.
- Bergeron, C.M., C.M. Bodinof, J.M. Unrine and W.A. Hopkins. 2010b. Bioaccumulation and maternal transfer of mercury and selenium in amphibians. Environmental Toxicology and Chemistry 29: 989-997.
- Bergeron, C.M., W.A. Hopkins, B.D. Todd, M.J. Hepner and J.M. Unrine. 2011a. Interactive effects of maternal and dietary mercury exposure have latent and lethal consequences for amphibian larvae. Environmental Science and Technology 45:3781-3787.
- Bergeron, C. M., W.A. Hopkins, C.M. Bodinof, S.A. Budischak, H. Wada and J.M. Unrine. 2011b. Counterbalancing effects of maternal mercury exposure during different stages of early ontogeny. Science of the Total Environment: 409:4746-4752.
- Beringer, J., and T.R. Johnson. 1995. *Rana catesbeiana* (Bullfrog). Diet. Herpetological Review 26:98.
- Bernal, X., and S.R. Ron. 2004. *Leptodactylus fragilis* (White-lipped Foamfrog). Courtship. Herpetological Review 35:372-373.
- Berns, M.W. 1966. Some genetic and histochemical aspects of the variant blue frog in the genus *Rana*. M.S. thesis, Cornell

- University, Ithaca, NY.
- Berns, M.W., and L.D. Uhler. 1966. Blue frogs of the genus *Rana*. *Herpetologica* 22:181-183.
- Berns, M.W., and K.S. Narayan. 1970. An histochemical and ultrastructural analysis of the dermal chromatophores of the variant ranid blue frog. *Journal of Morphology* 132:169-180.
- Berrill, M., S. Bertram, A. Wilson, S. Louis, and D. Brigham. 1993. Lethal and sublethal impacts of pyrethroid insecticides on amphibian embryos and tadpoles. *Environmental Toxicology and Chemistry* 12:525-539.
- Berrill, M., S. Bertram, L. McGillivray, M. Kolohon, and B. Pauli. 1994. Effects of low concentrations of forest use pesticides on frog embryos and tadpoles. *Environmental Toxicology and Chemistry* 13:657-664.
- Berrill, M., S. Bertram, and B. Pauli. 1997. Effects of pesticides on amphibian embryos and larvae. SSAR Herpetological Conservation 1:233-245.
- Berrill, M., D. Coulson, L. McGillivray, and B. Pauli. 1998. Toxicity of endosulfan to aquatic stages of anuran amphibians. *Environmental Toxicology and Chemistry* 17:1738-1744.
- Bertram, S., and M. Berrill. 1997. Fluctuations in a northern population of gray treefrogs, *Hyla versicolor*. SSAR Herpetological Conservation 1:57-63.
- Berven, K.A. 1981. Mate choice in the wood frog, *Rana sylvatica*. *Evolution* 35:707-722.
- Berven, K.A. 1982a. The genetic basis of altitudinal variation in the wood frog, *Rana sylvatica*. 1. An experimental analysis of life history traits. *Evolution* 36:962-983.
- Berven, K.A. 1982b. The genetic basis of altitudinal variation in the wood frog, *Rana sylvatica*. 2. An experimental analysis of larval development. *Oecologia* 52:360-369.
- Berven, K.A. 1988. Factors affecting variation in reproductive traits within a population of wood frogs (*Rana sylvatica*). *Copeia* 1988:605-615.
- Berven, K.A. 1990. Factors affecting population fluctuations in larval and adult stages of the wood frog (*Rana sylvatica*). *Ecology* 71:1599-1608.
- Berven, K.A. 1995. Population regulation in the wood frog, *Rana sylvatica*, from three diverse geographic locations. *Australian Journal of Ecology* 20:385-392.
- Berven, K.A. 2009. Density dependence in the terrestrial stage of wood frogs: evidence from a 21-year population study. *Copeia* 2009:328-338.
- Berven, K.A., and B.G. Chadra. 1988. The relationship among egg size, density and food level on larval development in the wood frog (*Rana sylvatica*). *Oecologia* 75:67-72.
- Berven, K.A., and T.A. Grudzien. 1990. Dispersal in the wood frog (*Rana sylvatica*): implications for genetic population structure. *Evolution* 44:2047-2056.
- Berven, K.A., and R.S. Boltz. 2001. Interactive effects of leech (*Desserobdella picta*) infection on wood frog (*Rana sylvatica*) tadpole fitness traits. *Copeia* 2001:907-915.
- Berven, K.A., D.E. Gill, and S.J. Smith-Gill. 1979. Countergradient selection in the green frog, *Rana clamitans*. *Evolution* 33:609-623.
- Bervier, C.R., K. Larson, K. Reilly, and S. Tat. 2004. Vocal repertoire and calling activity of the mink frog, *Rana septentrionalis*. *Amphibia-Reptilia* 25:255-264.
- Bervier, C.R., D.C. Tierney, L.E. Henderson, and H.E. Reid. 2006. Chorus attendance and site fidelity in the mink frog, *Rana septentrionalis*: are males territorial? *Journal of Herpetology* 40:160-164.
- Bettaso, J., A. Haggerty and E. Russell. 2008. *Rana boylii* (Foothill Yellow-legged Frog). Necrogamy. *Herpetological Review* 39:462.
- Bettaso, J., J. Carlson, B. Fahey and M. Thomas. 2011. *Rana boylii* (Foothill Yellow-legged Frog) and *Anaxyrus boreas* (Western Toad). Interspecific amplexus. *Herpetological Review* 42:589.
- Beyer, G.E. 1900a. Louisiana herpetology. Proceedings of the Louisiana Society of Naturalists for 1897-99. Appendix 1, pp. 25-33.
- Beyer, G.E. 1900b. A check-list of the batrachians and reptiles of Louisiana. Proceedings of the Louisiana Society of Naturalists for 1897-99. Appendix 1, pp. 33-46.
- Bezy, K.B., R.L. Bezy, K. Bolles, and E.F. Enderson. 2004. Breeding behavior of the western chorus frog (*Pseudacris triseriata* complex) in Arizona: do chorus frogs call in the snow on the Colorado Plateau? *Sonoran Herpetologist* 17:82-85.
- Bezy, R.L., W.C. Sherbrooke, and C.H. Lowe. 1966. Rediscovery of *Eleutherodactylus augusti* in Arizona. *Herpetologica* 22:221-225.

Herpetological Conservation and Biology

- Bider, J.R., and K.A. Morrison. 1981. Changes in toad (*Bufo americanus*) responses to abiotic factors at the northern limit of their distribution. *American Midland Naturalist* 106:293-304.
- Bider, J.R., and S. Matte. 1996. The Atlas of Amphibians and Reptiles of Québec. St. Lawrence Valley Natural History Society and the Ministère de l'Environnement et de la Faune Direction de la faune et des habitats Québec, Sainte-Anne-de-Bellevue, Québec.
- Biesterfeldt, J.M., J.W. Petranka, and S. Sherbondy. 1993. Prevalence of chemical interference competition in natural populations of wood frogs, *Rana sylvatica*. *Copeia* 1993:688-695.
- Biklé, A. 1985. Amphibians of the Landels-Hill Big Creek Reserve. Environmental Field Program, University of California-Santa Cruz, Special Paper No. 4.
- Bimber, D.L., and R.A. Mitchell. 1978. Effects of diquat on amphibian embryo development. *Ohio Journal of Science* 78:50-51.
- Binckley, C.A., and W.J. Resetarits, Jr. 2002. Reproductive divisions under threat of predation: squirrel treefrog (*Hyla squirella*) responses to banded sunfish (*Enneacanthus obesus*). *Oecologia* 130:157-161.
- Birchfield, G.L. 2002. Green frog (*Rana clamitans*) movement behavior and terrestrial habitat use in fragmented landscapes in central Missouri. Ph.D. diss., University of Missouri, Columbia.
- Birchfield, G.L., and J.E. Deters. 2005. Movement paths of displaced Northern Green Frogs (*Rana clamitans melanota*). *Southeastern Naturalist* 4:63-76.
- Birdsall, C.W., C.E. Grue, and A. Anderson. 1986. Lead concentrations in Bullfrog *Rana catesbeiana* and Green Frog *R. clamitans* tadpoles inhabiting highway drainages. *Environmental Pollution (Series A)* 40:233-247.
- Birge, W.J. 1978. Aquatic toxicology of trace elements of coal and fly ash. Pp. 219-240 In J.H. Thorp and G.W. Gibbons (eds.), Energy and Environmental Stress in Aquatic Systems, U.S. Department of Energy Symposium Series No. 48.
- Birge, W.J., and J.J. Just. 1973. Sensitivity of vertebrate embryos to heavy metals as a criterion of water quality. Water Resources Research Institute, University of Kentucky, Research Report 61.
- Birge, W.J., J.A. Black, and A.G. Westerman. 1979. Evaluation of aquatic pollutants using fish and amphibian eggs as bioassay organisms. Pp. 108-118 In Animals as Monitors of Environmental Pollutants. National Academy of Sciences, Washington.
- Birge, W.J., J.A. Black, and R.A. Kuehne. 1980. Effects of organic compounds on amphibian reproduction. Water Resources Research Institute, University of Kentucky, Research Report 121.
- Birge, W.J., J.A. Black, A.G. Westerman, and B.A. Ramey. 1983. Fish and amphibian embryos: a model system for evaluating teratogenicity. *Fundamental and Applied Toxicology* 3:237-242.
- Birge, W.J., A.G. Westerman, and J.A. Spromberg. 2000. Comparative toxicology and risk assessment of amphibians. Pp. 727-791 In D.W. Sparling, G. Linder, and C.A. Bishop (eds.), *Ecotoxicology of Amphibians and Reptiles*. SETAC Press, Pensacola, FL.
- Bishop, C.A., K.E. Pettit, M.E. Gartshore, and D.A. MacLeod. 1997. Extensive monitoring of anuran populations using call counts and road transects in Ontario (1992 to 1993). *SSAR Herpetological Conservation* 1:149-160.
- Bishop, D.C. 2003. *Rana okaloosae* (Florida Bog Frog). Predation. *Herpetological Review* 34:235.
- Bishop, D.C. 2005. Ecology and distribution of the Florida bog frog and flatwoods salamander on Eglin Air Force Base. Ph.D. diss., Virginia Polytechnic Institute and State University, Blacksburg.
- Bishop, S.C. 1927. The amphibians and reptiles of Allegany State Park. New York State Museum Handbook No. 3.
- Bisrat, S.A. 2010. Modeling bark beetle outbreak and fire interactions in western U.S. forests and the invasion potential of an invasive Puerto Rican frog in Hawaii using remote sensing data. Ph.D. diss., Utah State University, Logan.
- Black, I.H., and K.L. Gosner. 1958. The barking tree frog, *Hyla gratiosa* in New Jersey. *Herpetologica* 13:254-255.
- Black, J.D. 1938. Additional records of *Rana sylvatica* in Arkansas. *Copeia* 1938:48-49.
- Black, J.D., and S.C. Dellinger. 1938. Herpetology of Arkansas. Part 2. The Amphibians. *Occasional Papers of the University of Arkansas Museum* No. 2:1-30.
- Black, J.H. 1967. A blue leopard frog from Montana. *Herpetologica* 23:314-315.

- Black, J.H. 1968. A possible stimulus for the formation of some aggregations in tadpoles of *Scaphiopus bombifrons*. Proceedings of the Oklahoma Academy of Science 49:13-14.
- Black, J.H. 1969. Ethoecology of tadpoles of *Bufo americanus charlesmithi* in a temporary pool in Oklahoma. Journal of Herpetology 3:198.
- Black, J.H. 1970. Amphibians of Montana. Montana Fish and Game Department, Animals of Montana Series No. 1.
- Black, J.H. 1971. The toad genus *Bufo* in Montana. Northwest Science 45:156-162.
- Black, J.H. 1973a. A checklist of the cave fauna of Oklahoma: Amphibia. Proceedings of the Oklahoma Academy of Science 53:33-37.
- Black, J.H. 1973b. Ethoecology of *Scaphiopus* (Pelobatidae) larvae in temporary pools in central and southwestern Oklahoma. Ph.D. diss., University of Oklahoma, Norman.
- Black, J.H. 1974. Larval spadefoot survival. Journal of Herpetology 8:371-373.
- Black, J.H. 1975. The formation of "tadpole nests" by anuran larvae. Herpetologica 31:76-79.
- Black, J.H., and J.N. Black. 1968. Frog with a tail. Montana Outdoors 3(3):not paginated (3 pp.).
- Black, J.H., and J.N. Black. 1969. Postmetamorphic basking aggregations of the boreal toad, *Bufo boreas boreas*. Canadian Field-Naturalist 83:155-156.
- Black, J.H., and R.B. Brunson. 1971. Breeding behavior of the boreal toad, *Bufo boreas boreas* (Baird and Girard), in western Montana. Great Basin Naturalist 31:109-113.
- Blair, A.P. 1941a. Variation, isolation mechanisms and hybridization in certain toads. Genetics 26:398-417.
- Blair, A.P. 1941b. Isolating mechanisms in tree frogs. Proceedings of the National Academy of Sciences 27:14-17.
- Blair, A.P. 1942. Isolating mechanisms in a complex of four species of toads. Biological Symposia 6:235-249.
- Blair, A.P. 1943a. Geographical variation of ventral markings in toads. American Midland Naturalist 29:615-620.
- Blair, A.P. 1943b. Population structure in toads. American Naturalist 77:563-568.
- Blair, A.P. 1946. Description of a six-year-old hybrid toad. American Museum Novitates 1327:1-3.
- Blair, A.P. 1947a. Variation in two characteristics in *Bufo fowleri* and *Bufo americanus*. American Museum Novitates 1343:1-5.
- Blair, A.P. 1947b. The male warning vibration in *Bufo*. American Museum Novitates 1344:1-7.
- Blair, A.P. 1950. Notes on Oklahoma microhylid frogs. Copeia 1950:152.
- Blair, A.P. 1951. Note on the herpetology of the Elk Mountains, Colorado. Copeia 1951:239-240.
- Blair, A.P. 1955. Distribution, variation, and hybridization in a relict toad (*Bufo microscaphus*) in southwestern Utah. American Museum Novitates 1722:1-38.
- Blair, A.P., and H.L. Lindsay Jr. 1961. *Hyla avivoca* (Hylidae) in Oklahoma. Southwestern Naturalist 6:202.
- Blair, W.F. 1936. A note on the ecology of *Microhyla olivacea*. Copeia 1936:115.
- Blair, W.F. 1953. Growth, dispersal and age at sexual maturity of the Mexican toad (*Bufo valliceps* Wiegmann). Copeia 1953:208-212.
- Blair, W.F. 1955a. Size difference as a possible isolation mechanism in *Microhyla*. American Naturalist 89:297-302.
- Blair, W.F. 1955b. Mating call and stage of speciation in the *Microhyla olivacea-M. carolinensis* complex. Evolution 9:469-480.
- Blair, W.F. 1955c. Differentiation of mating call in spadefoots, genus *Scaphiopus*. Texas Journal of Science 7:183-188.
- Blair, W.F. 1956a. The mating calls of hybrid toads. Texas Journal of Science 8:350-355.
- Blair, W.F. 1956b. Call difference as an isolation mechanism in Southwestern toads (genus *Bufo*). Texas Journal of Science 8:87-106.
- Blair, W.F. 1957. Mating call and relationships of *Bufo hemiophrys* Cope. Texas Journal of Science 9:99-108.
- Blair, W.F. 1958a. Call difference as an isolation mechanism in Florida species of hylid frogs. Quarterly Journal of the Florida Academy of Sciences 21:32-48.
- Blair, W.F. 1958b. Mating call and stage of speciation of two allopatric populations of spadefoots (*Scaphiopus*). Texas Journal of Science 10:484-488.
- Blair, W.F. 1958c. Call structure and species groups in U.S. treefrogs (*Hyla*). Southwestern Naturalist 3:77-89.
- Blair, W.F. 1959. Genetic compatibility and species groups in U.S. toads (*Bufo*). Texas Journal of Science 11:427-453.
- Blair, W.F. 1960a. A breeding population of the Mexican toad (*Bufo valliceps*) in relation to its

- environment. *Ecology* 41:165-174.
- Blair, W.F. 1960b. Mating call as evidence of relations in the *Hyla eximia* group. *Southwestern Naturalist* 5:129-135.
- Blair, W.F. 1961a. Further evidence bearing on intergroup and intragroup genetic compatibility in toads (genus *Bufo*). *Texas Journal of Science* 13:163-175.
- Blair, W.F. 1961b. Calling and spawning seasons in a mixed population of anurans. *Ecology* 42:99-110.
- Blair, W.F. 1963a. Intragroup genetic compatibility in the *Bufo americanus* species group of toads. *Texas Journal of Science* 15:15-34.
- Blair, W.F. 1963b. Evolutionary relationships of North American Toads of the genus *Bufo*: a progress report. *Evolution* 17:1-16.
- Blair, W.F. 1964. Evidence bearing on the relationships of the *Bufo boreas* group of toads. *Texas Journal of Science* 16:181-192.
- Blair, W.F. 1966. Genetic compatibility in the *Bufo valliceps* and closely related groups of toads. *Texas Journal of Science* 18:333-351.
- Blair, W.F. 1972. Evidence from hybridization. Pp. 196-232 *In* W.F. Blair (ed.), *Evolution in the Genus Bufo*. University of Texas Press, Austin.
- Blair, W.F. 1974. Character displacement in frogs. *American Zoologist* 14:1119-1125.
- Blair, W.F., and D. Pettus. 1954. The mating call and its significance in the Colorado River toad (*Bufo alvarius* Girard). *Texas Journal of Science* 6:72-77.
- Blair, W.F., and M.J. Littlejohn. 1960. Stage of speciation of two allopatric populations of chorus frogs (*Pseudacris*). *Evolution* 14:82-87.
- Blair, W.R. 1964. Evidence bearing on the relationships of the *Bufo boreas* group of toads. *Texas Journal of Science* 16:181-192.
- Blanchard, F. N. 1922. The amphibians and reptiles of western Tennessee. *Occasional Papers of the Museum of Zoology, University of Michigan* 117:1 – 18.
- Blanchard, F.N. 1925. A collection of amphibians and reptiles from southern Indiana and adjacent Kentucky. *Papers of the Michigan Academy of Science, Arts and Letters* 5:367-388.
- Blanchard, F.N. 1933. Late autumn collections and hibernating situations of the salamander *Hemidactylum scutatum* (Schlegel) in southern Michigan. *Copeia* 1933:216.
- Blaney, R.M. 1971. An annotated check list and biogeographic analysis of the insular herpetofauna of the Apalachicola region, Florida. *Herpetologica* 27:406-430.
- Blatchley, W.S. 1892. Notes on the batrachians and reptiles of Vigo County, Indiana. *Journal of the Indiana Society of Natural History* 14:27.
- Blatchley, W.S. 1899. Notes on the batrachians and reptiles of Vigo County, Indiana. II. *Annual Report of the Indiana Department of Geology and Natural Resources* 24:537-552.
- Blaustein, A.R. 1994. Amphibians in a bad light. *Natural History* 103:32-37.
- Blaustein, A.R., and R.K. O'Hara. 1982. Kin recognition in *Rana cascadae* tadpoles: maternal and paternal effects. *Animal Behaviour* 30:1151-1157.
- Blaustein, A.R., and R.K. O'Hara. 1986. An investigation of kin recognition in red-legged frogs (*Rana aurora*) tadpoles. *Journal of Zoology, London* 209:347-353.
- Blaustein, A.R., and B. Waldman. 1992. Kin recognition in anuran amphibians. *Animal Behaviour* 44:207-221.
- Blaustein, A.R., and L.K. Belden. 2003. Amphibian defenses against ultraviolet-B radiation. *Evolution & Development* 5:89-97.
- Blaustein, A.R., and P.T.J. Johnson. 2003a. The complexity of deformed amphibians. *Frontiers in Ecology and the Environment* 1:87-94.
- Blaustein, A.R. and P.T.J. Johnson. 2003b. Explaining frog deformities. *Scientific American* 288:60-65.
- Blaustein, A.R. and P.T.J. Johnson. 2010. When an infection turns lethal. *Nature* 465: 881-882.
- Blaustein, A.R., and L.B. Kats. 2003. Amphibians in a very bad light. *Bioscience* 53: 1028-1029.
- Blaustein, A.R., K.S. Chang, H.G. Lefcourt, and R.K. O'Hara. 1990. Toad tadpole kin recognition: recognition of half siblings and the role of maternal cues. *Ethology, Ecology and Evolution* 2:215-226.
- Blaustein, A.R., D.G. Hokit, R.K. O'Hara, and R.A. Holt. 1994a. Pathogenic fungus contributes to amphibian losses in the Pacific Northwest. *Biological Conservation* 67:251-254.
- Blaustein, A.R., P.D. Hoffman, D.G. Hokit, J.M. Kiesecker, S.C. Walls, and J.B. Hays. 1994b. UV repair and resistance to solar UV-B in amphibian eggs: a link to population declines. *Proceedings of the National Academy of Science, USA* 91:1791-1795.

- Blaustein, A.R., J.M. Kiesecker, D.G. Hokit and S.C. Walls. 1995. Amphibian declines and UV radiation. *Bioscience* 45:514-515.
- Blaustein, A.R., P.D. Hoffman, J.M. Kiesecker, and J.B. Hayes. 1996a. DNA repair activity and resistance to solar UV-B radiation in eggs of the Red-legged Frog. *Conservation Biology* 0:1398-1402.
- Blaustein, A.R., J.M. Kiesecker, S.C. Walls and D.G. Hokit. 1996b. Field experiments, amphibian mortality, and UV radiation. *Bioscience* 46: 386-388.
- Blaustein, A.R., J.B. Hays, P.D. Hoffman, D.P. Chivers, J.M. Kiesecker, W.P. Leonard, A. Marco, D.H. Olson, J.K. Reaser, and R.G. Anthony. 1999. DNA repair and resistance to UV-B radiation in Western Spotted Frogs. *Ecological Applications* 9:1100-1105.
- Blaustein, A.R., B. Han, B. Fasy, J. Romansic, E.A. Scheessele, R.G. Anthony, A. Marco, D.P. Chivers, L.K. Belden, J.M. Kiesecker, T. Garcia, M. Lizana, and L.B. Kats. 2004. Variable breeding phenology affects the exposure of amphibian embryos to ultraviolet radiation and optical characteristics of natural waters protect amphibians from UV-B in the U.S. Pacific Northwest: comment. *Ecology* 85:1747-1754.
- Blaustein, A.R., J.M. Romansic, and E.A. Scheessele. 2005. Ambient levels of ultraviolet-B radiation cause mortality in juvenile Western Toads, *Bufo boreas*. *American Midland Naturalist* 154:375-382.
- Blaustein, A.R., S.S. Gervasi, P.T.J. Johnson, J.T. Hoverman, L.K. Belden, P.W. Bradley and G.Y. Xie. 2012. Ecophysiology meets conservation: understanding the role of disease in amphibian population declines. *Philosophical Transactions of the Royal Society B* 367:1688-1707.
- Bleakney, S. 1952. The amphibians and reptiles of Nova Scotia. *Canadian Field-Naturalist* 66:125-129.
- Bleakney, S. 1954. Range extensions of amphibians in eastern Canada. *Canadian Field-Naturalist* 68:165-171.
- Bleakney, J.S. 1958a. A zoogeographical study of the amphibians and reptiles of eastern Canada. *National Museum of Canada Bulletin* 155:1-119.
- Bleakney, S. 1958b. Cannibalism in *Rana sylvatica* tadpoles. *Herpetologica* 14:34.
- Bleakney, S. 1959. Postglacial dispersal of the Western Chorus Frog in eastern Canada. *Canadian Field-Naturalist* 73:197-205.
- Bleakney, S. 1963. First North American record of *Bufolucilia silvarum* (Meigen) (Diptera: Calliphoridae) parasitizing *Bufo terrestris americanus* Holbrook. *Canadian Entomologist* 95:107.
- Blem, C.R., J.W. Steiner, and M.A. Miller. 1978. Comparison of jumping abilities of the cricket frogs *Acrida gryllus* and *Acrida crepitans*. *Herpetologica* 34:288-291.
- Blihovde, W.B. 2006. Terrestrial movements and upland habitat use of Gopher Frogs in central Florida. *Southeastern Naturalist* 5:265-276.
- Blomquist, S.M. 2005. *Bufo retiformis* Sanders and Smith, 1951. Sonoran Green Toad. Pp. 433-435 In M.J. Lannoo (ed.), *Amphibian Declines. The Conservation Status of United States Species*. University of California Press, Berkeley.
- Blomquist, S.M., and M.L. Hunter, Jr. 2009. A multi-scale assessment of habitat selection and movement patterns by Northern Leopard Frogs (*Lithobates [Rana] pipiens*) in a managed forest. *Herpetological Conservation and Biology* 4:142-160.
- Blosser, E. M., and L.P. Lonnibos. 2012. Florida's frog-biting mosquitoes. *Wing Beats* (Spring):5-8, 11-12. [University of Florida Entomology Department]
- Blouin, M.S. 1992a. Comparing bivariate reaction norms among species: time and size at metamorphosis in three species of *Hyla* (Anura: Hylidae). *Oecologia* 90:288-293.
- Blouin, M.S. 1992b. Genetic correlations among morphometric traits and rates of growth and differentiation in the Green Tree Frog, *Hyla cinerea*. *Evolution* 46:735-744.
- Blouin, M.S., I. C. Phillipsen, and K. J. Monsen. 2010. Population structure and conservation genetics of the Oregon Spotted Frog, *Rana pretiosa*. *Conservation Genetics* 11:2179–2194.
- Boenke, M. and D.M. Green. 2012. *Anaxyrus fowleri* (Fowler's Toad). Habitat. *Herpetological Review* 43:461.
- Boogart, J.P., and C.E. Nelson. 1976. Evolutionary implications from karyotypic analysis of frogs of the families Microhylidae and Rhinophryidae. *Herpetologica* 32:199-208.

- Bogart, J.P., and A.P. Jaslow. 1979. Distribution and call parameters of *Hyla chrysoscelis* and *Hyla versicolor* in Michigan. Royal Ontario Museum Life Sciences Contribution 117, 13 pp.
- Bogart, C.M. 1933. Notes on Grand Canyon amphibians. Grand Canyon Nature Notes. [reprinted in S. Lamb (ed). 1994. The Best of Grand Canyon Nature Notes, 1926-1935. Grand Canyon Natural History Association]
- Bogert, C.M. 1947. Results of the Archbold Expeditions. No. 57. A field study of homing in the Carolina toad. American Museum Novitates 1355:1-24.
- Bogert, C.M. 1960. The influence of sound on the behavior of amphibians and reptiles. Pp. 37- 320 In W.E. Lanyon and W.N. Tavolga (eds.), Animal Sounds and Communication, American Institute of Biological Sciences Publication No. 7, Washington, DC.
- Bogert, C.M. 1962. Isolation mechanisms in toads of the *Bufo debilis* group in Arizona and western Mexico. American Museum Novitates 2100:1-37.
- Bogosian, V., III, E.C. Hellgren and R.W. Moody. 2012. Assemblages of amphibians, reptiles, and mammals on an urban military base in Oklahoma. Southwestern Naturalist 57:277-284.
- Bohsack, K.K. 1951. Temperature data on the terrestrial hibernation of the greenfrog, *Rana clamitans*. Copeia 1951:236-239.
- Bohsack, K.K. 1952. Terrestrial hibernation of the bullfrog, *Rana catesbeiana* Shaw. Copeia 1952:114.
- Boice, R., and D.W. Witter. 1969. Hierarchical feeding behaviour in the leopard frog (*Rana pipiens*). Animal Behaviour 17:474-479.
- Boice, R., and C. Boice. 1970. Interspecific competition in captive *Bufo marinus* and *Bufo americanus* toads. Journal of Biological Psychology 12:32-36.
- Boiteau, G. and P. C. McCarthy. 2010. Is there a role for stripes of adults and colour of larvae in determining the avoidance of the Colorado potato beetle by the American toad? Canadian Journal of Zoology 88: 468-478.
- Boivin, E. 2012. *Batrachochytrium dendrobatidis* in the Adirondacks, New York, USA. Herpetological Review 43:610.
- Bolek, M.G. 2006. The role of arthropod second intermediate hosts as avenues for and constraints on the transmission of frog lung flukes (Digenea: Haematoloechidae). Ph.D. diss., University of Nebraska, Lincoln.
- Bolek, M.G., and J.R. Coggins. 1998. Endoparasites of Cope's Gray Treefrog, *Hyla chrysoscelis*, and Western Chorus Frog, *Pseudacris triseriata*, from southeastern Wisconsin. Journal of the Helminthological Society of Washington 65:212-218.
- Bolek, M.G., and J.R. Coggins. 2000. Seasonal occurrence and community structure of helminth parasites from the eastern American Toad, *Bufo americanus americanus*, from southeastern Wisconsin, U.S.A. Comparative Parasitology 67:202-209.
- Bolek, M.G., and J.R. Coggins. 2001. Seasonal occurrence and community structure of helminth parasites in Green Frogs, *Rana clamintans melanota*, from southeastern Wisconsin, U.S.A. Comparative Parasitology 68: 164-172.
- Bolek, M.G., and J.R. Coggins. 2002. Observations on myiasis by the calliphorid, *Bufolucilia silvarum*, in the eastern American Toad (*Bufo americanus americanus*) from southeastern Wisconsin. Journal of Wildlife Diseases 38:598-603.
- Bolek, M.G., and J.R. Coggins. 2003. Helminth community structure of sympatric eastern American Toad, *Bufo americanus americanus*, Northern Leopard Frog, *Rana pipiens*, and Blue-spotted Salamander, *Ambystoma laterale*, from southeastern Wisconsin. Journal of Parasitology 89:673-680.
- Bolek, M.G., and J. Janovy Jr. 2004. Observations on myiasis by the calliphorids, *Bufolucilia silvarum* and *Bufolucilia elongata*, in Wood Frogs, *Rana sylvatica*, from southeastern Wisconsin. Journal of Parasitology 90:1169-1171.
- Bolek, M.G., and J. Janovy Jr. 2005. New host and distribution records for the amphibian leech *Desserobdella picta* (Rhynchobdellida: Glossiphoniidae) from Nebraska and Wisconsin. Journal of Freshwater Ecology 20:187-189.
- Bolek, M.G., and J. Janovy Jr. 2008. Alternative life cycle strategies of *Megalodiscus temperatus* in tadpoles and metamorphosed anurans. Parasite, Journal de la Societe Francaise de Parasitologie 15:396-401.
- Bolek, M.G., S. D. Snyder, and J. Janovy Jr. 2009a. Alternative life cycle strategies and colonization of young anurans by *Gorgoderina attenuata* in Nebraska. Journal of Parasitology 95:604-616.

- Bolek, M.G., S. D. Snyder, and J. Janovy Jr. 2009b. Redescription of the frog bladder fluke *Gorgoderina attenuata* from the Northern Leopard Frog, *Rana pipiens*. *Journal of Parasitology* 95:665-668.
- Bollinger, R. R. 1966. A study of the biology of the trypanosomes of *Rana clamitans clamitans*. Ph.D. diss., Tulane University, New Orleans, LA, USA.
- Bollinger, R. R., J. R. Seed and A. A. Gam. 1968. Studies on frog trypanosomiasis II. Seasonal variations in the parasitemia levels of *Trypanosoma rotatorium* in *Rana clamitans* from Louisiana. *Tulane Studies in Zoology and Botany* 15: 64-69.
- Bonin, J., J.-L. DesGranges, J. Rodrigue, and M. Ouellet. 1997a. Anuran species richness in agricultural landscapes of Québec: foreseeing long-term results of road call surveys. *SSAR Herpetological Conservation* 1:141-149.
- Bonin, J., M. Ouellet, J. Rodrigue, J.-L. DesGranges, F. Gagné, T.F. Sharbel, and L.A. Lowcock. 1997b. Measuring the health of frogs in agricultural habitats subjected to pesticides. *SSAR Herpetological Conservation* 1:246-257.
- Bonine, K.E., G.H. Dayton, and R.E. Jung. 2001. Attempted predation of Couch's Spadefoot (*Scaphiopus couchii*) juveniles by ants (*Aphaenogaster cockerelli*). *Southwestern Naturalist* 46:104-106.
- Bonnaterre, M. l'A. 1789. Tableau Encyclopédique et Méthodique des Trois Règnes de la Nature. Erpétologie. Chez Panckoucke, Hôtel de Thou, Paris.
- Boone, M.D. 2005. Juvenile frogs compensate for small metamorph size with terrestrial growth: overcoming the effects of larval density and insecticide exposure. *Journal of Herpetology* 39:416-423.
- Boone, M.D. 2008. Examining the single and interactive effects of three insecticides on amphibian metamorphosis. *Environmental Toxicology and Chemistry* 27:1561-1568.
- Boone, M.D., and C.M. Bridges. 1999. The effect of temperature on the potency of carbaryl for survival of tadpoles of the Green Frog (*Rana clamitans*). *Environmental Toxicology and Chemistry* 18:1482-1484.
- Boone, M.D., and C.M. Bridges. 2003. Effects of carbaryl on Green Frog (*Rana clamitans*) tadpoles: Timing of exposure versus multiple exposures. *Environmental Toxicology and Chemistry* 22:2695-2702.
- Boone, M.D., and R.D. Semlitsch. 2001. Interactions of an insecticide with larval density and predation in experimental amphibian communities. *Conservation Biology* 15:228-238.
- Boone, M.D., and R.D. Semlitsch. 2002. Interactions of an insecticide with competition and pond drying in amphibian communities. *Ecological Applications* 12:307-316.
- Boone, M.D., and R.D. Semlitsch. 2003. Interactions of bullfrog tadpole predators and an insecticide: predation release and facilitation. *Oecologia* 422:610-616.
- Boone, M.D., and S.M. James. 2003. Interactions of an insecticide, herbicide, and natural stressors in amphibian community mesocosms. *Ecological Applications* 13:829-841.
- Boone, M.D., and N.H. Sullivan. 2012. The impact of an insecticide changes with amount of leaf litter input: Implications for amphibian populations. *Environmental Toxicology and Chemistry* 31:1518-1524.
- Boone, M.D., C.M. Bridges, and B.B. Rothermel. 2001. Growth and development of larval Green Frogs (*Rana clamitans*) exposed to multiple doses of an insecticide. *Oecologia* 129:518-524.
- Boone, M.D., E.E. Little, and R.D. Semlitsch. 2004a. Overwintered Bullfrog tadpoles negatively affect salamanders and anurans in native amphibian communities. *Copeia* 2004:683-690.
- Boone, M.D., R.D. Semlitsch, J.F. Fairchild, and B.B. Rothermel. 2004b. Effects of an insecticide on amphibians in large-scale experimental ponds. *Ecological Applications* 14:685-691.
- Boone, M.D., R.D. Semlitsch, E.E. Little, and M.C. Doyle. 2007. Multiple stressors in amphibian communities: interactive effects of chemical contamination, Bullfrog tadpoles, and Bluegill Sunfish. *Ecological Applications* 17:291-301.
- Boone, M.D., R.D. Semlitsch, and C. Mosby. 2008. Suitability of golf course ponds for amphibian metamorphosis when Bullfrogs are removed. *Conservation Biology* 22:172-179.
- Bosakowski, T. 1999. Amphibian macrohabitat associations on a private industrial forest in western Washington. *Northwestern Naturalist* 80:61-69.
- Bosc, L.A.G. 1800. In F.M. Daudin, *Histoire Naturelle des Quadrupèdes Ovipaires*.

- Livraison 1:10, plate 5, Marchant et Cie, Paris.
- Bosc, L.A.G., and F.M. Daudin. 1801. *Laraine oocularie, Hyla ocularis*. In C.S. Sonnini and P.A. Latreille, *Histoire Naturelle des Reptiles, avec Figures dissinées d'après Nature*. Vol. 2. Deterville, Paris.
- Boschulte, D.S. 1993. Toxicity of six commonly used herbicides on larval Bullfrogs (*Rana catesbeiana*). M.S. thesis, Illinois State University, Normal.
- Bossert, M., M. Draud, and T. Draud. 2003. *Bufo fowleri* (Fowler's Toad) and *Malaclemys terrapin terrapin* (Northern Diamondback Terrapin) refugia and nesting. *Herpetological Review* 34:135.
- Botch, P.S., M.C. Beers, and T.M. Judd. 2007. The effects of calcium on the feeding preference of the tadpole of *Bufo americanus*. *Bulletin of the Maryland Herpetological Society* 43:162-166.
- Bouchard, J.L. 1951. The platyhelminthes parasitizing some northern Maine amphibia. *Transactions of the American Microscopical Society* 70:245-250.
- Bouchard, J.L. 1953. An ecological and taxonomic study of helminth parasites from Oklahoma amphibians. Ph.D. diss., University of Oklahoma, Norman.
- Bouchard, J., A.T. Ford, F.E. Eigenbrod, and L. Fahrig. 2009. Behavioral responses of Northern Leopard Frogs (*Rana pipiens*) to roads and traffic: implications for population persistence. *Ecology and Society* 14(2):23. <http://www.ecologyandsociety.org/Vol14/iss2/art23/>
- Boughton, R.G. 1997. The use of PVC refugia as a trapping technique for hylid treefrogs. M.S. thesis, University of Florida, Gainesville, FL.
- Boughton, R.G., J. Staiger, and R. Franz. 2000. Use of PVC pipe refugia as a sampling technique for hylid treefrogs. *American Midland Naturalist* 144:168-177.
- Boulenger, G.A. 1882. Descriptions of a new genus and species of frogs of the family Hylidae. *Annals and Magazine of Natural History, Series 5*, 10:326-328.
- Boulenger, G.A. 1899. On the American spadefoot (*Scaphiopus solitarius* Holbrook). *Proceedings of the Zoological Society of London* 1899(3):790-793.
- Boulenger, G.A. 1917. Descriptions of new frogs of the genus *Rana*. *Annals of the Magazine of Natural History* 20:413-418.
- Bourque, R.M. 2008. Spatial ecology of an inland population of the Foothill Yellow-legged Frog (*Rana boylii*) in Tehama County, California. M.A. thesis, Humboldt State University, Arcata, CA.
- Bourque, R.M., and J.B. Bettaso. 2011. *Rana boylii* (Foothill Yellow-legged Frog). Reproduction. *Herpetological Review* 42:589.
- Bovbjerg, R.V. 1965. Experimental studies on the dispersal of the frog, *Rana pipiens*. *Proceedings of the Iowa Academy of Science* 72:412-418.
- Bovbjerg, R.V., and A.M. Bovbjerg. 1964. Summer emigrations of the frog *Rana pipiens* in northwestern Iowa. *Proceedings of the Iowa Academy of Science* 71:511-518.
- Bowen, K.D., and E.A. Beever. 2010. Daytime amphibian surveys in three protected areas in the western Great Lakes. *IRCF Reptiles & Amphibians* 17:26-31, 34-35.
- Bowerman, J. 2010. Submerged calling by Oregon Spotted Frogs (*Rana pretiosa*) remote from breeding aggregations. *IRCF Reptiles & Amphibians* 17:84-87.
- Bowers, D.G., D.E. Andersen, and N.H. Euliss Jr. 1998. Anurans as indicators of wetland condition in the Prairie Pothole Region of North Dakota: an environmental monitoring and assessment program pilot project. Pp. 369-378 In M.J. Lannoo (ed.), *Status & Distribution of Midwestern Amphibians*. University of Iowa Press, Iowa City.
- Bowker, R.W., and B.K. Sullivan. 1991. *Bufo punctatus* x *B. retiformis* (Red-spotted Toad, Sonoran Green Toad). Natural hybridization. *Herpetological Review* 22:54.
- Boyd, C.E. 1964. The distribution of cricket frogs in Mississippi. *Herpetologica* 20:201-202.
- Boyd, C.E., and D.H. Vickers. 1963. Distribution of some Mississippi amphibians and reptiles. *Herpetologica* 19:202-205.
- Boyd, S.H. 1975. Inhibition of fish reproduction by *Rana catesbeiana* larvae. *Physiological Zoology* 48:225-234.
- Boykin, K.G. 2006. Multiscale analysis of habitat, vegetation change, and streamflow as ecological factors affecting population dynamics of *Rana chiricahuensis*. Ph.D. diss., New Mexico State University, Las Cruces.
- Boykin, K.G., and K.C. McDaniel. 2008. Simulated potential effects of ecological factors on a hypothetical population of Chiricahua Leopard Frog (*Rana*

- chiricahuensis*). Ecological Modelling 218:175-181.
- Bradford, D.F. 1983. Winterkill, oxygen regulations, and energy metabolism of a submerged dormant amphibian, *Rana muscosa*. Ecology 64:1171-1183.
- Bradford, D.F. 1989. Allotopic distribution of native frogs and introduced fishes in high Sierra Nevada lakes of California: implication of the negative effect of fish introductions. Copeia 1989:775-778.
- Bradford, D.F. 1991. Mass mortality and extinction in a high-elevation population of *Rana muscosa*. Journal of Herpetology 25:174-177.
- Bradford, D.F., C. Swanson, and M.S. Gordon. 1992. Effects of low pH and aluminum on two declining species of amphibians in the Sierra Nevada, California. Journal of Herpetology 26:369-377.
- Bradford, D.F., F. Tabatabai, and D.M. Gruber. 1993. Isolation of remaining populations of the native frog, *Rana muscosa*, by introduced fishes in Sequoia and Kings Canyon National Parks, California. Conservation Biology 7:882-888.
- Bradford, D.F., M.S. Gordon, D.F. Johnson, R.D. Andrews, and W.B. Jennings. 1994a. Acidic deposition as an unlikely cause for amphibian population declines in the Sierra Nevada, California. Biological Conservation 69:155-161.
- Bradford, D.F., D.M. Gruber, and F. Tabatabai. 1994b. Population declines of the native frog, *Rana muscosa*, in Sequoia and Kings Canyon National Parks, California. Southwestern Naturalist 39:323-327.
- Bradford, D.F., S.D. Cooper, T.M. Jenkins Jr., K. Kratz, O. Sarnelle, and A.D. Brown. 1998. Influences of natural acidity and introduced fish on faunal assemblages in California alpine lakes. Canadian Journal of Fisheries and Aquatic Sciences 55:2478-2491.
- Bradford, D.F., A.C. Neale, M.S. Nash, D.W. Sada, and J.R. Jaeger. 2003. Habitat patch occupancy by toads (*Bufo punctatus*) in a naturally fragmented desert landscape. Ecology 84:1012-1023.
- Bradford, D.F., J.R. Jaeger, and R.D. Jennings. 2004. Population status and distribution of a decimated amphibian, the relict leopard frog (*Rana onca*). Southwestern Naturalist 49: 218-228.
- Bradford, D.F., J.R. Jaeger, and S.A. Shanahan. 2005a. Distributional changes and population status of amphibians in the eastern Mojave Desert. Western North American Naturalist 65:462-472.
- Bradford, D.F., R.D. Jennings, and J.R. Jaeger. 2005b. *Rana onca* Cope, 1875(b). Relict Leopard Frog. Pp. 567-568 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Bradford, D.F., R.A. Knapp, D.W. Sparling, M.S. Nash, K.A. Stanley, N.G. Tallent-Halsell, L.L. McConnell, and S.M. Simonich. 2011. Pesticide distributions and population declines of California, USA, alpine frogs, *Rana muscosa* and *Rana sierrae*. Environmental Toxicology and Chemistry 30:682-691.
- Bradley, G.A., P.C. Rosen, M.J. Sredl, T.R. Jones, and J.E. Longcore. 2002. Chytridiomycosis in native Arizona frogs. Journal of Wildlife Diseases 38:206-212.
- Brady, M. 1927. Notes on the amphibians and reptiles of the Dismal Swamp. Copeia (162):26-29.
- Brady, M.K., and F. Harper. 1935. A Florida subspecies of *Pseudacris nigrita* (Hylidae). Proceedings of the Biological Society of Washington 48:107-110.
- Bragg, A.N. 1936. Notes on the breeding habits, eggs, and embryos of *Bufo cognatus* with a description of the tadpole. Copeia 1936:14-20.
- Bragg, A.N. 1937a. A note on the metamorphosis of the tadpoles of *Bufo cognatus*. Copeia 1937:227-228.
- Bragg, A.N. 1937b. Observations on *Bufo cognatus* with special reference to the breeding habits and eggs. American Midland Naturalist 18:273-284.
- Bragg, A.N. 1939. Possible hybridization of *Bufo cognatus* and *B.w. woodhousii*. Copeia 1939:173.
- Bragg, A.N. 1940a. Observations on the ecology and natural history of Anura. 2. Habits, habitat and breeding of *Bufo woodhousii woodhousii* (Girard) in Oklahoma. American Midland Naturalist 24:306-335.
- Bragg, A.N. 1940b. Observations on the ecology and natural history of Anura. 6. The ecological importance of the study of the habits of animals as illustrated by toads. The Wasmann Collector 4:6-16.
- Bragg, A.N. 1940c. Observations on the ecology and natural history of Anura. 1. Habits, habitat and breeding of *Bufo cognatus* Say. American

- Naturalist 74:322-349, 424-438.
- Bragg, A.N. 1941a. Tadpoles of *Scaphiopus bombifrons* and *Scaphiopus hammondii*. The Wasmann Collector 4:92-94.
- Bragg, A.N. 1941b. Some observations on amphibia at and near Las Vegas, New Mexico. Great Basin Naturalist 2:109-117.
- Bragg, A.N. 1941c. Observations on the ecology and natural history of Anura. 9. The invasion of the Canadian River flood plain by two prairie species. Proceedings of the Oklahoma Academy of Science 22:73-74.
- Bragg, A.N. 1942. Observations on the ecology and natural history of Anura. 10. The breeding habits of *Pseudacris streckeri* Wright and Wright in Oklahoma including a description of the eggs and tadpoles. Wasmann Collector 5:47-62.
- Bragg, A.N. 1943a. Observations on the ecology and natural history of Anura. 15. The hylids and microhylids in Oklahoma. Great Basin Naturalist 4:62-80.
- Bragg, A.N. 1943b. Observations on the ecology and natural history of Anura. 16. Life-history of *Pseudacris clarkii* (Baird) in Oklahoma. Wasmann Collector 5:129-140.
- Bragg, A.N. 1944a. The spadefoot toads in Oklahoma with a summary of our knowledge of the group. American Naturalist 78:517-533.
- Bragg, A.N. 1944b. Breeding habits, eggs, and tadpoles of *Scaphiopus hurterii*. Copeia 1944:230-241.
- Bragg, A.N. 1945a. Notes on the psychology of frogs and toads. Journal of General Psychology 32:27-37.
- Bragg, A.N. 1945b. The spadefoot toads in Oklahoma with a summary of our knowledge of the group. 2. American Naturalist 79:52-72.
- Bragg, A.N. 1945c. Breeding and tadpole behavior in *Scaphiopus hurterii* near Norman, Oklahoma, spring, 1945. Wasmann Collector 6: 69-78.
- Bragg, A.N. 1948. Observations on the life history of *Pseudacris triseriata* (Wied.) in Oklahoma. The Wasmann Collector 7:149-168.
- Bragg, A.N. 1950a. Salientian breeding dates in Oklahoma. Pp. 35-38 In Researches on the Amphibia of Oklahoma. University of Oklahoma Press, Norman.
- Bragg, A.N. 1950b. Observations on the ecology and natural history of Anura. 17. Adaptations and distribution in accordance with habitats in Oklahoma. Pp. 59-100 In Researches on the Amphibia of Oklahoma. University of Oklahoma Press, Norman.
- Bragg, A.N. 1950c. Observations on *Microhyla* (Salientia: Microhylidae). Wassmann Journal of Biology 8:113-118.
- Bragg, A.N. 1950d. The identification of salientia in Oklahoma. Pp. 9-29 In Researches on the Amphibia of Oklahoma. University of Oklahoma Press, Norman.
- Bragg, A.N. 1950e. Observations on the ecology and natural history of Anura. 14. Growth rates and age at sexual maturity of *Bufo cognatus* under natural conditions in central Oklahoma. Pp. 47-58 In Researches on the Amphibia of Oklahoma. University of Oklahoma Press, Norman.
- Bragg, A.N. 1952. Decline in toad populations in central Oklahoma. Proceedings of the Oklahoma Academy of Science 33:70.
- Bragg, A.N. 1953. A study of *Rana areolata* in Oklahoma. Wasmann Journal of Biology 11:273-318.
- Bragg, A.N. 1954. A second season with *Rana areolata* in Oklahoma. Wasmann Journal of Biology 12: 337-343.
- Bragg, A.N. 1955. In quest of spadefoots. New Mexico Quarterly 25(4):345-258.
- Bragg, A.N. 1956. Dimorphism and cannibalism in tadpoles of *Scaphiopus bombifrons* (Amphibia, Salientia). Southwestern Naturalist 1:105-108.
- Bragg, A.N. 1958a. A melanistic tendency in the Great Plains Toad, *Bufo cognatus*. Southwestern Naturalist 3:229-230.
- Bragg, A.N. 1958b. The clasping reflex observed in juvenile spadefoots (*Scaphiopus*). Southwestern Naturalist 3:229.
- Bragg, A.N. 1959. Behavior of tadpoles of Hurter's Spadefoot during an exceptionally rainy season. Wasmann Journal of Biology 17:23-42.
- Bragg, A.N. 1960a. Experimental observations on the feeding of spadefoot tadpoles. Southwestern Naturalist 5:201-207.
- Bragg, A.N. 1960b. Feeding in the Houston toad. Southwestern Naturalist 5:106.
- Bragg, A.N. 1961. A theory of the origin of spade-footed toads deduced principally by a study of their habits. Animal Behaviour 9: 178-186.
- Bragg, A.N. 1962a. *Saprolegnia* on tadpoles again in Oklahoma. Southwestern Naturalist 7:79-80.
- Bragg, A.N. 1962b. Predator-prey relationship in

- two species of spadefoot tadpoles with notes on some other features of their behavior. *Wasmann Journal of Biology* 20:81-97.
- Bragg, A.N. 1962c. Predation on arthropods by spadefoot tadpoles. *Herpetologica* 18:144.
- Bragg, A.N. 1964a. A hypothesis to explain the almost exclusive use of temporary water by breeding spadefoot toads. *Proceedings of the Oklahoma Academy of Science* 44:24-25.
- Bragg, A.N. 1964b. Mass movements resulting in aggregations of tadpoles of the Plains spadefoot, some of them in response to light and temperature (Amphibia: Salientia). *Wasmann Journal of Biology* 22:299-305.
- Bragg, A.N. 1964c. Further study of predation and cannibalism in spadefoot tadpoles. *Herpetologica* 20:17-24.
- Bragg, A.N. 1965. Gnomes of the Night. The Spadefoot Toads. University of Pennsylvania Press, Philadelphia.
- Bragg, A.N. 1966. Longevity of the tadpole stage in the Plains Spadefoot (Amphibia: Salientia). *Wasmann Journal of Biology* 24:71-73.
- Bragg, A.N. 1967. Recent studies on the spadefoot toads. *Bios* 38:75-84.
- Bragg, A.N. 1968. The formation of feeding schools in tadpoles of spadefoots. *Wasmann Journal of Biology* 26:11-16.
- Bragg, A.N., and C.C. Smith. 1942. Observations on the ecology and natural history of Anura. 9. Notes on breeding behavior in Oklahoma. *Great Basin Naturalist* 3:33-50.
- Bragg, A.N., and C.C. Smith. 1943. Observations on the ecology and natural history of Anura. 4. The ecological distribution of toads in Oklahoma. *Ecology* 24:285-309.
- Bragg, A.N., and O. Sanders. 1951. A new subspecies of the *Bufo woodhousii* group of toads (Salientia: Bufonidae: *Bufo woodhousii velatus* subsp. nov.). *Wasmann Journal of Biology* 9:363-378.
- Bragg, A.N., and V.E. Dowell. 1954. Leopard frog eggs in October. *Proceedings of the Oklahoma Academy of Science* 35:41.
- Bragg, A.N., and W.N. Bragg. 1958a. Parasitism of spadefoot tadpoles by *Saprolegnia*. *Herpetologica* 14:34.
- Bragg, A.N., and W.N. Bragg. 1958b. Variations in the mouth parts in tadpoles of *Scaphiopus (Spea) bombifrons* Cope (Amphibia: Salientia). *Southwestern Naturalist* 3:55-69.
- Bragg, A.N., and M. Brooks. 1958. Social behavior in juveniles of *Bufo cognatus* Say. *Herpetologica* 14:141-147.
- Bragg, A.N., and O.M. King. 1960. Aggregational and associated behavior in tadpoles of the Plains spadefoot. *Wasmann Journal of Biology* 18:273-289.
- Bragg, A.N., and R.J. Taylor. 1968. A range extension of the Pickerel Frog, *Rana palustris palustris*, in Oklahoma with indications of an extension of the Austroriparian life province. *Southwestern Naturalist* 13:372-374.
- Bragg, A.N., R. Matthews, and R. Kingsinger Jr. 1964. The mouth parts of tadpoles of Hurter's spadefoot. *Herpetologica* 19:284-285.
- Braid, M.R., C.B. Raymond, and W.S. Sanders. 1994. Feeding trials with the Dusky Gopher Frog, *Rana capito sevosa*, in a recirculating water system and other aspects of their culture as part of a "headstarting" effort. *Journal of the Alabama Academy of Science* 65:249-262.
- Branch, L.C., and D.G. Hokit. 2000. A comparison of scrub herpetofauna on two central Florida sand ridges. *Florida Scientist* 63:108-117.
- Brand, A.B., and J.W. Snodgrass. 2010. Value of artificial habitats for amphibian reproduction in altered landscapes. *Conservation Biology* 24:295-301.
- Brand, A.B., J.W. Snodgrass, M.T. Gallagher, R.E. Casey, and R. Van Meter. 2010. Lethal and sublethal effects of embryonic and larval exposure of *Hyla versicolor* to stormwater pond sediments. *Archives of Environmental Contaminants and Toxicology* 58:325-331.
- Brandon, R.A., and S.R. Ballard. 1998. Status of Illinois chorus frogs in southern Illinois. Pp. 102-112 In M.J. Lannoo (ed.), *Status & Conservation of Midwestern Amphibians*. University of Iowa Press, Iowa City.
- Brandt, B.B. 1936. Parasites of certain North Carolina salientia. *Ecological Monographs* 6:493-532.
- Brandt, B.B., and C.F. Walker. 1933. A new species of *Pseudacris* from the southeastern United States. *Occasional Papers of the Museum of Zoology*, University of Michigan No. 272.
- Brannelly, L., M. W. H. Chatfield and C. L. Richards-Zawacki. 2012. Field and laboratory studies of the susceptibility of the Green Treefrog (*Hyla cinerea*) to *Batrachochytrium dendrobatidis* infection. *PLoS One* 7(6): e38473.
- Branson, B.A. 1975. Claude who? Another unwanted exotic species. *National Parks and*

- Conservation Magazine (June):17-18.
- Brashears, V. Sr., and V. Brashears Jr. 1950. Frog Raising. Brashears Printing Co., Berryville, AR.
- Braswell, A. 1988. A survey of amphibians and reptiles of Nags Head Woods Ecological Preserve. Association of Southeastern Biologists Bulletin 35:199-217.
- Braswell, A.L. 1993. Status report on *Rana capito capito* Leconte, the Carolina Gopher Frog in North Carolina. Nongame and Endangered Wildlife Program, North Carolina Wildlife Resources Commission, Raleigh.
- Brattstrom, B.H. 1953. The amphibians and reptiles from Rancho La Brea. Transactions of the San Diego Natural History Society 11:365-392.
- Brattstrom, B.H. 1958. New records of Cenozoic amphibians and reptiles from California. Bulletin of the Southern California Academy of Sciences 54:1-4.
- Brattstrom, B.H. 1962. Thermal control of aggregation behavior in tadpoles. Herpetologica 18:38-46.
- Brattstrom, B.H. 1963. A preliminary review of the thermal requirements of amphibians. Ecology 44:238-255.
- Brattstrom, B.H. 1968. Thermal acclimation in anuran amphibians as a function of latitude and altitude. Comparative Biochemistry and Physiology 24:93-111.
- Brattstrom, B.H. 1979. Amphibian temperature regulation studies in the field and laboratory. American Zoologist 19:345-356.
- Brattstrom, B.H., and J.W. Warren. 1955. Observations on the ecology and behavior of the Pacific Treefrog, *Hyla regilla*. Copeia 1955:181-191.
- Breckenridge, W.J. 1944. Reptiles and Amphibians of Minnesota. University of Minnesota Press, Minneapolis.
- Breckenridge, W.J., and J.R. Tester. 1961. Growth, local movements and hibernation of the Manitoba Toad, *Bufo hemiophrys*. Ecology 42:637-646.
- Breden, F. 1987. The effect of post-metamorphic dispersal on the population genetic structure of Fowler's Toad, *Bufo woodhousei fowleri*. Copeia 1987:386-395.
- Breden, F. 1988. Natural history and ecology of Fowler's Toad, *Bufo woodhousei fowleri* (Amphibia: Bufonidae), in the Indiana Dunes National Seashore. Fieldiana Zoology, new series (18):1-16.
- Breden, F., and C.H. Kelly. 1982. The effect of conspecific interactions on metamorphosis in *Bufo americanus*. Ecology 63:1682-1689.
- Breden, F., A. Lum, and R. Wassersug. 1982. Body size and orientation in aggregates of toad tadpoles *Bufo woodhousei*. Copeia 1982:672-680.
- Breder, C.M. Jr. 1927. Frog tagging: a method of studying anuran life habits. Zooligica 9:201-229.
- Brehaut, L. 2012. Local and landscape variables influencing the use of ponds by Wood Frogs (*Lithobates sylvaticus*) in the Shakwak Valley, Yukon. Undergraduate thesis, Queen's University, Kingston, Ontario.
- Brekke, D.R., S.D. Hillyard, and R.M. Winokur. 1991. Behavior associated with the water absorption response by the toad, *Bufo punctatus*. Copeia 1991:393-401.
- Brem, F.M. 2012. Factors affecting infectivity and pathogenicity of Batrachochytrium dendrobatidis in amphibians. Ph.D. diss., University of Memphis, Memphis, TN.
- Brennan, T.C., and A.T. Holycross. 2006. Amphibians and Reptiles in Arizona. Arizona Game and Fish Department, Phoenix.
- Brenner, F.J. 1969. Role of temperature and fat deposition in hibernation and reproduction in two species of frogs. Herpetologica 25:105-113.
- Brenowitz, E.E., and G.J. Rose. 1994. Behavioural plasticity mediates aggression in choruses of the Pacific Treefrog. Animal Behaviour 47:633-641.
- Brenowitz, E.A., and G.J. Rose. 1999. Female choice and plasticity of male calling behaviour in the Pacific Treefrog. Animal Behaviour 57:1337-1342.
- Brenowitz, E.A., W. Wilczynski, and H.H. Zakon. 1984. Acoustic communication in spring peepers: environmental and behavioral aspects. Journal of Comparative Physiology 155A:585-592.
- Bresler, J.B. 1963. Pigmentation characteristics of *Rana pipiens*: dorsal region. American Midland Naturalist 70:197-207.
- Bresler, J.B. 1964. Pigmentation characteristics of *Rana pipiens*: tympanum spot, line on upper jaw, and spots on upper eyelids. American Midland Naturalist 72:382-389.
- Bridges, C.M. 1997. Tadpole swimming performance and activity affected by acute exposure to sublethal levels of carbaryl. Environmental Toxicology and Chemistry

- 16:1935-1939.
- Bridges, C.M. 1999a. Effects of a pesticide on tadpole activity and predator avoidance behavior. *Journal of Herpetology* 33:303-306.
- Bridges, C.M. 1999b. Predator-prey interactions between two amphibian species: effects of insecticide exposure. *Aquatic Ecology* 33:205-211.
- Bridges, C.M. 2000. Long-term effects of pesticide exposure at various life stages of the Southern Leopard Frog (*Rana sphenocephala*). *Archives of Environmental Contamination and Toxicology* 39:91-96.
- Bridges, C.M., and R.D. Semlitsch. 2000. Variation in pesticide tolerance of tadpoles among and within species of Ranidae and patterns of amphibian decline. *Conservation Biology* 14:1490-1499.
- Bridges, C. M., and R.D. Semlitsch. 2001. Genetic variation in insecticide tolerance in a population of Southern Leopard Frogs (*Rana sphenocephala*): implications for amphibian conservation. *Copeia* 2001:7-13.
- Bridges, C.M., and M.D. Boone. 2003. The interactive effects of UV-B and insecticide exposure on tadpole survival, growth and development. *Biological Conservation* 113:49-54.
- Briggler, J.T. 1998. Amphibian use of constructed woodland ponds in the Ouachita National Forest. M.S. thesis, University of Arkansas, Fayetteville.
- Briggler, J.T. 2000. *Rana utricularia* (Southern Leopard Frog). Predation. *Herpetological Review* 31:171.
- Briggler, J.T., and T.R. Johnson. 2008. Missouri's Toads and Frogs. Missouri Department of Conservation, Jefferson City.
- Briggler, J.T., K.M. Lohruff, and G.L. Adams. 2001. Amphibian parasitism by the leech *Desserobdella picta* at a small pasture pond in northwest Arkansas. *Journal of Freshwater Ecology* 16:105-111.
- Briggs, C.J., V.T. Vredenburg, R.A. Knapp, and L.J. Rachowicz. 2005. Investigating the population-level effects of chytridiomycosis: an emerging infectious disease of amphibians. *Ecology* 86:3149-3159.
- Briggs, C.J., R.A. Knapp, and V.T. Vredenburg. 2010. Enzootic and epizootic dynamics of the chytrid fungal pathogen of amphibians. *Proceedings of the National Academy of Sciences, USA* 107:9695-9700.
- Briggs, J.L. 1975. A case of *Bufolucilla elongata* Shannon 1924 (Diptera: Calliphoridae) myiasis in the American Toad, *Bufo americanus* Holbrook 1836. *Journal of Parasitology* 61:412.
- Briggs, J.L. 1987. Breeding biology of the Cascades Frog, *Rana cascadae*, with comparisons to *R. aurora* and *R. pretiosa*. *Copeia* 1987:241-245.
- Briggs, J.L., and R.M. Storm. 1970. Growth and population structure of the Cascade Frog, *Rana cascadae* Slater. *Herpetologica* 26:283-300.
- Brill, T.M. 1993. Postmetamorphic population structure and the effects of salinity on larval development and size at metamorphosis of *Bufo woodhousei fowleri* Hinckley (Anura: Bufonidae). M.S. thesis, Bloomsburg University, Bloomsburg, PA.
- Brimley, C.S. 1926. Revised key and list of the amphibians and reptiles of North Carolina. *Journal of the Elisha Mitchell Scientific Society* 42:75-93.
- Brimley, C.S. 1944. Amphibians and Reptiles of North Carolina. Carolina Biological Supply Company, Elon College, NC.
- Brindle, A.A., S.B. Karr, G.R. Smith, and J.A. Rettig. 2009. Within-pond oviposition site selection in the Wood Frog (*Rana sylvatica*). *Bulletin of the Maryland Herpetological Society* 45:57-60.
- Britson, C.A., and R.E. Kissell Jr. 1996. Effects of food type on developmental characteristics of an ephemeral pond-breeding anuran, *Pseudacris triseriata feriarum*. *Herpetologica* 52:374-382.
- Britson, C.A., and S.T. Threlkeld. 1998. Abundance, metamorphosis, developmental and behavioral abnormalities in *Hyla chrysoscelis* tadpoles following exposure to three agrichemicals and methyl mercury in outdoor mesocosms. *Bulletin of Environmental Contamination and Toxicology* 61:154-161.
- Britson, C.A., and S.T. Threlkeld. 2000. Interactive effects of anthropogenic, environmental, and biotic stressors on multiple endpoints in *Hyla chrysoscelis*. *Journal of the Iowa Academy of Science* 107:61-66.
- Brocchi, P. 1877. Sur quelques batraciens Raniformes et Bufoniformes d l'Amérique Centrale. *Bulletin de la Société Philomathique de Paris*, Série 7, 1:175-197.
- Brocchi, M.P. 1879. Sur divers Batraciens anoures de l'Amérique Centrale. *Bulletin de la Société Philomathique de Paris*, Série 7,

- 3(1):19-24.
- Brockelman, W.Y. 1968. Natural regulation of density in tadpoles of *Bufo americanus*. Ph.D. diss., University of Michigan, Ann Arbor.
- Brockelman, W.Y. 1969. An analysis of density effects and predation in *Bufo americanus* tadpoles. *Ecology* 50:632-644.
- Brode, W.E. 1958. The occurrence of the pickerel frog, three salamanders and two snakes in Mississippi caves. *Copeia* 1958:47-48.
- Brode, W.E. 1959. Territoriality in *Rana clamitans*. *Herpetologica* 15:140.
- Brode, W.E. 1960. Some notes on the occurrence of *Rana palustris* in caves. *Journal of the Mississippi Academy of Science* 6:233.
- Brodie, E.D. Jr. 1968. A case of interbreeding between *Bufo boreas* and *Rana cascadae*. *Herpetologica* 24: 86.
- Brodie, E.D. Jr., and D.R. Formanowicz. 1983. Prey size preference of predators: differential vulnerability of larval anurans. *Herpetologica* 39:67-75.
- Brodie, E.D. Jr., and D.R. Formanowicz. 1987. Antipredator mechanisms of larval anurans: protection of palatable individuals. *Herpetologica* 43:369-373.
- Brodie, E.D. Jr., D.R. Formanowicz Jr., and E.D. Brodie III. 1978. The development of noxiousness of *Bufo americanus* tadpoles to aquatic insect predators. *Herpetologica* 34:302-306.
- Brodkin, M.A., H. Madhoun, M. Rameswaran, and I. Vatnick. 2007. Atrazine is an immune disruptor in adult Northern Leopard Frogs (*Rana pipiens*). *Environmental Toxicology and Chemistry* 26:80-84.
- Brodman, R. 2003. Amphibians and reptiles from twenty-three counties of Indiana. *Proceedings of the Indiana Academy of Science* 112:43-54.
- Brodman, R. 2009. A 14-year study of amphibian populations and metacommunities. *Herpetological Conservation and Biology* 4:106-119.
- Brodman, R., and M. Kilmurry. 1998. Status of amphibians in northwestern Indiana. Pp. 125-136 In M.J. Lannoo (ed.), *Status & Distribution of Midwestern Amphibians*. University of Iowa Press, Iowa City.
- Brodman, R., S. Cortwright, and A. Resedar. 2002. Historical changes of reptiles and amphibians of northwest Indiana Fish and Wildlife properties. *American Midland Naturalist* 147:135-144.
- Brodman, R., M. Parrish, H. Kraus, and S. Cortwright. 2006. Amphibian biodiversity recovery in a large-scale ecosystem restoration. *Herpetological Conservation and Biology* 1:101-108.
- Broel, A. 1950. *Frog Raising for Pleasure and Profit*. Marlboro House, New Orleans.
- Brooks, D.R. 1975. A review of the genus *Allassostomoides* (Trematoda: Paramphistomatidae) with a redescription of *Allassostomoides chelydrae*. *Journal of Parasitology* 61:882-885.
- Brooks, D.R. 1976. Parasites of amphibians of the Great Plains. Part 2. Platyhelminths of amphibians in Nebraska. *Bulletin of the University of Nebraska State Museum* 10:65-92.
- Brooks, D.R., and N.J. Welch. 1976. Parasites of amphibians of the Great Plains. 1. The cercariae of *Cephalogonimus brevicirrus* Ingles, 1932 (Trematoda: Cephalogonimidae). *Proceedings of the Helminthological Society of Washington* 43:92-93.
- Brooks, G.R. Jr. 1964. An analysis of the food habits of the Bullfrog, *Rana catesbeiana*, by body size, sex, month, and habitat. *Virginia Journal of Science* 15:173-186.
- Brothers, D.R. 1965. An annotated list of the amphibians and reptiles of northeastern North Carolina. *Journal of the Elisha Mitchell Scientific Society* 81:119-124.
- Browder, L.W. 1972. Genetic and embryological studies of albinism in *Rana pipiens*. *Journal of Experimental Zoology* 180:149-156.
- Browder, L.W., J.C. Underhill, and D.J. Merrell. 1966. Mid-dorsal stripe in the Wood Frog. *Journal of Heredity* 57:65-67.
- Brown, B.C. 1950. An annotated check list of the reptiles and amphibians of Texas. Baylor University, Waco, TX.
- Brown, C., K. Kiehl and L. Wilkinson. 2012. Advantages of long-term, multi-scale monitoring: assessing the current status of the Yosemite Toad (*Anaxyrus [Bufo] canorus*) in the Sierra Nevada, California, USA. *Herpetological Conservation and Biology* 7:115-131.
- Brown, C.J., B. Blossey, J.C. Maerz, and S.J. Joule. 2006. Invasive plant and experimental venue affect tadpole performance. *Biological Invasions* 8:327-338.
- Brown, D. 2009. Amphibian populations at the Celery Bog Nature Area and the potential

- effects of land use and water quality. M.S. thesis, Purdue University, West Lafayette, IN.
- Brown, D.R. 1984. *Rana palustris* (Pickerel Frog). Oviposition. *Herpetological Review* 15:110-111.
- Brown, E.E. 1980. Some historical data bearing on the Pine Barrens Treefrog, *Hyla andersoni*, in South Carolina. *Brimleyana* 3:113-117.
- Brown, E.E. 1992. Notes on amphibians and reptiles of the western Piedmont of North Carolina. *Journal of the Elisha Mitchell Scientific Society* 108:38-54.
- Brown, H.A. 1967. Embryonic temperature adaptations and genetic compatibility in two allopatric populations of the Spadefoot Toad, *Scaphiopus hammondi*. *Evolution* 21:742-761.
- Brown, H.A. 1969. The heat resistance of some anuran tadpoles (Hylidae and Pelobatidae). *Copeia* 1969:138-147.
- Brown, H.A. 1975a. Embryonic temperature adaptations of the Pacific Treefrog, *Hyla regilla*. *Comparative Biochemistry and Physiology* 51A:863-873.
- Brown, H.A. 1975b. Reproduction and development of the Red-legged Frog, *Rana aurora*, in northwestern Washington. *Northwest Science* 49:241-252.
- Brown, H.A. 1975c. Temperature and development of the Tailed Frog, *Ascaphus truei*. *Comparative Biochemistry and Physiology* 50A:397-405.
- Brown, H.A. 1976. The status of California and Arizona populations of the Western Spadefoot Toads (genus *Scaphiopus*). *Natural History Museum of Los Angeles County Contributions in Science No.* 286:1-15.
- Brown, H.A. 1977. A case of interbreeding between *Rana aurora* and *Bufo boreas* (Amphibia, Anura). *Journal of Herpetology* 11:92-94.
- Brown, H.A. 1989. Tadpole development and growth of the Great Basin Spadefoot Toad, *Scaphiopus intermontanus*, from central Washington. *Canadian Field-Naturalist* 103:531-534.
- Brown, H.A. 1990. Morphological variation and age-class determination in overwintering tadpoles of the Tailed Frog, *Ascaphus truei*. *Journal of Zoology* 220:171-184.
- Brown, J.S. 1956. The frogs and toads of Alabama. Ph.D. diss., University of Alabama, Tuscaloosa.
- Brown, J.S., and H.T. Boschung Jr. 1954. *Rana palustris* in Alabama. *Copeia* 1954:226.
- Brown, L.E. 1964. An electrophoretic study of variation in the blood proteins of the toads *Bufo americanus* and *Bufo woodhousei*. *Systematic Zoology* 13:92-95.
- Brown, L.E. 1969. Natural hybrids between two toad species in Alabama. *Quarterly Journal of the Florida Academy of Science* 32:285-290.
- Brown, L.E. 1970. Interspecies interactions as possible causes of racial size differences in the toads *Bufo americanus* and *Bufo woodhousei*. *Texas Journal of Science* 21:261-267.
- Brown, L.E. 1971a. Natural hybridization and reproductive ecology of two toad species in a disturbed environment. *American Midland Naturalist* 86:78-85.
- Brown, L.E. 1971b. Natural hybridization and trend toward extinction in some relict Texas toad populations. *Southwestern Naturalist* 16:185-199.
- Brown, L.E. 1973. Speciation in the *Rana pipiens* complex. *American Zoologist* 13:73-79.
- Brown, L.E. 1974. Behavioral reactions of bullfrogs while attempting to eat toads. *Southwestern Naturalist* 19:329-340.
- Brown, L.E. 1975. The status of the near-extinct Houston toad (*Bufo houstonensis*) with recommendations for its conservation. *Herpetological Review* 6:37-40.
- Brown, L.E. 1978. Subterranean feeding by the chorus frog *Pseudacris streckeri* (Anura: Hylidae). *Herpetologica* 34:212-216.
- Brown, L.E. 2012. *Pseudacris streckeri illinoensis* (Illinois Chorus Frog). Large wound in holotype. *Herpetological Bulletin* (112):43-44.
- Brown, L.E., and J.R. Pierce. 1965. Observations on the breeding behavior of certain anuran amphibians. *Texas Journal of Science* 26:313-317.
- Brown, L.E., and J.R. Pierce. 1967. Male-male interactions and chorusing intensities of the Great Plains Toad, *Bufo cognatus*. *Copeia* 1967:149-154.
- Brown, L.E., and M.A. Ewert. 1971. A natural hybrid between the toads *Bufo hemiophrys* and *Bufo cognatus* in Minnesota. *Journal of Herpetology* 5:78-82.
- Brown, L.E., and J.R. Brown. 1972a. Call types of the *Rana pipiens* complex in Illinois. *Science* 176:928-929.
- Brown, L.E., and J.R. Brown. 1972b. Mating calls and distributional records of treefrogs of the *Hyla versicolor* complex in Illinois. *Journal*

- of Herpetology 6:233-234.
- Brown, L.E., and M.J. Littlejohn. 1972. Male release call in the *Bufo americanus* group. Pp. 310- 323 In W.F. Blair (ed.), Evolution in the Genus *Bufo*. University of Texas Press, Austin.
- Brown, L.E., and J.R. Brown. 1973. Notes on breeding choruses of two anurans (*Scaphiopus holbrookii*, *Pseudacris streckeri*) in southern Illinois. Natural History Miscellanea (192):1-3.
- Brown, L.E., and J.R. Brown. 1977. Comparison of environmental and body temperatures as predictors of mating call parameters of spring peepers. American Midland Naturalist 97:209-211.
- Brown, L.E., and R.S. Funk. 1977. Absence of dorsal spotting in two species of leopard frogs (Anura: Ranidae). Herpetologica 33:290-293.
- Brown, L.E., and D.B. Means. 1984. Fossorial behavior and ecology of the chorus frog *Pseudacris ornata*. Amphibia-Reptilia 5:261-273.
- Brown, L.E., and G.B. Rose. 1988. Distribution, habitat, and calling season of the Illinois Chorus Frog (*Pseudacris streckeri illinoensis*) along the lower Illinois River. Illinois Natural History Survey Biological Notes 132:1-13.
- Brown, L.E., and J.E. Cima. 1998. Illinois Chorus Frogs and the Sand Lake dilemma. Pp. 301-311 In M.J. Lannoo (ed.), Status & Conservation of Midwestern Amphibians. University of Iowa Press, Iowa City.
- Brown, L.E., and A. Mesrobian. 2005. Houston Toads and Texas politics. Pp. 150-167 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Brown, L.E., H.O. Jackson, and J.R. Brown. 1972. Burrowing behavior of the chorus frog, *Pseudacris streckeri*. Herpetologica 28:325-328.
- Brown, L.E., M.A. Morris, and T.R. Johnson. 1993. Zoogeography of the Plains Leopard Frog (*Rana blairi*). Bulletin of the Chicago Academy of Sciences 15:1-13.
- Brown, M.B., and C.R. Brown. 2009. *Lithobates catesbeianus* (American Bullfrog). Predation on Cliff Swallows. Herpetological Review 40:206.
- Brown, M.G., E. K. Dobbs, J. W. Snodgrass, and D. R. Ownby. 2012. Ameliorative effects of sodium chloride on acute copper toxicity among Cope's Gray Tree Frog (*Hyla chrysoscelis*) and Green Frog (*Rana clamitans*) embryos. Environmental Toxicology and Chemistry 31:836-842.
- Brown, R.E. 1972. Size variation and food habits of larval Bullfrogs, *Rana catesbeiana* Shaw, in western Oregon. Ph.D. diss., Oregon State University, Corvallis.
- Brown, R.L. 1974. Diets and habitat preferences of selected anurans in southeast Arkansas. American Midland Naturalist 91:468-473.
- Brown, R.M., and D.H. Taylor. 1995. Compensatory escape mode trade-offs between swimming performance and maneuvering behavior through larval ontogeny of the Wood Frog, *Rana sylvatica*. Copeia 1995:1-7.
- Brown, W. 1953. Brolo Frog Farm. Privately published, West Frankfort, IL.
- Brown, W.C., and J.R. Slater. 1939. The amphibians and reptiles of the islands of the state of Washington. Occasional Papers, Department of Biology, College of Puget Sound No. 4:6-31.
- Browne, C.L., and C.A. Paszkowski. 2010. Factors affecting the timing of movements to hibernation sites by Western Toads (*Anaxyrus boreas*). Herpetologica 66:250-258.
- Browne, C.L., C.A. Paszkowski, A.L. Foote, A. Moenting, and S.M. Boss. 2009. The relationship of amphibian abundance to habitat features across spatial scales in the Boreal Plains. Ecoscience 16:209-223.
- Brues, C.T. 1932. Further studies on the fauna of North American hot springs. Proceedings of the American Academy of Arts and Science 67:185-303.
- Brugger, K.E. 1984. Aspects of reproduction in the Squirrel Treefrog, *Hyla squirella*. M.S. thesis, University of Florida, Gainesville.
- Bruggers, R.L. 1973. Food habits of Bullfrogs in northwest Ohio. Ohio Journal of Science 73:185-188.
- Bruggers, R.L., and W.B. Jackson. 1974. Eye-lens weight of the Bullfrog (*Rana catesbeiana*) related to larval development, transformation, and age of adults. Ohio Journal of Science 74:282-286.
- Bruneau, M., and E. Magnin. 1980a. Vie larvaire des ouaouarons *Rana catesbeiana* Shaw (Amphibia Anura) des Laurentides, Québec. Canadian Journal of Zoology 58:169-174.
- Bruneau, M., and E. Magnin. 1980b. Croissance, nutrition, et reproduction des ouaouarons *Rana catesbeiana* Shaw (Amphibia Anura) des Laurentides au nord du Montréal. Canadian

- Journal of Zoology 58:175-183.
- Brunner, J.L., K.E. Barnett, C.J. Gosier, S.A. McNulty, M.J. Rubbo, and M.B. Kolozsvary. 2011. *Ranavirus* infection in die-offs of vernal pool amphibians in New York, USA. Herpetological Review 42:76-79.
- Bryce, F.D. 1975. Reptiles and amphibians of the Wichitas. Great Plains Journal 15:65-78.
- Bryer, P.J. 2002. The embryonic world of Wood Frogs, *Rana sylvatica*: natal pond learning and anti-predator behaviors. M.S. thesis, University of Maine, Orono.
- Buchanan, B. W. 1988. Territoriality in the Squirrel Treefrog, *Hyla squirella*: competition for diurnal retreat sites. M.S. thesis, University of Southwestern Louisiana, Lafayette.
- Buchanan, B.W. 1993. Effects of enhanced lighting on the behaviour of nocturnal frogs. Animal Behaviour 45:893-899.
- Buck, J.C., E.A. Scheessele, R.A. Relyea and A.R. Blaustein. 2012. The effects of multiple stressors on wetland communities: pesticides, pathogens and competing amphibians. Freshwater Biology 57: 61-73.
- Buckle, J. 1971. A recent introduction of frogs to Newfoundland. Canadian Field-Naturalist 85:72-74.
- Budischak, S.A., L.K. Belden and W.A. Hopkins. 2008. The effects of malathion on embryonic development and latent susceptibility to trematode parasites in ranid tadpoles. Environmental Toxicology and Chemistry 27:2496-2500.
- Budischak S.A., L.K. Belden, and W.A. Hopkins. 2009. Relative toxicity of malathion to trematode-infected and noninfected *Rana palustris* tadpoles. Archives of Environmental Contamination and Toxicology 56:123-128.
- Buhlmann, K.A. 2001. A biological inventory of eight caves in northwestern Georgia with conservation implications. Journal of Cave and Karst Studies 63:91-98.
- Buhlmann, K.A., and J.C. Mitchell. 1997. Ecological notes on the amphibians and reptiles of the Naval Surface Warfare Center, Dahlgren Laboratory, King George County, Virginia. Banisteria 9:45-51.
- Buhlmann, K.A., J.C. Mitchell, and C.A. Pague. 1993. Amphibian and small mammal abundance and diversity in saturated forested wetlands and adjacent uplands of southeastern Virginia. Pp. 1-7 In S.D. Eckles, A. Jennings, A. Spingarn, and C. Wienhold (eds.), Proceedings of a Workshop on Saturated Forested Wetlands in the Mid-Atlantic Region. The State of the Science. U.S. Fish and Wildlife Service, Annapolis, MD.
- Bulen, B.J., and C.A. Distel. 2011. Carbaryl concentration gradients in realistic environments and their influence on our understanding of the tadpole food web. Archives of Environmental Contamination and Toxicology 60:343-350.
- Bulger, J.B., N.J. Scott Jr., and R.B. Seymour. 2003. Terrestrial activity and conservation of adult California Red-legged Frogs *Rana aurora draytonii* in coastal forests and grasslands. Biological Conservation 110:85-95.
- Bull, E.L. 2006. Sexual differences in the ecology and habitat selection of Western Toads (*Bufo boreas*) in northeastern Oregon. Herpetological Conservation and Biology 1:27-38.
- Bull, E.L. 2009. Dispersal of newly metamorphosed and juvenile Western Toads (*Anaxyrus boreas*) in northeastern Oregon, USA. Herpetological Conservation and Biology 4:236-247.
- Bull, E.L., and B.E. Carter. 1996. Winter observations of tailed frogs in northeastern Oregon. Northwestern Naturalist 77:45-47.
- Bull, E.L., and M.P. Hayes. 2000. Livestock effects on reproduction of the Columbia Spotted Frog. Journal of Range Management 53:291-294.
- Bull, E.L., and M.P. Hayes. 2001. Post-breeding season movements of Columbia Spotted Frogs (*Rana luteiventris*) in northeastern Oregon. Western North American Naturalist 61:119-123.
- Bull, E.L., and D.B. Marx. 2002. Influence of fish and habitat on amphibian communities in high elevation lakes in northwestern Oregon. Northwest Science 76:240-248.
- Bull, E.L., and C. Carey. 2008. Breeding frequency of Western Toads (*Bufo boreas*) in northeastern Oregon. Herpetological Conservation and Biology 3:282-288.
- Bull, E.L., and J.L. Hayes. 2009. Selection of diet by metamorphic and juvenile Western Toads (*Bufo boreas*) in northwestern Oregon. Herpetological Conservation and Biology 4:85-95.
- Bullard, A.J. 1965. Additional records of the tree frog *Hyla andersonii* from the Coastal Plain of North Carolina. Herpetologica 21:154-155.
- Bumpus, H.C. 1885. Reptiles and batrachians of

- Rhode Island. X. Class Batrachia. Random Notes on Natural History 2(7): 52-53.
- Bumpus, H.C. 1885a. Reptiles and batrachians of Rhode Island. XI. Random Notes on Natural History 2(8): 59-60.
- Bumpus, H.C. 1885b. Reptiles and batrachians of Rhode Island. XII. Random Notes on Natural History 2(9): 68-69.
- Bumpus, H.C. 1885c. Reptiles and batrachians of Rhode Island. XIII. Random Notes on Natural History 2(10): 75.
- Bumpus, H.C. 1885d. Reptiles and batrachians of Rhode Island. XIV. Random Notes on Natural History 2(11): 83-84.
- Bumpus, H.C. 1885e. Reptiles and batrachians of Rhode Island. XV. Random Notes on Natural History 2(12): 93.
- Bumpus, H.C. 1886a. Reptiles and batrachians of Rhode Island. XVI. Random Notes on Natural History 3(1): 7-8.
- Bumpus, H.C. 1886b. Reptiles and batrachians of Rhode Island. XVII. Random Notes on Natural History 3(2): 13.
- Bundy, D., and C.R. Tracy. 1977. Behavioral response of American Toads (*Bufo americanus*) to stressful thermal and hydric environments. *Herpetologica* 33:455-458.
- Bunnell, J.F., and R.A. Zampella. 1999. Acid water anuran pond communities along a regional forest to agro-urban ecotone. *Copeia* 1999:614-627.
- Burbrink, F.T., C.A. Phillips, and E.J. Heske. 1998. A riparian zone in southern Illinois as a potential dispersal corridor for reptiles and amphibians. *Biological Conservation* 86:107-115.
- Burdick, S.L. 2008. Blanchard's Cricket Frog seasonal status and distribution in southeastern South Dakota. M.S. thesis, University of South Dakota, Vermillion.
- Burdick, S.L., and D.L. Swanson. 2010. Status, distribution and microhabitats of Blanchard's Cricket Frog *Acris blanchardi* in South Dakota. *Herpetological Conservation and Biology* 5:9-16.
- Burger, W.L. Jr., and A.N. Bragg. 1947. Notes on *Bufo boreas* (B. and G.) from the Gothic region of Colorado. *Proceedings of the Oklahoma Academy of Science* 27:61-65.
- Burger, W.L., P.W. Smith, and H.M. Smith. 1949. Notable records of reptiles and amphibians in Oklahoma, Arkansas, and Texas. *Journal of the Tennessee Academy of Science* 14:130-134.
- Burgess, R.C. Jr. 1950. Development of spadefoot toad larvae under laboratory conditions. *Copeia* 1950:49-53.
- Burgett, A.A., C.D. Wright, G.R. Smith, D.T. Fortune, and S.L. Johnson. 2007. Impact of ammonium nitrate on Wood Frog (*Rana sylvatica*) tadpoles: effects on survivorship and behavior. *Herpetological Conservation and Biology* 2:29-34.
- Burke, V. 1933. Bacteria as food for vertebrates. *Science* 78:194-195.
- Burkett, R.D. 1969. An ecological study of the Cricket Frog, *Acrida crepitans*, in northeastern Kansas. Ph.D. diss., University of Kansas, Lawrence.
- Burkett, R.D. 1984. An ecological study of the Cricket Frog, *Acrida crepitans*. Pp. 89-103 In R.A. Seigel, L.E. Hunt, J.L. Knight, L. Malaret, and N.L. Zuschlag (eds.), *Vertebrate Ecology and Systematics. A Tribute to Henry S. Fitch*. Museum of Natural History, University of Kansas, Lawrence.
- Burkett, R.D. 1989. Status of diploid/tetraploid Gray Treefrogs (*Hyla chrysoscelis*-*Hyla versicolor*) in the mid-South. Pp. 51-57 In A.F. Scott (ed.), *Proceedings of the Second Annual Symposium on the Natural History of Lower Tennessee and Cumberland Valleys*. Center for Field Biology, Austin Peay State University, Clarksville, TN.
- Burkett, R.D. 1991. Ecological comparisons of some closely related species of amphibians in Land Between the Lakes and the mid-South. *Journal of the Tennessee Academy of Science* 66:161-164.
- Burkholder, G. 1998. *Hyla chrysoscelis* (Gray Treefrog). Hibernacula. *Herpetological Review* 29:231.
- Burkholder, L.L., and L.V. Diller. 2007. Life history of postmetamorphic Coastal Tailed Frogs (*Ascaphus truei*) in northwestern California. *Journal of Herpetology* 41:251-262.
- Burmeister, S., W. Wilczynski, and M.J. Ryan. 1999a. Temporal call changes and prior experience affect graded signalling in the cricket frog. *Animal Behaviour* 57:611-618.
- Burmeister, S., J. Konieczka, and W. Wilczynski. 1999b. Agonistic encounters in a cricket frog (*Acrida crepitans*) chorus: behavioral outcomes vary with local competition and within breeding season. *Ethology* 105:335-347.
- Burmeister, S., A.G. Ophir, M.J. Ryan, and W. Wilczynski. 2002. Information transfer during

- cricket frog contests. *Animal Behaviour* 64:715-725.
- Burne M.R. 2000. Conservation of vernal pool breeding amphibian communities: habitat and landscape association with community richness. M.S. thesis, University of Massachusetts, Amherst.
- Burne, M.R., and C.R. Griffin. 2005. Habitat associations of pool-breeding amphibians in eastern Massachusetts, USA. *Wetlands Ecology and Management* 13:247-259.
- Burnett, S. 1997. Colonizing Cane Toads cause population declines in native predators: reliable anecdotal information and management implications. *Pacific Conservation Biology* 3:65-72.
- Burnley, J.M. 1973. Eastern Spadefoots, *Scaphiopus holbrookii*, found on the south fork of Long Island during 1973. *Englehardtia* 6:10.
- Burnley, J.M. 1979. Photographic glimpses of the Long Island Pine Barrens. Privately published, Massapequa Park, NY. 11 pp.
- Burress, R.M. 1982. Effects of synergized rotenone on nontarget organisms in ponds. U.S. Fish and Wildlife Service, Investigations in Fish Control No 91:1-7.
- Burroughs, J. 1913. The Writings of John Burroughs. 17. The Summit of the Years. Houghton Mifflin Co., Boston, MA.
- Bursey, C.R., and W.F. DeWolf II. 1998. Helminths of the frogs, *Rana catesbeiana*, *Rana clamitans*, and *Rana palustris*, from Coshocton County, Ohio. *Ohio Journal of Science* 98:28-29.
- Bursey, C.R., and S.R. Goldberg. 2001. *Falcaustra lowei* n. sp. and other helminths from the Tarahumara Frog, *Rana tarahumarae* (Anura: Ranidae), from Sonora, Mexico. *Journal of Parasitology* 87:340-344.
- Bursey, C.R., S.R. Goldberg, and J.B. Bettaso. 2010. Persistence and stability of the component helminth community of the Foothill Yellow-legged Frog, *Rana boylii* (Ranidae), from Humboldt County, California, 1964-1965, versus 2004-2007. *American Midland Naturalist* 163:476-482.
- Burt, C.E. 1933. A contribution to the herpetology of Kentucky. *American Midland Naturalist* 14:669-679.
- Burt, C.E. 1935. Further records of the ecology and distribution of amphibians and reptiles in the Middle West. *American Midland Naturalist* 16:311-336.
- Burt, C.E. 1936. Contributions to the herpetology of Texas. 1. Frogs of the genus *Pseudacris*. *American Midland Naturalist* 17:770-775.
- Burt, C.E. 1937 (1938). Contributions to Texan herpetology. 6. Narrow-mouthed froglike toads (*Microhyla* and *Hypopachus*). *Papers of the Michigan Academy of Science, Arts, and Letters* 23:607-610.
- Burton, E.C., M.J. Gray, and A.C. Schmutz. 2006. Comparison of anuran call survey durations in Tennessee wetlands. *Proceedings of the Annual Conference of Southeastern Fish and Wildlife Agencies*, pp. 15-18.
- Burton, E.C., D.L. Miller, E.L. Styer, and M.J. Gray. 2008. Amphibian ocular malformation associated with Frog Virus 3. *Veterinary Journal* 177:442-444.
- Burton, E.C., M.J. Gray, A.C. Schmutz, and D.L. Miller. 2009. Differential responses of postmetamorphic amphibians to cattle grazing in wetlands. *Journal of Wildlife Management* 73:269-277.
- Bury, R.B. 1968. The distribution of *Ascaphus truei* in California. *Herpetologica* 24:39-46.
- Bury, R.B. 1973. The Cascade Frog, *Rana cascadae*, in the North Coast Range of California. *Northwest Science* 47:228-229.
- Bury, R.B. 1983. Differences in amphibian populations in logged and old growth redwood forest. *Northwest Science* 57:167-178.
- Bury, R.B. 1988. Habitat relationships and ecological importance of amphibians and reptiles. Pp. 61-76 In K.J. Raedeke (ed.), *Streamside Management. Riparian Wildlife and Forestry Interactions*. Institute of Forest Resources, University of Washington, Contribution No. 59.
- Bury, R.B. 2008. Amphibians in the Willamette Valley, Oregon: survival in a rapidly urbanizing and developing region. Pp. 435-444 In J.C. Mitchell, R.E Jung Brown, and B. Bartholomew (eds.), *Urban Herpetology. Herpetological Conservation 3*. Society for the Study of Amphibians and Reptiles, Salt Lake City, UT.
- Bury, R.B., and R.A. Luckenbach. 1976. Introduced amphibians and reptiles in California. *Biological Conservation* 10:1-14.
- Bury, R.B., and J.A. Whelan. 1984. Ecology and management of the bullfrog. U.S. Fish and Wildlife Service Resource Publication 155.
- Bury, R.B., and P.S. Corn. 1988a. Responses of aquatic and streamside amphibians to timber harvest: a review. Pp. 165-181 In K.J. Raedeke

- (ed.), Streamside Management. Riparian Wildlife and Forestry Interactions. Institute of Forest Resources, University of Washington, Contribution No. 59.
- Bury, R.B., and P.S. Corn. 1988b. Douglas-fir forests in the Oregon and Washington Cascades: relation of the herpetofauna to stand age and moisture. Pp. 11-22 In R.C. Szaro, K.E. Severson, and D.R. Patton (eds.), Management of Amphibians, Reptiles, and Small Mammals in North America. USDA Forest Service General and Technical Report RM-166.
- Bury, R.B., and M.J. Adams. 1999. Variation in age at metamorphosis across a latitudinal gradient for the tailed frog, *Ascaphus truei*. *Herpetologica* 55:283-291.
- Bury, R.B., C.K. Dodd Jr., and G.M. Fellers. 1980. Conservation of the Amphibia of the United States. A Review. U.S. Fish and Wildlife Service Resource Publication 134.
- Bury, R.B., P.S. Corn, and K.B. Aubry. 1991a. Regional patterns of terrestrial amphibian communities in Oregon and Washington. Pp. 341-350 In L.F. Ruggiero, K.B. Aubry, A.B. Carey, and M.H. Huff (coordinators), Wildlife and Vegetation of Unmanaged Douglas-fir Forests. USDA Forest Service General Technical Report PNW-GTR-285, Portland, OR.
- Bury, R.B., P.S. Corn, K.B. Aubrey, F.F. Gilbert, and L.L.C. Jones. 1991b. Aquatic amphibian communities in Oregon and Washington. Pp. 353-362 In L.F. Ruggiero, K.B. Aubry, A.B. Carey, and M.H. Huff (coordinators), Wildlife and Vegetation of Unmanaged Douglas-fir Forests. USDA Forest Service General Technical Report PNW-GTR-285, Portland, OR.
- Bury, R.B., P. Loafman, D. Rofkar, and K.I. Mike. 2001. Clutch sizes and nests of tailed frogs from the Olympic Peninsula, Washington. *Northwest Science* 75:419-422.
- Busack, S.D., and R.B. Bury. 1975. Toad in exile. *National Parks and Conservation Magazine* (March):15-16.
- Busby, W.H., and W.R. Brecheisen. 1997. Chorusing phenology and habitat associations of the Crawfish Frog, *Rana areolata* (Anura: Ranidae), in Kansas. *Southwestern Naturalist* 42:210-217.
- Busby, W.H., and J.R. Parmelee. 1996. Historical changes in a herpetofaunal assemblage in the Flint Hills of Kansas. *American Midland Naturalist* 135:81-91.
- Busby, W.H., J.T. Collins, and G. Suleiman. 2005. The Snakes, Lizards, Turtles, and Amphibians of Fort Riley and Vicinity. 2nd rev. ed. Kansas Biological Survey, Lawrence. [first edition, 1996]
- Buseck, R.S., D.A. Keinath, and M. Geraud. 2005. Species assessment for Great Basin Spadefoot Toad (*Spea intermontana*) in Wyoming. Wyoming Natural Diversity Database, University of Wyoming, Laramie.
- Bush, F.M., and E.F. Menhinick. 1962. The food of *Bufo woodhousei fowleri* Hinckley. *Herpetologica* 18:110-114.
- Bush, S.L., H.C. Gerhardt, and J. Schul. 2002. Pattern recognition and call preferences in treefrogs (Anura: Hylidae): a quantitative analysis using a no-choice paradigm. *Animal Behaviour* 63:7-14.
- Bushnell, R.J., E.P. Bushnell, and M.V. Parker. 1939. A chromosome study of five members of the Family Hylidae. *Journal of the Tennessee Academy of Science* 14:209-215.
- Butterfield, B.P. 1988. Age structure and reproductive biology of the Illinois Chorus Frog (*Pseudacris streckeri illinoensis*) from northeastern Arkansas. M.S. thesis, Arkansas State University, Jonesboro.
- Butterfield, B.P., W.E. Meshaka, and S.E. Trauth. 1989. Fecundity and egg mass size of the Illinois chorus frog, *Pseudacris streckeri illinoensis* (Hylidae), from northeastern Arkansas. *Southwestern Naturalist* 34:556-557.
- Butterfield, B.P., H.A. Messer, L.D. Bennie, and J.W. Stanley. 2009. Distribution *Pseudacris crucifer* (Spring Peeper). *Herpetological Review* 40:234-235.
- Buttermore, K.F., P.N. Litkenhaus, D.C. Torpey, G.R. Smith and J.E. Rettig. 2011. Effects of Mosquitofish (*Gambusia affinis*) cues on Wood Frog (*Lithobates sylvaticus*) tadpole activity. *Acta Herpetologica* 6:81-85.
- Buzo, D. 2008. A GIS model for identifying potential breeding habitat for the Houston Toad (*Bufo houstonensis*). M.S. thesis, Texas State University-San Marcos, TX, USA.
- Cabarle, K.C. 2006. Geographic distribution: *Rana sylvatica* (Wood Frog). *Herpetological Review* 37:359.
- Cagle, F.R. 1941. Key to the reptiles and amphibians of Illinois. Museum of Natural and Social Sciences Southern Illinois Normal University 5: 1-32.

- Cagle, F.R. 1942. Herpetological fauna of Jackson and Union counties, Illinois. American Midland Naturalist 28:164-200.
- Cahn, A.R. 1926. A set of albino frog eggs. Copeia (151):107-109.
- Caldwell, J.P. 1982. Disruptive selection: a tail color polymorphism in *Acris* tadpoles in response to differential predation. Canadian Journal of Zoology 60:2818-2827.
- Caldwell, J.P. 1986. Selection of egg deposition sites: a seasonal shift in the Southern Leopard Frog, *Rana sphenocephala*. Copeia 1986:249-253.
- Caldwell, J.P. 1987. Demography and life history of two species of chorus frogs (Anura: Hylidae) in South Carolina. Copeia 1987:114-127.
- Caldwell, J.P., J.H. Thorp, and T.O. Jersey. 1980. Predator-prey relationships among larval dragonflies, salamanders, and frogs. Oecologia 46:285-289.
- Calef, G.W. 1973a. Natural mortality of tadpoles in a population of *Rana aurora*. Ecology 54:741-758.
- Calef, G.W. 1973b. Spatial distribution and “effective” breeding population of Red-legged Frogs (*Rana aurora*) in Marion Lake, British Columbia. Canadian Field-Naturalist 87:279-284.
- Calfee, R.D., and E.E. Little. 2003. The effects of ultraviolet-B radiation on the toxicity of fire-fighting chemicals. Environmental Toxicology and Chemistry 22:1525-1531.
- Calhoun, A.J.K., T.E. Walls, S.S. Stockwell, and M.M. McCollough. 2003. Evaluating several vernal pools as a basis for conservation strategies: a Maine case study. Wetlands 23:70-81.
- Cameron, J.A. 1940. Effect of fluorine on hatching time and hatching stage in *Rana pipiens*. Ecology 21:288-292.
- Camp, C.D., and R.A. Pyron. 2003. Geographic distribution: *Rana sylvatica* (Wood Frog). Herpetological Review 34:382.
- Camp, C.D., C.E. Condee, and D.G. Lovell. 1990. Oviposition, larval development, and metamorphosis in the Wood Frog, *Rana sylvatica* (Anura: Ranidae), in Georgia. Brimleyana 16:17-21.
- Camp, C.L. 1915. *Batrachoseps major* and *Bufo cognatus californicus*, new amphibia from southern California. University of California Publications in Zoology 12:327-334.
- Camp, C.L. 1916. Description of *Bufo canorus*, a new toad from the Yosemite National Park. University of California Publications in Zoology 17:59-62.
- Camp, C.L. 1917. Notes on the systematic status of the toads and frogs of California. University of California Publications in Zoology 17:115-125.
- Campbell, B. 1931. *Rana tarahumarae*, a frog new to the United States. Copeia 1931:164.
- Campbell, B. 1934. Report on a collection of reptiles and amphibians made in Arizona during the summer of 1933. Occasional Papers of the Museum of Zoology, University of Michigan No. 289.
- Campbell, C.A. 1969. Who cares for the Fowler’s Toad? Ontario Naturalist 7(4):24-27.
- Campbell, C.E., I.G. Warkentin, and K.G. Powell. 2004. Factors influencing the distribution and potential spread on introduced anurans in western Newfoundland. Northeastern Naturalist 11:151-162.
- Campbell, J.B. 1970a. Life history of *Bufo boreas boreas* in the Colorado Front Range. Ph.D. diss., University of Colorado, Boulder.
- Campbell, J.B. 1970b. Food habits of the Boreal Toad, *Bufo boreas boreas*, in the Colorado Front Range. Journal of Herpetology 4:83-85.
- Campbell, J.B. 1970c. Hibernacula of a population of *Bufo boreas boreas* in the Colorado Front Range. Herpetologica 26:278-282.
- Campbell, J.B. 1970d. New elevational records for the Boreal Toad (*Bufo boreas boreas*). Arctic and Alpine Research 2:157-159.
- Campbell, J.B. 1976. Environmental controls on boreal toad populations in the San Juan Mountains. Pp. 289-295 In H.W. Steinhoff and J.D. Ives (eds.), Ecological Impacts of Snowpack Augmentation in the San Juan Mountains, Colorado. San Juan Ecology Project, Colorado State University Publishing, Fort Collins.
- Campbell, J.B., and W.G. Degenhardt. 1971. *Bufo boreas boreas* in New Mexico. Southwestern Naturalist 16:209-220.
- Campbell, K.R., T.S. Campbell, and S.A. Johnson. 2010. The use of PVC pipe refugia to evaluate spatial and temporal distributions of native and introduced treefrogs. Florida Scientist 73:78-88.
- Campbell, R.A. 1968. A comparative study of the parasites of certain Salientia from Pocohontas State Park, Virginia. Virginia Journal of Science 19:13-20.

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- Camponelli, K.M., R.E. Casey, J.W. Snodgrass, S.M. Lev, and E.R. Landa. 2009. Impacts of weathered tire debris on the development of *Rana sylvatica* larvae. Chemosphere 74:717-722.
- Capranica, R.R. 1965. The Evoked Vocal Response of the Bullfrog. MIT Press, Cambridge, MA.
- Capranica, R.R. 1968. The vocal repertoire of the bullfrog (*Rana catesbeiana*). Behaviour 31:302-325.
- Capranica, R.R., L.S. Frishkopf, and E. Nevo. 1973. Encoding of geographic dialects in the auditory system of the Cricket Frog. Science 182:1272-1275.
- Carey, C. 1976. Thermal physiology and energetics of Boreal Toads, *Bufo boreas boreas*. Ph.D. diss., University of Michigan, Ann Arbor.
- Carey, C. 1993. Hypothesis concerning the causes of the disappearance of Boreal Toads from the mountains of Colorado. Conservation Biology 7:355-362.
- Carey, C., G.D. Maniero, and J.F. Stinn. 1996. Effect of cold on immune function and susceptibility to bacterial infection in toads (*Bufo marinus*). Pp. 123-129 In F. Geiser, A.J. Hulbert, and S.C. Nicol (eds.), Adaptations to Cold. Tenth International Hibernation Symposium. University of New England Press, Armidale, Australia.
- Carey, C., P.S. Corn, M.S. Jones, L.J. Livo, E. Muths, and C.W. Loeffler. 2005. Factors limiting the recovery of Boreal Toads (*Bufo b. boreas*). Pp. 222-236 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Carey, C., J.E. Bruzgul, L.J. Livo, M.L. Walling, K.A. Kuehl, B.F. Dixon, A.P. Pessier, R.A. Alford, and K.B. Rogers. 2006. Experimental exposures of Boreal Toads (*Bufo boreas*) to a pathogenic chytrid fungus (*Batrachochytrium dendrobatidis*). EcoHealth 3:5-21.
- Carey, S.D. 1982. Geographic distribution. *Eleutherodactylus planirostris*. Herpetological Review 13:130.
- Carfagno, G.L.F., J.M. Carithers, L.J. Mycoff and R.M. Lehtinen. 2011. How the Cricket Frog lost its spot: the inducible defense hypothesis. Herpetologica 67:386-396.
- Carl, G.C. 1943. The amphibians of British Columbia. British Columbia Provincial Museum, Bulletin No. 2.
- Carl, G.C. 1942. The Western Spadefoot Toad in British Columbia. Copeia 1942:129.
- Carl, G.C., and G.A. Hardy. 1943. Report on a collecting trip to the Lac La Hache area, British Columbia. Report of the British Columbia Provincial Museum for 1942:25-49.
- Carl, G.C. 1949. Extensions of known ranges of some amphibians in British Columbia. Herpetologica 5:139.
- Carpenter, C.C. 1953a. A study of hibernacula and hibernating associations of snakes and amphibians in Michigan. Ecology 34:74-80.
- Carpenter, C.C. 1953b. Aggregation behavior of tadpoles of *Rana p. pretiosa*. Herpetologica 9:77-78.
- Carpenter, C.C. 1954a. A study of amphibian movement in the Jackson Hole Wildlife Park. Copeia 1954:197-200.
- Carpenter, C.C. 1954b. Feeding aggregation of Narrow Mouth Toads (*Microhyla carolinensis olivacea*). Proceedings of the Oklahoma Academy of Science 35:45.
- Carpenter, C.C. 1955. The amphibians and reptiles of the University of Oklahoma Biological Station area in south central Oklahoma. Proceedings of the Oklahoma Academy of Science 36:39-46.
- Carpenter, C.C. 1957. Michigan's frogs and toads. Jack Pine Warbler 35:64-67.
- Carpenter, C.C., and D.E. Delzell. 1951. Road records as indicators of differential spring migrations of amphibians. Herpetologica 7:63-64.
- Carpenter, H.L., and E.O. Morrison. 1973. Feeding behavior of the Bullfrog, *Rana catesbeiana*, in northcentral Texas. Bios 44:188-193.
- Carr, A.F. Jr. 1940a. A contribution to the herpetology of Florida. University of Florida Publication, Biological Science Series 3(1):1-118.
- Carr, A.F. Jr. 1940b. Dates of frog choruses in Florida. Copeia 1940:55.
- Cartwright, M.E., S.E. Trauth, and J.D. Wilhide. 1998. Wood Frog (*Rana sylvatica*) use of wildlife ponds in northcentral Arkansas. Journal of the Arkansas Academy of Science 52:32-34.
- Cary, J.A. 2010. Determining habitat characteristics that predict oviposition site selection for pond-breeding Northern Red-legged Frogs (*Rana aurora*) in Humboldt County, California. M.A. thesis, Humboldt State University, Arcata, CA.

- Case, S.M. 1978. Biochemical systematics of members of the genus *Rana* native to western North America. Systematic Zoology 27:299-311.
- Case, S.M., P.G. Haneline, and M.F. Smith. 1975. Protein variation in several species of *Hyla*. Systematic Zoology 24:281-295.
- Cash, M.N., and J.P. Bogart. 1978. Cytological differentiation of the diploid-tetraploid species pair of North American treefrogs (Amphibia, Anura, Reptilia). Journal of Herpetology 12:555-558.
- Cash, W.B. 1994. Herpetofaunal diversity of a temporary wetland in the Southeast Atlantic Coastal Plain. M.S. thesis, Georgia Southern University, Statesboro.
- Casper, G.S. 1996. Geographic distributions of the amphibians and reptiles of Wisconsin. An interim report of the Wisconsin Herpetological Atlas Project. Milwaukee Public Museum, Milwaukee, WI.
- Casper, G.S. 1998. Review of the status of Wisconsin amphibians. Pp. 199-205 In M.J. Lannoo (ed.), Status & Distribution of Midwestern Amphibians. University of Iowa Press, Iowa City.
- Castano, B., S. Miely, G.R. Smith, and J.E. Rettig. 2010. Interactive effects of food availability and temperature on wood frog (*Rana sylvatica*) tadpoles. Herpetological Journal 20:209-211.
- Catalano, P.A., and A.M. White. 1977. New host records for *Haematoloechus complex* (Seely) Krull, 1933 from *Hyla crucifer* and *Rana sylvatica*. Ohio Journal of Science 77:99.
- Catesby, M. 1771. The Natural History of Carolina, Florida and the Bahama Islands. Benjamin White, London.
- Cecil, S.G., and J.J. Just. 1979. Survival rate, population density and development of a naturally occurring anuran larvae (*Rana catesbeiana*). Copeia 1979:447-453.
- Cely, J.E., and J.A. Sorrow Jr. 1986. Distribution and habitat of *Hyla andersonii* in South Carolina. Journal of Herpetology 20:102-104.
- Chamberlain, E.B. 1939. Frogs and toads of South Carolina. Charleston Museum Leaflet No. 12.
- Chamberlain, F.M. 1897. Notes on the edible frogs of the United States and their artificial propagation. U.S. Bureau of Fisheries for 1897:249-261.
- Chambers, D.L. 2011. Increased conductivity affects corticosterone levels and prey consumption in larval amphibians. Journal of Herpetology 45:219-223.
- Chan-McLeod, A.C.A., and A. Moy. 2007. Evaluating residual tree patches as stepping stones and short-term refugia for Red-legged Frogs. Journal of Wildlife Management 71:1836-1844.
- Chance, K.B. 2002. A telemetric study of winter habitat selection by the American bullfrog, *Rana catesbeiana*, in east-central Kansas. M.S. thesis, Emporia State University, Emporia, KS.
- Chandler, J.H., and L.L. Marking. 1975. Toxicity of the lampricide 3-trifluoromethyl-4-nitrophenol (TFM) to selected aquatic invertebrates and frog larvae. U.S. Fish and Wildlife Service, Investigations in Fish Control No. 62:1-7.
- Chandler, J.H., and L.L. Marking. 1982. Toxicity of rotenone to selected aquatic invertebrates and frog larvae. Progressive Fish Culturist 44:78-80.
- Chantell, C.J. 1970. Upper Pliocene frogs from Idaho. Copeia 1970:654-664.
- Chantell, C.J. 1971. Fossil amphibians from the Egelhoff Local Fauna of northcentral Nebraska. Contributions from the Museum of Paleontology, University of Michigan 23:239-246.
- Chapel, W.L. 1939. Field notes on *Hyla wrightorum* Taylor. Copeia 1939:225-227.
- Chatfield, M.W.H., B.B. Rothermel, C.S. Brooks, and J.B. Kay. 2009. Detection of *Batrachochytrium dendrobatis* in amphibians from the Great Smoky Mountains of North Carolina and Tennessee. Herpetological Review 40:176-179.
- Chelgren, N.D., D.K. Rosenberg, S.S. Heppell, and A.I. Gitelman. 2006. Carryover aquatic effects on survival of metamorphic frogs during pond emigration. Ecological Applications 16:250-261.
- Chelgren, N.D., C.A. Pearl, M.J. Adams, and J. Bowerman. 2008a. Demography and movement in a relocated population of Oregon spotted frogs (*Rana pretiosa*): influence of season and gender. Copeia 2008:742-751.
- Chelgren, N.D., D.K. Rosenberg, S.S. Heppell, and A.I. Gitelman. 2008b. Individual variation affects departure rate from the natal pond in an ephemeral pond-breeding anuran. Canadian Journal of Zoology 86: 260-267.
- Chelgren, N.D., B. Samora, M.J. Adams and B. McCreary. 2011. Using spatiotemporal models

- and distance sampling to map the space use and abundance of newly metamorphosed Western Toads (*Anaxyrus boreas*). Herpetological Conservation and Biology 6:175-190.
- Chen, C.Y., K.M. Hathaway, and C.L. Folt. 2004. Multiple stress effects of Vision™ herbicide, pH, and food on zooplankton and larval amphibian species from forest wetlands. Environmental Toxicology and Chemistry 23:823-831.
- Chen, C.Y., K.M. Hathaway, D.G. Thompson, and C.L. Folt. 2008. Multiple stressor effects of herbicide, pH, and food on wetland zooplankton and a larval amphibian. Ecotoxicology and Environmental Safety 71:209-218.
- Chen, G.J., and S.S. Desser. 1989. The Coccidia (Apicomplexa: Eimeriidae) of frogs from Algonquian Park, with descriptions of two new species. Canadian Journal of Zoology 67:1686-1689.
- Chen, T.-H., J.A. Gross, and W.H. Karasov. 2006. Sublethal effects of lead on Northern Leopard Frog (*Rana pipiens*) tadpoles. Environmental Toxicology and Chemistry 25:1383-1389.
- Cheng, T.C. 1961. Description, life history and developmental pattern of *Glypthelmins pennsylvaniensis* n. sp. (Trematoda: Brachycoeliidae), new parasite of frogs. Journal of Parasitology 47:469-477.
- Cheng, T.-H. 1929a. Intersexuality in *Rana cantabrigensis*. Journal of Morphology and Physiology 48:345-369.
- Cheng, T.-H. 1929b. A new case of intersexuality in *Rana cantabrigensis*. Biological Bulletin 57:412-421.
- Cheng, T.-H. 1930. Intersexuality in tadpoles of *Rana cantabrigensis*. Papers of the Michigan Academy of Science, Arts and Letters 11:353-368.
- Chermock, R.L. 1952. A key to the amphibians and reptiles of Alabama. Geological Survey of Alabama, Museum Paper 23.
- Chestnut, T., J.E. Johnson, and R.S. Wagner. 2008. Results of amphibian chytrid (*Batrachochytrium dendrobatidis*) sampling in Denali National Park, Alaska, USA. Herpetological Review 39:202-204.
- Childs, C. 2000. The Secret Knowledge of Water. Little, Brown and Co., New York.
- Childs, H.E. Jr. 1953. Selection by predation on albino and normal spadefoot toads. Evolution 7:228-233.
- Chivers, D.P., J.M. Kiesecker, A. Marco, E.L. Wildy, and A.R. Blaustein. 1999. Shifts in life history as a response to predation in Western Toads (*Bufo boreas*). Journal of Chemical Ecology 25:2455-2463.
- Chivers, D.P., J.M. Kiesecker, A. Marco, J. DeVito, M.T. Anderson and A.R. Blaustein. 2001a. Predator-induced life history changes in amphibians: egg predation induces hatching. Oikos 92: 135-142.
- Chivers, D.P., E.L. Wildy, J.M. Kiesecker and A.R. Blaustein. 2001. Avoidance response of juvenile Pacific Treefrogs to chemical cues of introduced predatory Bullfrogs. Journal of Chemical Ecology 27: 1667-1676.
- Chrapliwy, P.S. 1953. Taxonomy and distribution of the spadefoot toads of North America (Salientia: Pelobatidae). M.S. thesis, University of Kansas, Lawrence.
- Chrapliwy, P.S., and K.L. Williams. 1957. A species of frog new to the fauna of the United States: *Pternohyla fodiens* Boulenger. Natural History Miscellanea (160):1-2.
- Christein, D., and D.H. Taylor. 1978. Population dynamics in breeding aggregations of the American Toad, *Bufo americanus* (Amphibia, Anura, Bufonidae). Journal of Herpetology 12:17-24.
- Christein, D., S.I. Guttman, and D.H. Taylor. 1979. Heterozygote deficiencies in a breeding population of *Bufo americanus* (Bufonidae: Anura): the test of a hypothesis. Copeia 1979:498-502.
- Christian, K.A. 1976. Ontogeny of the food niche of *Pseudacris triseriata*. M.S. thesis, Colorado State University, Fort Collins.
- Christiansen, J.L. 1981. Population trends among Iowa's amphibians and reptiles. Proceedings of the Iowa Academy of Science 88:24-27.
- Christiansen, J.L. 1998. Perspectives on Iowa's declining amphibians and reptiles. Journal of the Iowa Academy of Science 105:109-114.
- Christiansen, J.L. 2001. Non-native amphibians and reptiles in Iowa. Journal of the Iowa Academy of Science 108:210-211.
- Christiansen, J.L., and R.R. Burken. 1978. The endangered and uncommon reptiles and amphibians of Iowa. Iowa Science Teachers Journal, Special Issue, 26 pp.
- Christiansen, J.L., and C.M. Mabry. 1985. The amphibians and reptiles of Iowa's Loess Hills. Proceedings of the Iowa Academy of Science

- 92:159-163.
- Christiansen, J.L., and R.M. Bailey. 1991. The salamanders and frogs of Iowa. Iowa Department of Natural Resources, Nongame Technical Series 3.
- Christiansen, J.L., and H. Feltman. 2000. A relationship between trematode metacercariae and Bullfrog limb abnormalities. *Journal of the Iowa Academy of Science* 107:79-85.
- Christie, P. 1997. Reptiles and Amphibians of Prince Edward County Ontario. Natural Heritage Books, Toronto.
- Christin, M.-S., A.D. Gendron, P. Brousseau, L. Ménard, D.J. Marcogliese, D. Cyr, S. Ruby, and M. Fournier. 2003. Effects of agricultural pesticides on the immune system of *Rana pipiens* and on its resistance to parasitic infection. *Environmental Toxicology and Chemistry* 22:1127-1133.
- Christin, M.-S., L. Ménard, A.D. Gendron, S. Ruby, D. Cyr, D.J. Marcogliese, L. Rollins-Smith, and M. Fournier. 2004. Effects of agricultural pesticides on the immune system of *Xenopus laevis* and *Rana pipiens*. *Aquatic Toxicology* 67:33-43.
- Christman, S.P. 1970. *Hyla andersoni* in Florida. *Quarterly Journal of the Florida Academy of Sciences* 33:80.
- Christman, S.P. 1974. Geographic variation for salt water tolerance in the frog *Rana sphenocephala*. *Copeia* 1974:773-778.
- Christoffel, R., R. Hay and M. Wolfgram. 2001. Amphibians of Wisconsin. Wisconsin Department of Natural Resources PUB-ER-105
- Church, D.R. 2008. Role of current versus historical hydrology in amphibian species turnover within local pond communities. *Copeia* 2008:115-125.
- Church, D.R., H.M. Wilbur, S.M. Roble, F.C. Huber, and M.W. Donahue. 2002. Observations on breeding by Eastern Spadefoots (*Scaphiopus holbrookii*) in Augusta County, Virginia. *Banisteria* 20:71-72.
- Churchill, T.A., and K.B. Storey. 1996. Organ metabolism and cryoprotectant synthesis during freezing in Spring Peepers *Pseudacris crucifer*. *Copeia* 1996:517-525.
- Claflin, W.J. 1962. Larval growth and development of *Pseudacris nigrita triseriata* and *Rana pipiens* in semi-permanent ponds in south-eastern South Dakota. M.A. thesis, State University of South Dakota, Vermillion.
- Clark, C.B., and A.N. Bragg. 1950. A comparison of the ovaries of two species of *Bufo* with different ecological requirements. Pp. 143-152 *In Researches on the Amphibia of Oklahoma*, University of Oklahoma Press, Norman.
- Clark, P.J., J.M. Reed, B.G. Tavernia, B.S. Windmiller, and J.V. Regosin. 2008. Urbanization effects on Spotted Salamander and Wood Frog presence and abundance. Pp. 67-75 *In* J.C. Mitchell, R.E. Jung Brown, and B. Bartholomew (eds.), *Urban Herpetology. Herpetological Conservation 3*. Society for the Study of Amphibians and Reptiles, Salt Lake City, UT.
- Clark, R.F. 1949. Snakes of the hill parishes of Louisiana. *Journal of the Tennessee Academy of Science* 24:244-261.
- Clark, V.R. 2001. *Rana heckscheri* (River Frog). Ectoparasites. *Herpetological Review* 32:36.
- Clarke, R.D. 1972. The effect of toe clipping on survival in Fowler's Toad (*Bufo woodhousei fowleri*). *Copeia* 1972:182-185.
- Clarke, R.D. 1974a. Activity and movement patterns in a population of Fowler's Toad, *Bufo woodhousei fowleri*. *American Midland Naturalist* 92:257-274.
- Clarke, R.D. 1974b. Food habits of the toads, genus *Bufo* (Amphibia, Bufonidae). *American Midland Naturalist* 91:140-147.
- Clarke, R.D. 1974c. Postmetamorphic growth rates in a natural population of Fowler's Toad, *Bufo woodhousei fowleri*. *Canadian Journal of Zoology* 52:1489-1498.
- Clarke, R.D. 1977. Postmetamorphic survivorship of Fowler's Toad, *Bufo woodhousei fowleri*. *Copeia* 1977:594-597.
- Clarke, R.F. 1958. An ecological study of reptiles and amphibians in Osage County, Kansas. *Emporia State Research Studies* 7:1-52.
- Clarkson, R.W., and J.C. DeVos Jr. 1986. The Bullfrog, *Rana catesbeiana* Shaw, in the lower Colorado River, Arizona-California. *Journal of Herpetology* 20:42-49.
- Clarkson, R.W., and J.C. Rorabaugh. 1989. Status of leopard frogs (*Rana pipiens* complex: Ranidae) in Arizona and southeastern California. *Southwestern Naturalist* 34:531-538.
- Claussen, D.L. 1973a. The water relations of the Tailed Frog, *Ascaphus truei*, and the Pacific Treefrog, *Hyla regilla*. *Comparative Biochemistry and Physiology* 44A:155-171.
- Claussen, D.L. 1973b. The thermal relations of the Tailed Frog, *Ascaphus truei*, and the Pacific

- Treefrog, *Hyla regilla*. Comparative Biochemistry and Physiology 44A:137-153.
- Claussen, D.L. 1974. Urinary bladder water reserves in the terrestrial toad, *Bufo fowleri*, and the aquatic frog, *Rana clamitans*. Herpetologica 30:360-367.
- Claussen, D.L., and J.R. Layne Jr. 1983. Growth and survival of juvenile toads, *Bufo woodhousei*, maintained on different diets. Journal of Herpetology 17:107-112.
- Clawson, M.E., and T.S. Baskett. 1982. Herpetofauna of the Ashland Wildlife Area, Boone County, Missouri. Transactions, Missouri Academy of Science 16:5-16.
- Clawson, R.G., B.G. Lockley, and R.H. Jones. 1997. Amphibian responses to helicopter harvesting in forested floodplains of low order, blackwater streams. Forest Ecology and Management 90:225-235.
- Clemmer, J.H., E.Z. Miller, L. Wolgamott, G.R. Smith and J.E. Rettig. 2011. The effects of temperature and salinity on Wood Frog (*Lithobates sylvaticus*) tadpole growth and survival. Bulletin of the Maryland Herpetological Society 47:38-41.
- Cochran, D.M., and C.J. Goin. 1970. The New Field Book of Reptiles and Amphibians. G.P. Putnam's Sons, New York.
- Cochran, P.A. 1999. *Rana sylvatica* (Wood Frog). Predation. Herpetological Review 30:94.
- Cochran, P.A. 2008. An unusual microhabitat for an American Toad (*Anaxyrus americanus*). Bulletin of the Chicago Herpetological Society 43:62.
- Cochran, P.A., and J.A. Cochran. 2003. *Pseudacris crucifer* (Spring Peeper). Predation. Herpetological Review 34:360.
- Cocroft, R.B. 1994. A cladistic analysis of chorus frog phylogeny (Hylidae: *Pseudacris*). Herpetologica 50:420-437.
- Coggins, J.R., and R.A. Sajdak. 1982. A survey of helminth parasites in the salamanders and certain anurans from Wisconsin. Proceedings of the Helminthological Society of Washington 49:99-102.
- Cohen, J.S., S. Ng and B. Blossey. 2012a. Quantity counts: amount of litter determines tadpole performance in experimental mesocosms. Journal of Herpetology 46:85-90.
- Cohen, J.S., J.C. Maerz, and B. Blossey. 2012b. Traits, not origin, explain impacts of plants on larval amphibians. Ecological Applications 22:218-222.
- Cohen, N.W., and W.E. Howard. 1958. Bullfrog food and growth at the San Joaquin Experimental Range, California. Copeia 1958:223-225.
- Cole, C.J. 1962. Notes on the distribution and food habits of *Bufo alvarius* at the eastern edge of its range. Herpetologica 18:172-175.
- Cole, E.C., W.C. McComb, M. Newton, C.L. Chambers, and J.P. Leeming. 1997. Response of amphibians to clearcutting, burning, and glyphosate application in the Oregon Coast Range. Journal of Wildlife Management 61:656-664.
- Cole, L.M., and J.E. Casida. 1983. Pyrethroid toxicology in the frog. Pesticide Biochemistry and Physiology 20:217-224.
- Collier, A., J.B. Keiper, and L.P. Orr. 1998. The invertebrate prey of the Northern Leopard Frog, *Rana pipiens*, in a northeastern Ohio population. Ohio Journal of Science 98:39-41.
- Collins, J.P. 1975. A comparative study of the life history strategies in a community of frogs. Ph.D. diss., University of Michigan, Ann Arbor.
- Collins, J.P., and M.A. Lewis. 1979. Overwintering tadpoles and breeding season variation in the *Rana pipiens* complex in Arizona. Southwestern Naturalist 24:371-373.
- Collins, J.P., and H.M. Wilbur. 1979. Breeding habits and habitats of the amphibians of the Edwin S. George Reserve, Michigan, with notes on the local distribution of fishes. Occasional Papers of the Museum of Zoology, University of Michigan No. 686.
- Collins, J.T. 1993. Amphibians & Reptiles in Kansas. 3rd rev. ed. University of Kansas, Museum of Natural History, Lawrence. [first edition, 1974; second edition, 1982]
- Collins, J.T., and S.L. Collins. 2006. Amphibians, turtles and reptiles of Cheyenne Bottoms. Sternberg Museum of Natural History, Fort Hays State University, Fort Hays, KS. [first edition, 1993]
- Collins, J.T., S.L. Collins, and T.W. Taggart. 2010. Amphibians, Reptiles, and Turtles in Kansas. Eagle Mountain Publishing, Eagle Mountain, UT.
- Collins, J.T., S.L. Collins, and T.W. Taggart. 2011. Amphibians, Reptiles, and Turtles of the Cimarron National Grassland Kansas. U.S. Forest Service, Cimarron National Grassland, Elkhart, Kansas. [first edition, 1991]
- Coleman, J.L., N.B. Ford and K. Herriman. 2008. A road survey of amphibians and reptiles

- in a bottomland hardwood forest. *Southeastern Naturalist* 7:339-348.
- Coman, D.R. 1972. The native mammals, reptiles and amphibians of Mount Desert Island, Maine. Privately published, Bar Harbor, ME.
- Conant, R. 1940. *Rana virgatipes* in Delaware. *Herpetologica* 1:176-177.
- Conant, R. 1947. The Carpenter Frog in Maryland. *Maryland, A Journal of Natural History* 17:72-73.
- Conant, R. 1957. Reptiles and amphibians of the northeastern states. Zoological Society of Philadelphia, 3rd edition. [2nd edition, 1952]
- Conant, R. 1962. Notes on the distribution of reptiles and amphibians in the Pine Barrens of southern New Jersey. *New Jersey Nature Notes* (New Jersey Audubon Society) 17:16-21.
- Conant, R. 1977 [1978]. Semiaquatic reptiles and amphibians of the Chihuahuan Desert and their relationships to drainage patterns of the region. Pp. 455-491 In R.H. Wauer and D.H. Riskind (eds.), *Transactions of the Symposium on the Biological Resources of the Chihuahuan Desert Region, United States and Mexico*. U.S. National Park Service Transactions and Proceedings Series No. 3.
- Conant, R., and J.T. Collins. 1998. A Field Guide to the Reptiles and Amphibians. Eastern and Central North America. 3rd exp. ed. Houghton Mifflin Co., Boston, MA. [first edition, 1958; second edition, 1991]
- Conant, R., J.C. Mitchell, and C.A. Pague. 1990. Herpetofauna of the Virginia barrier islands. *Virginia Journal of Science* 41:364-380.
- Conaway, C.H., and D.E. Metter. 1967. Skin glands associated with breeding in *Microhyla carolinensis*. *Copeia* 1967:672-673.
- Conlon, J.M., T. Halverson, J. Dulka, J.E. Platz, and F.C. Knoop. 1999. Peptides with antimicrobial activity of the brevinin-1 family isolated from the skin secretions of the Southern Leopard Frog, *Rana sphenocephala*. *Journal of Peptide Research* 54:522-527.
- Conlon, J.M., A. Sonnevend, C. Davidson, D.D. Smith, and P.F. Nielsen. 2004. The ascaphins: a family of antimicrobial peptides from the skin secretions of the most primitive extant frog, *Ascaphus truei*. *Biochemical and Biophysical Research Communications* 320:170-175.
- Conlon, J.M., T. Jouenne, P. Cosette, D. Cosquer, H. Vaudry, C.K. Taylor, and P.W. Abel. 2005a. Bradykinin-related peptides and tryptophyllins in the skin secretions of the most primitive extant frog, *Ascaphus truei*. *General and Comparative Endocrinology* 143:193-199.
- Conlon, J.M., B. Abraham, A. Sonnevend, T. Jouenne, P. Cosette, J. Leprince, H. Vaudry, and C.A. Bevier. 2005b. Purification and characterization of antimicrobial peptides from the skin secretions of the Carpenter Frog *Rana virgatipes* (Ranidae, Aquarana). *Regulatory Peptides* 131:38-45.
- Conlon, J.M., N. Al-Ghafari, L. Coquet, J. Leprince, T. Jouenne, H. Vaudry, and C. Davidson. 2006. Evidence from peptidomic analysis of skin secretions that the Red-legged Frogs, *Rana aurora draytonii* and *Rana aurora aurora*, are distinct species. *Peptides* 27:1305-1312.
- Conlon, J.M., L. Coquet, J. Leprince, T. Jouenne, H. Vaudry, J. Kolodziejek, N. Nowotny, C.R. Bevier, and P.E. Moler. 2007a. Peptidomic analysis of skin secretions from *Rana heckscheri* and *Rana okaloosae* provides insight into phylogenetic relationships among frogs of the *Aquarana* species group. *Regulatory Peptides* 138:87-93.
- Conlon, J.M., C.R. Bevier, L. Coquet, J. Leprince, T. Jouenne, H. Vaudry, and B.R. Hossack. 2007b. Peptidomic analysis of skin secretions supports separate species status for the tailed frogs, *Ascaphus truei* and *Ascaphus montanus*. *Comparative Biochemistry and Physiology* 2D:121-125.
- Conlon, J.M., E. Ahmed, L. Coquet, T. Jouenne, J. Leprince, H. Vaudry, and J.D. King. 2009. Peptides with potent cytolytic activity from the skin secretions of the North American leopard frogs, *Lithobates blairi* and *Lithobates yavapaiensis*. *Toxicon* 53:699-705.
- Conlon, J.M., L. Coquet, J. Leprince, T. Jouenne, H. Vaudry, and J.D. King. 2010. Primary structures of skin antimicrobial peptides indicate a close, but not conspecific, phylogenetic relationship between the leopard frogs *Lithobates onca* and *Lithobates yavapaiensis* (Ranidae). *Comparative Physiology and Biochemistry* 151C:313-317.
- Conlon, J.M., M. Mechkarska, E. Ahmed, L. Coquet, T. Jouenne, J. Leprince, H. Vaudry, M.P. Hayes, and G. Padgett-Flohr. 2011. Host defense peptides in skin secretions of the Oregon Spotted Frog *Rana pretiosa*: implications for species resistance to chytridiomycosis. *Developmental and Comparative Immunology* 35:644-649.

- Connell, J. 2006. Mercury concentrations in the muscles of the North American Bullfrogs (*Rana catesbeiana*). Ph.D. diss., University of Nevada-Las Vegas.
- Connolly, J.C., B.L. Kress, G.R. Smith and J.E. Rettig. 2011. Possible behavioral avoidance of UV-B radiation and sunlight in Wood Frog (*Lithobates sylvaticus*) tadpoles. Current Herpetology 30:1-5.
- Constible, J.M., P.T. Gregory, and B.R. Anholt. 2001. Patterns of distribution, relative abundance, and microhabitat use of anurans in a boreal landscape influenced by fire and timber harvest. Ecoscience 8:462-470.
- Constible, J.M., P.T. Gregory, and K.W. Larsen. 2010. The pitfalls of extrapolation in conservation: movements and habitat use of a threatened toad are different in the boreal forest. Animal Conservation 13:43-52.
- Converse, K.A., J. Mattsson, and L. Eaton-Poole. 2000. Field surveys of Midwestern and Northeastern Fish and Wildlife Service lands for the presence of abnormal frogs and toads. Journal of the Iowa Academy of Science 107:160-167.
- Cook, D. 1997a. Biology of the California Red-Legged frog: a synopsis. Transactions of the Western Section of the Wildlife Society 33:79-82.
- Cook, D. 1997b. Microhabitat use and reproductive success of the California Red-legged Frog (*Rana aurora draytonii*) and Bullfrog (*Rana catesbeiana*) in an ephemeral marsh. M.A. thesis, Sonoma State University, Sonoma, CA.
- Cook, D.G., S. White, P. White and E. White. 2012. *Rana boylii* (Foothill Yellow-legged Frog). Upland movement. Herpetological Review 43:325-326.
- Cook, F.R. 1960. New localities for the Plains Spadefoot Toad, Tiger Salamander and the Great Plains Toad in the Canadian prairies. Copeia 1960:363-364.
- Cook, F.R. 1963. The rediscovery of the Mink Frog in Manitoba. Canadian Field-Naturalist 77:129-130.
- Cook, F.R. 1964a. Additional records and a correction of the type locality for the Boreal Chorus Frog in northwestern Ontario. Canadian Field-Naturalist 78:186-192.
- Cook, F.R. 1964b. The rusty colour phase of the Canadian Toad, *Bufo hemiophrys*. Canadian Field-Naturalist 78:263-267.
- Cook, F. R. 1964c. A northern range extension for *Bufo americanus* with notes on *B. americanus* and *Rana sylvatica*. Canadian Field-Naturalist 78:65-66.
- Cook, F. R. 1964d. A range extension for the Wood Frog in northeastern Saskatchewan. Canadian Field-Naturalist. 78:268-269.
- Cook, F. R. 1964e. The status of records of the Western Spotted Frog, *Rana pretiosa*, in Saskatchewan. Copeia 1964: 219.
- Cook, F.R. 1965. Additions to the known range of some amphibians and reptiles in Saskatchewan. Canadian Field-Naturalist 79:112-120.
- Cook, F.R. 1966. A guide to the amphibians and reptiles of Saskatchewan. Saskatchewan Museum of Natural History Popular Series 13:1-40.
- Cook, F.R. 1967. An analysis of the herpetofauna of Prince Edward Island. National Museum of Canada Bulletin 212.
- Cook, F.R. 1977. Records of the boreal toad from the Yukon and northern British Columbia. Canadian Field-Naturalist 91:185-186.
- Cook, F.R. 1978. Amphibians and reptiles of Saskatchewan. Saskatchewan Museum of Natural History, popular series, No. 13.
- Cook, F.R. 1983. An analysis of toads of the *Bufo americanus* group in a contact zone in central northern North America. National Museums of Canada, Publications in Natural Sciences 3:i-89.
- Cook, F.R., and D.R.M. Hatch. 1964. A spadefoot toad from Manitoba. Canadian Field-Naturalist 78:60-61.
- Cook, F.R., and J.C. Cook. 1981. Attempted avian predation by a Canadian Toad, *Bufo americanus hemiophrys*. Canadian Field-Naturalist 95:346-347.
- Cook, J.C. 2008. Transmission and occurrence of *Dermomycoïdes* sp. in *Rana sevosa* and other ranids in the north central Gulf of Mexico states. M.S. thesis, University of Southern Mississippi, Hattiesburg.
- Cook, R.P. 1989. And the voice of the Grey Tree Frog was heard again in the land. Park Science 9(3):6-7.
- Cook, R.P. 2008. Potential and limitations of herpetofaunal restoration in an urban landscape. Pp. 465-478 In J.C. Mitchell, R.E. Jung Brown, and B. Bartholomew (eds.), Urban Herpetology. Herpetological Conservation 3, Society for the Study of Amphibians and Reptiles, Salt Lake City, UT.

- Cook, R.P., T.A. Tupper, P.W.C. Paton and B.C. Timm. 2011. Effects of temperature and temporal factors on anuran detection probabilities at Cape Cod National Seashore, Massachusetts, USA: implications for long-term monitoring. *Herpetological Conservation and Biology* 6:25-39.
- Cooper, J.E. 1953. Notes on the amphibians and reptiles of southern Maryland. *Maryland Naturalist* 23:90-100.
- Cooper, J.E., S.S. Robinson and J.B. Funderburg (eds.). 1977. Endangered and Threatened Plants and Animals of North Carolina. North Carolina State Museum of Natural History, Raleigh.
- Cooper, W.E., Jr. 2011. Escape strategy and vocalization during escape by American Bullfrogs (*Lithobates catesbeianus*). *Amphibia-Reptilia* 32:213-221.
- Cope, E.D. 1862. On some new and little known American Anura. *Proceedings of the Academy of Natural Sciences of Philadelphia* 14:151-159.
- Cope, E.D. 1863. On *Trachycephalus*, *Scaphiopus* and other American Batrachia. *Proceedings of the Academy of Natural Sciences of Philadelphia* 15:43-54.
- Cope, E.D. 1866. On the structures and distribution of the genera of the arciferous anura. *Journal of the Academy of Natural Sciences of Philadelphia*, series 2, 6:67-112.
- Cope, E.D. 1866 (1867). On the reptilia and Batrachia of the Sonoran Province of the Nearctic Region. *Proceedings of the Academy of Natural Sciences of Philadelphia* 18:300-314.
- Cope, E.D. 1875. *Rana onca*, Cope, sp. nov. Pp. 528-529 and Plate 15 In H.C. Yarrow, Report upon the collections of batrachians and reptiles made in portions of Nevada, Utah, California, Colorado, New Mexico, and Arizona during 1871, 1872, 1873, and 1874. Ch. 4, pp. 509-584 In Report Upon Geographical and Geological Surveys West of the One Hundredth Meridian in Charge of First Lieut. Geo. M. Wheeler. Vol. 5. Zoology. U.S. Government Printing Office, Washington, DC.
- Cope, E.D. 1877 (1878). A new genus of Cystignathidae from Texas. *American Naturalist* 12:253.
- Cope, E.D. 1879. Eleventh contribution to the herpetology of tropical America. *Proceedings of the American Philosophical Society* 18:261-277.
- Cope, E.D. 1880. On the zoological position of Texas. *Bulletin of the United States National Museum* 17:1-51.
- Cope, E.D. 1883. Notes on the geographic distribution of Batrachia and Reptilia in western North America. *Proceedings of the Academy of Natural Sciences of Philadelphia* 35:10-35.
- Cope, E.D. 1886. Synonymic list of the North American species of *Bufo* and *Rana*, with descriptions of some Batrachia, from specimens in the National Museum. *Proceedings of the American Philosophical Society* 23:514-526.
- Cope, E.D. 1889. The Batrachia of North America. *Bulletin of the United States National Museum* 34:1-525.
- Cope, E.D. 1891. A new species of frog from New Jersey. *American Naturalist* 25:1017-1019.
- Corcoran, M.F., and J.R. Travis. 1980. A comparison of the karyotypes of the frogs *Rana areolata*, *Rana sphenocephala*, and *Rana pipiens*. *Herpetologica* 36:296-300.
- Corkran, C.C., and C. Thoms. 2006. Amphibians of Oregon, Washington and British Columbia. 2nd ed. Lone Pine Publishing, Edmonton, Alberta.
- Corn, P.S. 1980a. Polymorphic reproductive behavior in male chorus frogs (*Pseudacris riserii*). *Journal of the Colorado-Wyoming Academy of Sciences* 12:6-7.
- Corn, P.S. 1980b. Comment on the occurrence of *Pseudacris clarkii* in Montana. *Bulletin of the Chicago Herpetological Society* 15:77-78.
- Corn, P.S. 1981. Field evidence for a relationship between color and developmental rate in the Northern Leopard Frog (*Rana pipiens*). *Herpetologica* 37:155-160.
- Corn, P.S. 1986. Genetic and developmental studies of albino chorus frogs. *Journal of Heredity* 77:164-168.
- Corn, P.S. 1993. *Bufo boreas* (Boreal Toad). Predation. *Herpetological Review* 24:57.
- Corn, P.S. 1994. What we know and don't know about amphibian declines in the West. Pp. 59-67 In W.W. Covington and L.F. DeBano (eds.), Sustainable Ecological Systems: Implementing and Ecological Approach to Land Management. USDA Forest Service, General Technical Report RM-247, Ft. Collins, CO.
- Corn, P.S. 1998. Effects of ultraviolet radiation on boreal toads in Colorado. *Ecological Applications* 8:18-26.

- Corn, P.S. 2000. Amphibian declines: review of some current hypotheses. Pp. 663-696 In D.W. Sparling, G. Linder, and C.A. Bishop (eds.), *Ecotoxicology of Amphibians and Reptiles*. SETAC Press, Pensacola, FL.
- Corn, P.S. 2003. Endangered toads in the Rockies. Pp. 43-51 In L. Taylor, K. Martin, D. Hik, and A. Ryall (eds.), *Ecological and Earth Sciences in Mountain Areas*. The Banff Center, Banff, Alberta.
- Corn, P.S. 2005. Climate change and amphibians. *Animal Biodiversity and Conservation* 28:59-67.
- Corn, P.S. 2007. Amphibians and disease: implications for conservation in the Greater Yellowstone Ecosystem. *Yellowstone Science* 15(2):11-16.
- Corn, P.S., and J.C. Fogleman. 1984. Extinction of montane populations of the Northern Leopard Frog (*Rana pipiens*) in Colorado. *Journal of Herpetology* 18:147-152.
- Corn, P.S., and R.B. Bury. 1989. Logging in western Oregon: responses of headwater habitats and stream amphibians. *Forest Ecology and Management* 29:39-57.
- Corn, P.S., and L.J. Livo. 1989. Leopard Frog and Wood Frog reproduction in Colorado and Wyoming. *Northwestern Naturalist* 70:1-9.
- Corn, P.S., and F.A. Vertucci. 1992. Descriptive risk assessment of the effects of acidic deposition on Rocky Mountain amphibians. *Journal of Herpetology* 26:361-369.
- Corn, P.S., and E. Muths. 2002. Variable breeding phenology affects the exposure of amphibian embryos to ultraviolet radiation. *Ecology* 83:2958-2963.
- Corn, P.S., W. Stolzenburg, and R.B. Bury. 1989. Acid precipitation studies in Colorado and Wyoming: interim report of surveys of montane amphibians and water chemistry. U.S. Fish and Wildlife Service Biological Report 80(40.26).
- Corn, P.S., M.L. Jennings, and E. Muths. 1997. Survey and assessment of amphibian populations in Rocky Mountain National Park. *Northwestern Naturalist* 78:34-55.
- Corn, P.S., E. Muths, and W.M. Iko. 2000. A comparison in Colorado of three methods to monitor breeding amphibians. *Northwestern Naturalist* 81:22-30.
- Corn, P.S., B.R. Hossack, E. Muths, D.A. Patla, C.R. Peterson, and A.L. Gallant. 2005. Status of amphibians on the Continental Divide: surveys on a transect from Montana to Colorado, USA. *Alytes* 22:85-94.
- Corn, P.S., E. Muths, A.M. Kissel and R.D. Scherer. 2011. Breeing chorus indices are weakly related to estimated abundance of boreal chorus frogs. *Copeia* 2011:365-371.
- Cornell, T.J., K.A. Berven, and G.J. Gamboa. 1989. Kin recognition by tadpoles and froglets of the Wood Frog *Rana sylvatica*. *Oecologia* 78:312-316.
- Corrington, J.D. 1929. Herpetology of the Columbia, South Carolina, region. *Copeia* (172):58-83.
- Corse, W.A., and D.E. Metter. 1980. Economics, adult feeding and larval growth of *Rana catesbeiana* on a fish hatchery. *Journal of Herpetology* 14:231-238.
- Corser, J.D. 2008. The Cumberland Plateau disjunct paradox and the biogeography and conservation of pond-breeding amphibians. *American Midland Naturalist* 159:498-503.
- Cort, W.W. 1919. A new distome from *Rana aurora*. *University of California Publications in Zoology* 19:283-298.
- Cortwright, S.A. 1998. Ten- to eleven-year population trends of two pond-breeding amphibians species, red-spotted newts and green frogs. Pp. 61-71 In M.J. Lannoo (ed.), *Status & Distribution of Midwestern Amphibians*. University of Iowa Press, Iowa City.
- Cortwright, S.A., and C.E. Nelson. 1990. An examination of multiple factors affecting community structure in an aquatic amphibian community. *Oecologia* 83:123-131.
- Cory, L., and J.J. Manion. 1953. Predation on eggs of the Woodfrog *Rana sylvatica*, by leeches. *Copeia* 1953:66.
- Cory, L., and J.J. Manion. 1955. Ecology and hybridization in the genus *Bufo* in the Michigan-Indiana region. *Evolution* 9:42-51.
- Costanzo, J.P., and R.E. Lee, Jr. 1993. Cryoprotectant production capacity of the freeze-tolerant Wood Frog, *Rana sylvatica*. *Canadian Journal of Zoology* 71:71-75.
- Costanzo, J.P., and R. E. Lee. 2005. Cryoprotection by urea in a terrestrially hibernating frog. *Journal of Experimental Biology* 208:4079-4089.
- Costanzo, J.P., M.F. Wright, and R.E. Lee Jr. 1992. Freeze tolerance as an overwintering adaptation in Cope's Gray Treefrog (*Hyla chrysoscelis*). *Copeia* 1992:565-569.
- Costanzo, J.P., J. T. Irwin and R. E. Lee. 1997. Freezing impairment of male reproductive

- behaviors of the freeze-tolerant Wood Frog, *Rana sylvatica*. *Physiological Zoology* 70: 158-166.
- Cotten, T.B., M.A. Kwiatkowski, D. Saenz and M. Collyer. 2012. Effects of an invasive plant, Chinese Tallow (*Triadica sebifera*), on development and survival of anuran larvae. *Journal of Herpetology* 46:186-193.
- Coues, E., and H.C. Yarrow. 1878. Notes on the herpetology of Dakota and Montana. *Bulletin of the United States Geological and Geographical Survey* 4:259-291.
- Counts, C.L. III, and R.W. Taylor. 1977. A xanthoma of indeterminate origin in *Bufo americanus* (Amphibia, Anura, Bufonidae). *Journal of Herpetology* 11:235-236.
- Courtois, D., R. Leclair Jr., S. Lacasse, and P. Magnan. 1995. Habitats préférentiels d'amphibiens ranidés dans les lacs oligotrophes du Bouclier laurentien, Québec. *Canadian Journal of Zoology* 73:1744-1753.
- Cousineau, M., and K. Rogers. 1991. Observations on sympatric *Rana pipiens*, *R. blairi*, and their hybrids in eastern Colorado. *Journal of Herpetology* 25:114-116.
- Cowan, I.M. 1939. The vertebrate fauna of the Peace River District of British Columbia. *Occasional Papers of the British Provincial Museum* 1:1-102.
- Cowan, I.M. 1941. Longevity of the Red-legged Frog. *Copeia* 1941:48.
- Cowles, R.B. 1924. Notes regarding the breeding habits of *Scaphiopus hammondii* Baird. *Pomona College Journal of Entomology and Zoology* 16:108-110.
- Cowles, R.B., and C.M. Bogert. 1936. The herpetology of the Boulder Dam region (Nev., Ariz., Utah). *Herpetologica* 1:33-42.
- Cowman, D.F. 2005. Pesticides and amphibian declines in the Sierra Nevada Mountains, California. Ph.D. diss., Texas A&M University, College Station.
- Cox, P. 1898. Batrachia of New Brunswick. *Bulletin of the Natural History Society of New Brunswick* 4:64-66.
- Cox, P. 1899. The anoura of New Brunswick. *Proceedings of the Natural History Association of Miramichi* 1:9-19.
- Cragin, F.W. 1881. A preliminary catalogue of Kansas reptiles and batrachians. *Transactions of the Kansas Academy of Science* 7:112-120.
- Crawford, J.A., D.B. Shepard, and C.A. Conner. 2009. Diet composition and overlap between recently metamorphosed *Rana areolata* and *Rana sphenocephala*: implications for a frog of conservation concern. *Copeia* 2009:642-646.
- Crawshaw, G.J. 1997. Diseases in Canadian amphibian populations. *SSAR Herpetological Conservation* 1:258-270.
- Crawshaw, L.I., R.N. Rausch, L.P. Wollmuth, and E.J. Bauer. 1992. Seasonal rhythms of development and temperature selection in larval Bullfrogs, *Rana catesbeiana* Shaw. *Physiological Zoology* 65:346-359.
- Crayon, J.J., and R.L. Hothem. 1998. *Xenopus laevis* (African Clawed Frog). Predation. *Herpetological Review* 29:165-166.
- Creel, G.C. 1963. Bat as a food item of *Rana pipiens*. *Texas Journal of Science* 15:104-106.
- Crenshaw, J.W., and W.F. Blair. 1959. Relationships in the *Pseudacris nigrita* complex in southwestern Georgia. *Copeia* 1959:215-222.
- Crisafulli, C.M., L.S. Trippe, C.P. Hawkins, and J.A. MacMahon. 2005. Amphibian responses to the 1980 eruption of Mount St. Helens. Pp. 183-197 In V.H. Dale, F.J. Swanson, and C.M. Crisafulli (eds.), *Ecological Responses to the 1980 Eruption of Mount St. Helens*. Springer, New York.
- Crockett, M.E. 2001. Survey and comparison of amphibian assemblages in two physiographic regions of northeast Tennessee. M.S. thesis, East Tennessee State University, Johnson City, TN.
- Croes, S.A., and R.E. Thomas. 2000. Freeze tolerance and cryoprotectant synthesis of the Pacific Tree Frog *Hyla regilla*. *Copeia* 2000:863-868.
- Cromer, R.B., J.D. Lanham, and H.H. Hanlin. 2002. Herpetofaunal response to gap and skidder-rut wetland creation in a southern bottomland hardwood forest. *Forest Science* 48:407-413.
- Cronin, J.T., and J. Travis. 1986. Size-limited predation on larval *Rana areolata* (Anura: Ranidae) by two species of backswimmer (Insecta: Notonectidae). *Herpetologica* 42:171-174.
- Crosby, C.R., and S.C. Bishop. 1925. A new genus and two new species of spiders collected by *Bufo quercicus*. *Florida Entomologist* 9:33-36.
- Crosby, M.K., L.E. Licht and J.Z. Fu. 2009. The effect of habitat fragmentation on finescale population structure of Wood Frogs (*Rana sylvatica*). *Conservation Genetics* 10:1707-

- 1718.
- Cross, K., and J.M. Hranitz. 1999. *Bufo americanus* (American Toad). Endoparasite. Herpetological Review 31:39.
- Crossland, M.R., G.P. Brown, M. Anstis, C. Shilton, and R. Shine. 2008. Mass mortality of native anuran tadpoles in tropical Australia due to the invasive cane toad (*Bufo marinus*). Biological Conservation 141:2387-2394.
- Crosswhite, E., and M. Wyman. 1920. [No title: figure and notes on an abnormal toad, presumably *A. boreas*]. Pomona College Journal of Entomology and Zoology 12:78.
- Croteau, M.C. 2009. Chronic exposure to UV-B radiation and 4-tert-octylphenol disrupt metamorphosis and the thyroid system of Northern Leopard Frog (*Rana pipiens*) tadpoles. Ph.D. diss., University of Ottawa, Ottawa, Ontario.
- Crother, B.I. (Committee Chair). 2012. Scientific and Standard English Names of Amphibians and Reptiles on North America North of Mexico, with Comments Regarding Confidence in Our Understanding. 7th ed. Society for the Study of Amphibians and Reptiles, Herpetological Circular No. 39.
- Crouch, W.B., and P.W.C. Paton. 2000. Using egg-mass counts to monitor Wood Frog populations. Wildlife Society Bulletin 28:895-901.
- Cruesere, F.M., and W.G. Whitford. 1976. Ecological relationships in a desert anuran community. Herpetologica 32:7-18.
- Crump, D., M. Berrill, D. Coulson, D. Lean, L. McGillivray, and A. Smith. 1999. Sensitivity of amphibian embryos, tadpoles, and larvae to enhanced UV- β radiation in natural pond conditions. Canadian Journal of Zoology 77:1956-1966.
- Crump, M.L. 1981a. Energy accumulation and amphibian metamorphosis. Oecologia 49:167-169.
- Crump, M.L. 1981b. Intraclutch egg size variability in *Hyla crucifer* (Anura: Hylidae). Copeia 1981:302-308.
- Cuellar, H.S. 1968. Genetic compatibility of *Rana areolata* with southwestern members of the *Rana pipiens* complex: (Anura : Ranidae). M.S. thesis, Texas Tech University, Lubbock.
- Cuellar, H.S. 1971. Levels of genetic compatibility of *Rana areolata* with southwestern members of the *Rana pipiens* complex (Anura: Ranidae). Evolution 25:399-409.
- Cuellar, O. 1994. Ecological observations on *Rana pretiosa* in western Utah. Alytes 12:109-121.
- Culley, D.D. Jr. 1973. Use of Bullfrogs in biological research. American Zoologist 13:85-90.
- Cummins, H. 1920. The role of voice and coloration in spring migration and sex recognition in frogs. Journal of Experimental Zoology 30:325-343.
- Cunjak, R.A. 1986. Winter habitat of Northern Leopard Frogs, *Rana pipiens*, in a southern Ontario stream. Canadian Journal of Zoology 64:255-257.
- Cunningham, J. 2003. Pond-breeding amphibian species distributions in a beaver-modified landscape, Acadia National Park, Mount Desert Island, Maine. M.S. thesis, University of Maine, Orono.
- Cunningham, J., A.J.K. Calhoun and W.E. Glanz. 2007. Pong-breeding amphibian species richness and breeding habitat selection in a beaver-modified landscape. Journal of Wildlife Management 71:2517-2526.
- Cunningham, J.D. 1955a. A case of cannibalism in the toad *Bufo boreas*. Herpetologica 10:166.
- Cunningham, J.D. 1955b. Observations on the ecology of the canyon treefrog, *Hyla californiae*. Herpetologica 20:55-61.
- Cunningham, J.D. 1955c. Observations on the natural history of the California Toad, *Bufo californicus* Camp. Herpetologica 17:255-260.
- Cunningham, J.D. 1959. Reproduction and food of some California snakes. Herpetologica 15:17-19.
- Cunningham, J.D., and D.P. Mullally. 1956. Thermal factors in the ecology of the Pacific Treefrog. Herpetologica 12:68-79.
- Cupp, P.V., Jr. 1974. Thermal tolerances and acclimation during anuran development and metamorphosis. Ph.D. diss., Clemson University, Clemson, SC.
- Cupp, P.V., Jr. 1980. Thermal tolerance of five salientian amphibians during development and metamorphosis. Herpetologica 36:234-244.
- Currie, W., and E.D. Bellis. 1969. Home range and movements of the Bullfrog, *Rana catesbeiana* Shaw, in an Ontario pond. Copeia 1969:688-692.
- Cushman, S.A. 2006. Effects of habitat loss and fragmentation on amphibians: a review and prospectus. Biological Conservation 128:231-240.
- Daigle, C. 1997. Distribution and abundance of

- the chorus frog *Pseudacris triseriata* in Québec. SSAR Herpetological Conservation 1:73-77.
- Dailey, M.D., and S.R. Goldberg. 2000. *Langeronia burseyi* sp. n. (Trematoda: Lecithodendriidae) from the California Treefrog, *Hyla cadaverina* (Anura: Hylidae), with revision of the genus *Langeronia*. Caballero and Bravo-Hollis, 1949. Comparative Parasitology 67:165-168.
- Dale, J.M., B. Freedman, and J. Kerekes. 1985. Acidity and associated water chemistry of amphibian habitats in Nova Scotia. Canadian Journal of Zoology 63:97-105.
- Daly, E.W., and P.T.J. Johnson. 2011. Beyond immunity: quantifying the effects of host anti-parasite behavior on parasite transmission. Oecologia 165:1043-1050.
- D'Aoust-Messier, A.-M. 2012. Colonizing northern landscapes: population genetics and phylogeography of Wood Frogs (*Lithobates sylvaticus*) in the James Bay area. M.S. thesis, Laurentian University, Sudbury, Ontario.
- Daniel, R., and B. Edmond. 2006. Atlas of Missouri amphibians and reptiles for 2005. <http://atlas.moherp.org/pubs/atlas05.pdf>.
- Dapson, R.W., and L. Kaplan. 1975. Biological half-life and distribution of radiocesium in a contaminated population of Green Treefrogs *Hyla cinerea*. Oikos 26:39-42.
- Dare, O.K., and M.R. Forbes. 2009. Patterns of trematode and nematode lungworm infections in Northern Leopard Frogs and Wood Frogs from Ontario, Canada. Journal of Helminthology 83:339-343.
- Da Silva, E.T., E. P. dos Reis, P.S. Santos, and R.N. Feio. 2010. *Lithobates catesbeianus* (American Bullfrog). Diet. Herpetological Review 41:475-476.
- Da Silva, H.R. 1997. Two character states new for hylines and the taxonomy of the genus *Pseudacris*. Journal of Herpetology 31:609-613.
- Daszak, P., A. Strieby, A.A. Cunningham, J.E. Longcore, C. Brown, and D. Porter. 2004. Experimental evidence that the Bullfrog (*Rana catesbeiana*) is a potential carrier of chytridiomycosis, an emerging fungal disease of amphibians. Herpetological Journal 14:201-207.
- Daszak, P., D.E. Scott, A.M. Kilpatrick, C. Faggioni, J.W. Gibbons, and D. Porter. 2005. Amphibian population declines at Savannah River Site are linked to climate, not chytridiomycosis. Ecology 86:3232-3237.
- Datta, S., L. Hansen, L. McConnell, J. Baker, J. LeNoir, and J.N. Selber. 1998. Pesticides and PCB contaminants in fish and tadpoles from the Kaweah River Basin, California. Bulletin of Environmental Contamination and Toxicology 60:829-836.
- Daudin, F.M. 1802. Histoire Naturelle des Rainettes, des Grenouilles, et des Crapauds. Bertrandet, Librairie Levraut, Paris.
- Daugherty, C.H. 1979. Population ecology and genetics of *Ascaphus truei*: an examination of gene flow and natural selection. Ph.D. diss., University of Montana, Missoula.
- Daugherty, C.H., and A.L. Sheldon. 1982a. Age-determination, growth, and life history of a Montana population of the tailed frog (*Ascaphus truei*). Herpetologica 38:461-468.
- Daugherty, C.H., and A.L. Sheldon. 1982b. Age-specific movement patterns of the frog *Ascaphus truei*. Herpetologica 38:468-474.
- Davidson, C. 2010. *Rana draytonii* (California Red-legged Frog). Prey. Herpetological Review 41:66.
- Davidson, C., and R.A. Knapp. 2007. Multiple stressors and amphibian declines: dual impacts of pesticides and fish on Yellow-legged Frogs. Ecological Applications 17:587-597.
- Davidson, C., H.B. Shaffer, and M.R. Jennings. 2001. Declines of the California Red-legged Frog: climate, UV-B, habitat, and pesticides hypotheses. Ecological Applications 11:464-479.
- Davidson, C., H.B. Shaffer, and M.R. Jennings. 2002. Spatial tests of the pesticide drift, habitat destruction, UV-B, and climate-change hypotheses for California amphibian declines. Conservation Biology 16:1588-1601.
- Davidson, C., M.F. Bernard, H.B. Shaffer, J.M. Parker, C. O'Leary, J.M. Conlon, and L.A. Rollins-Smith. 2007. Effects of chytrid and carbaryl exposure on survival, growth and skin peptide defenses in Foothill Yellow-legged Frogs. Environmental Science and Technology 41:1771-1776.
- Davidson, C., K. Stanley and S.M. Simonich. 2012. Contaminant residues and declines of the Cascades Frog (*Rana cascadae*) in the California Cascades, USA. Environmental Toxicology and Chemistry 31:1895-1902.
- Davidson, S.A., and D.L. Chambers. 2011a. Occurrence of *Batrachochytrium dendrobatidis* in amphibians of Wise County, Virginia, USA. Herpetological Review 42:214-

- 215.
- Davidson, S.R.A., and D.L. Chambers. 2011b. Ranavirus prevalence in amphibian populations of Wise County, Virginia. *Herpetological Review* 42:540-542.
- Davis, A.B., and P.A. Verrell. 2005. Demography and reproductive ecology of the Columbia Spotted Frog (*Rana luteiventris*) across the Palouse. *Canadian Journal of Zoology* 83:702-711.
- Davis, A.K., M.J. Yabsley, M.K. Keel, and J.C. Maerz. 2007. Discovery of a novel alveolate pathogen affecting Southern Leopard Frogs in Georgia: description of the disease and host effects. *EcoHealth* 4:310-317.
- Davis, A.K., M.K. Keel, A. Ferreira and J.C. Maerz. 2010. Effects of chytridiomycosis on circulating white blood cell distributions of Bullfrog larvae (*Rana catesbeiana*). *Comparative Clinical Pathology* 19:49-55.
- Davis, B.J., and N. Hollenback. 1978. New records of the Bird-voiced Treefrog, *Hyla avivoca* (Hylidae), from Arkansas and Louisiana. *Southwestern Naturalist* 23:161-162.
- Davis, D.D. 1933. Unusual behavior in a leopard frog. *Copeia* 1933:223-224.
- Davis, J.G., and S.A. Menze. 2000. Ohio Frog and Toad Atlas. Ohio Biological Survey Miscellaneous Contribution No. 6.
- Davis, J.G., and S.A. Menze. 2002. In Ohio's Backyard: Frogs and Toads. Ohio Biological Survey, Backyard Series No. 3.
- Davis, J.G., P.J. Krusling, and J.W. Ferner. 1998. Status of amphibian populations in Hamilton County, Ohio. Pp. 155-165 In M.J. Lannoo (ed.), *Status & Distribution of Midwestern Amphibians*. University of Iowa Press, Iowa City.
- Davis, J.R., D.T. Eastlake, A.J. Kouba and C.K. Vance. 2012. *Batrachochytrium dendrobatidis* detected in Fowler's Toad (*Anaxyrus fowleri*) populations in Memphis, Tennessee. *Herpetological Review* 43:81-83.
- Davis, L.C. 1973. The herpetofauna of Peccary Cave, Arkansas. M.S. thesis, University of Arkansas, Fayetteville.
- Davis, M.J., P. Kleinhenz and M.D. Boone. 2011. Juvenile Green Frog (*Rana clamitans*) predatory ability not affected by exposure to carbaryl at different times during larval development. *Environmental Toxicology and Chemistry* 30:1618-1620.
- Davis, M.J., J.L. Purrenhaage and M.D. Boone. 2012. Elucidating predator-prey interactions using aquatic microcosms: complex effects of a crayfish predator, vegetation, and atrazine on tadpole survival and behavior. *Journal of Herpetology* 46:527-534.
- Davis, M.S. 1980. Observations on the life history of the Wood Frog, *Rana sylvatica* LeConte, in Alabama. M.S. thesis, Auburn University, Auburn, AL.
- Davis, M.S., and G.W. Folkerts. 1980. A beetle (*Eutheola rugiceps* LeC.: Scarabaeidae) penetrates the stomach wall of its predator (*Rana sylvatica* LeC.: Amphibia). *Coleopterists Bulletin* 34:396.
- Davis, M.S., and T.R. Jones. 1982. Reassessment of the distribution of three amphibians in Alabama. *Journal of the Alabama Academy of Science* 53:10-16.
- Davis, M.S., and G.W. Folkerts. 1986. Life history of the Wood Frog, *Rana sylvatica* LeConte (Amphibia: Ranidae), in Alabama. *Brimleyana* 12:29-50.
- Davis, S.L. 1958. Notes on the Amphibia in Acadia National Park, Maine. M.S. thesis, Cornell University, Ithaca, NY.
- Davis, T.M., and P.T. Gregory. 2003. Decline and local extinction of the Western Toad, *Bufo boreas*, on southern Vancouver Island, British Columbia, Canada. *Herpetological Review* 34:350-352.
- Davis, W.T. 1884. The reptiles and batrachians of Staten Island. *Proceedings of the Natural Science Association of Staten Island*. Extra No. 1: 13.
- Davis, W.T. 1904. *Hyla andersonii* and *Rana virgatipes* at Lakehurst, New Jersey. *American Naturalist* 38:893.
- Davis, W.T. 1907. Additional observations on *Hyla andersonii* and *Rana virgatipes* in New Jersey. *American Naturalist* 41:49-51.
- Davis, W.T. 1910. An addition to the list of Staten Island frogs. *Proceedings of the Staten Island Association of Arts and Sciences* 3(2):66-67.
- Dawson, D.E., and M.E. Hostetler. 2007. Herpetofaunal use of edge and interior habitats in urban forest remnants. *Urban Habitats* 5:103-125.
- Dawson, J.T. 1982. Kin recognition and schooling in the American Toad (*Bufo americanus*). Ph.D. diss., State University of New York, Albany.
- Dayton, G.H. 2000. *Gastrophryne olivacea* (Narrow-mouthed Toad). Vocalization.

- Herpetological Review 31:40.
- Dayton, G.H., and R.E. Jung. 1999. *Scaphiopus couchii* (Couch's Spadefoot). Predation. Herpetological Review 30:164.
- Dayton, G.H., and L.A. Fitzgerald. 2001. Competition, predation, and the distributions of four desert anurans. Oecologia 129:430-435.
- Dayton, G.H., and S.D. Wapo. 2002. Cannibalistic behavior in *Scaphiopus couchii*: more evidence for larval anuran oophagy. Journal of Herpetology 36:531-532.
- Dayton, G.H., and C.W. Painter. 2005. *Bufo speciosus* Girard, 1854. Texas Toad. Pp. 435-436 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Dayton, G.H., and L.A. Fitzgerald. 2006. Habitat suitability models for desert amphibians. Biological Conservation 132:40-49.
- Dayton, G.H. and L.A. Fitzgerald. 2011. The advantage of no defense: predation enhances cohort survival in a desert amphibian. Aquatic Ecology 45:325-333.
- Dayton, G.H., R.E. Jung,, and S. Droege. 2004. Large-scale habitat associations of four desert anurans in Big Bend National Park, Texas. Journal of Herpetology 38:619-627.
- Dayton, G.H., R. Skiles,, and L. Dayton. 2007. Frogs & Toads of Big Bend National Park. Texas A&M University Press, College Station.
- DeBenedictis, P.A. 1970. Interspecific competition between tadpoles of *Rana pipiens* and *Rana sylvatica*: an experimental field study. Ph.D. diss., University of Michigan, Ann Arbor.
- DeBenedictis, P.A. 1974. Interspecific competition between larvae of *Rana pipiens* and *Rana sylvatica*: an experimental field study. Ecological Monographs 44:129-151.
- Deckert, R.F. 1914a. List of salientia from Jacksonville, Fla. Copeia (3):3.
- Deckert, R.F. 1914b. Further notes on the salientia of Jacksonville, Fla. Copeia (9):1-3.
- Deckert, R.F. 1915a. An albino pond frog. Copeia (24):53-54.
- Deckert, R.F. 1915b. Further notes on the salientia of Jacksonville, Fla. Copeia (18):3-5.
- Deckert, R.F. 1915c. Concluding notes on the salientia of Jacksonville, Fla. Copeia (20):21-24.
- Deckert, R.F. 1922. Notes on Dade County salientia. Copeia (112):88.
- Defauw, S.L., and P.J. English. 1994. Geographic distribution. *Scaphiopus holbrookii holbrookii* (Eastern Spadefoot). Herpetological Review 25:162.
- Degenhardt, W.G., C.W. Painter, and A.H. Price. 1996. Amphibians & Reptiles of New Mexico. University of New Mexico Press, Albuquerque.
- Degner, J.F., D.M. Silva, T.D. Hether, J.M. Daza, and E.A. Hoffman. 2010. Fat frogs, mobile genes: unexpected phylogeographic patterns for the Ornate Chorus Frog (*Pseudacris ornata*). Molecular Ecology 19:2501-2515.
- DeGraaf, J.D., and D.G. Nein. 2010. Predation of Spotted Turtle (*Clemmys guttata*) hatchling by Green Frog (*Rana clamitans*). Northeastern Naturalist 17:667-670.
- DeGraaf, R.M., and D.D. Rudis. 1983. Amphibians and Reptiles of New England. Habitats and Natural History. University of Massachusetts Press, Amherst.
- DeGraaf, R.M., and D.D. Rudis. 1986. New England Wildlife: Habitat, Natural History, and Distribution. USDA Forest Service, General Technical Report NE-108, Broomall, PA.
- DeGraaf, R.M., and D.D. Rudis. 1990. Herpetofaunal species composition and relative abundance among three New England forest types. Forest Ecology and Management 32:155-165.
- Deguise, I., and J.S. Richardson. 2009a. Prevalence of the chytrid fungus (*Batrachochytrium dendrobatidis*) in Western Toads in southwestern British Columbia, Canada. Northwestern Naturalist 90:35-38.
- Deguise, I., and J.S. Richardson. 2009b. Movement behaviour of adult Western Toads in a fragmented, forest landscape. Canadian Journal of Zoology 87: 1184-1194.
- Delis, P.R. 1993. Effects of urbanization on the community of anurans of a pine flatwood habitat in west central Florida. M.S. thesis, University of South Florida, Tampa.
- Delis, P.R. 2001. *Hyla gratiosa* and *H. femoralis* (Anura: Hylidae) in west central Florida: a comparative study of rarity and commonness. Ph.D. diss., University of South Florida, Tampa.
- Delis, P.R., H.R. Mushinsky, and E.D. McCoy. 1996. Decline of some west-central Florida anuran populations in response to habitat degradation. Biodiversity and Conservation 5:1579-1595.
- Delis, P.R., C. Kindlin and R.L. Stewart. 2010.

- The herpetofauna of Letterkenny Army Depot, south-central Pennsylvania: a starting point to the long-term monitoring and management of amphibians and reptiles. *Journal of Kansas Herpetology* 34:11-16.
- Delvinquier, B.L.J., and S.S. Desser. 1996. Opalinidae (Sarcomastigophora) in North American amphibia: genus *Opalina* Purkinje and Valentin, 1835. *Systematic Parasitology* 33:33-51.
- Delzell, D.E. 1958. Spatial movement and growth of *Hyla crucifer*. Ph.D. diss., University of Michigan, Ann Arbor.
- deMaynadier, P.G., and M.L. Hunter Jr. 1998. Effects of silvicultural edges on the distribution and abundance of amphibians in Maine. *Conservation Biology* 12:340-352.
- deMaynadier, P.G., and M.L. Hunter Jr. 1999. Forest canopy closure and juvenile emigration by pool-breeding amphibians in Maine. *Journal of Wildlife Management* 63:441-450.
- deMaynadier, P.G., and M.L. Hunter Jr. 2000. Road effects on amphibian movements in a forested landscape. *Natural Areas Journal* 20:56-65.
- Demlong, M.J. 1997. Head-starting *Rana subaquavocalis* in captivity. *Reptiles Magazine* (January):24-28, 30, 32-33.
- Denman, N.S., and L. Denman. 1985. Geographic distribution. *Bufo americanus copei* (Hudson Bay Toad). *Herpetological Review* 16:114.
- DeNoyelles, F., W.D. Kettle, C.H. Fromm, M.F. Moffett, and S.L. Dewey. 1989. Use of experimental ponds to assess the effects of a pesticide on the aquatic environment. Pp. 41-56 In J.R. Voshell (ed.), *Using Mesocosms to Assess the Aquatic Ecological Risk of Pesticides: Theory and Practice*. Entomological Society of America, Lanham, MD.
- Dentel, J.A., A. Reist, O. Hornacek, J. McBride, C. White, T.D. Schwaner and J. Spurgat. 2011. *Lithobates catesbeianus* (American Bullfrog). Predation. *Herpetological Review* 42:89.
- Denton, R.D. 2011. Amphibian community similarity between natural ponds and constructed ponds of multiple types in Daniel Boone National Forest, Kentucky. M.S. thesis, Eastern Kentucky University, Richmond.
- Denton, R.D., and S.C. Richter. 2012. A quantitative comparison of two common amphibian sampling techniques for wetlands. *Herpetological Review* 43:44-47.
- Denver, R.J., N. Mirhadi, and M. Phillips. 1998. Adaptive plasticity in amphibian metamorphosis: response of *Scaphiopus hammondii* tadpoles to habitat desiccation. *Ecology* 79:1859-1872.
- Depoe, C.E., J.H. Funderberg and T.L. Quay. 1961. The reptiles and amphibians of North Carolina: (A preliminary check list and bibliography). *Journal of the Elisha Mitchell Scientific Society* 17:125-139.
- Dernehl, P.H. 1902. Place-modes of *Acris gryllus* for Madison, Wis. *Bulletin of the Wisconsin Natural History Society* 2:75-83.
- de Solla, S.R., C.A. Bishop, K.E. Pettit, and J.E. Elliott. 2002a. Organochlorine pesticides and polychlorinated biphenyls (PCBs) in eggs of Red-legged Frogs (*Rana aurora*) and Northwestern Salamanders (*Ambystoma gracile*) in an agricultural landscape. *Chemosphere* 46:1027-1032.
- de Solla, S.R., K.E. Pettit, C.A. Bishop, K.M. Cheng, and J.E. Elliott. 2002b. Effects of agricultural runoff on native amphibians in the lower Fraser River valley, British Columbia, Canada. *Environmental Toxicology and Chemistry* 21:353-360.
- de Solla, S.R., L.J. Shirose, K.J. Fernie, G.C. Barrett, C.S. Brousseau, and C.A. Bishop. 2005. Effect of sampling effort and species detectability on volunteer based anuran monitoring programs. *Biological Conservation* 121:585-594.
- Desroches, J.-F., and D. Rodrigue. 2004. *Amphibiens et Reptiles du Québec et des Maritimes*. Éditions Michel Quintin, Waterloo, Québec.
- Dessauer, H.C., and E. Nevo. 1969. Geographic variation of blood and liver proteins in cricket frogs. *Biochemical Genetics* 3:171-188.
- Desser, S., and J.R. Barta. 1984a. An intraerythrocytic virus and rickettsia of frogs from Algonquin Park, Ontario. *Canadian Journal of Zoology* 62:1521-1524.
- Desser, S., and J.R. Barta. 1984b. *Thrombocytozoons ranarum* Tchacaroff 1863, a prokaryotic parasite in thrombocytes of the Mink Frog *Rana septentrionalis* in Ontario. *Journal of Parasitology* 70:454-456.
- Desser, S., and S. Jones. 1985. *Hexamita intestinalis* Dujardin in the blood of frogs from southern and central Ontario. *Journal of Parasitology* 71:841.
- Desser, S., J. Lom, and I. Dykova. 1986. Developmental stages of *Sphaerospora*

- ohlmacheri* (Whinery, 1893) n. comb. (Myxozoa: Myxosporea) in the renal tubules of Bullfrog tadpoles, *Rana catesbeiana* from Lake of Two Rivers, Algonquin Park, Ontario. Canadian Journal of Zoology 64:2344-2347.
- Desser, S., M.E. Siddall, and J.R. Barta. 1989. Ultrastructural observations of the developmental stages of *Lankesterella minima* (Apicomplexa) in experimentally infected *Rana catesbeiana* tadpoles. Journal of Parasitology 76:97-103.
- Desser, S., H. Hong, M.E. Siddall, and J.R. Barta. 1993. An ultrastructural study of *Brugerolleia algonquinensis* gen. nov., sp. nov. (Diplomonadina: Diplomonadida), a flagellate parasite in the blood of frogs from Ontario, Canada. European Journal of Protistology 29:72-80.
- DeVito, J., D.P. Chivers, J.M. Kiesecker, A. Marco, E.L. Wildy, and A.R. Blaustein. 1998. The effects of snake predation on metamorphosis of Western Toads, *Bufo boreas* (Amphibia, Bufonidae). Ethology 104:185-193.
- DeVito, J., D.P. Chivers, J.M. Kiesecker, L.K. Belden, and A.R. Blaustein. 1999. Effects of snake predation on aggregation and metamorphosis of Pacific Treefrog (*Hyla regilla*) larvae. Journal of Herpetology 33:504-507.
- de Vlaming, V.L., and R.B. Bury. 1970. Thermal selection in tadpoles of the Tailed Frog, *Ascaphus truei*. Journal of Herpetology 4:179-189.
- Diakow, C. 1977. Initiation and inhibition of the release croak of *Rana pipiens*. Physiology & Behavior 19:607-610.
- Dial, N.A., and C.A. Bauer. 1984. Teratogenic and lethal effects of paraquat on developing frog embryos (*Rana pipiens*). Bulletin of Environmental Contamination and Toxicology 33:592-597.
- Dial, N.A., and C.A. Bauer Dial. 1987. Lethal effects of diquat and paraquat on developing frog embryos and 15-day-old tadpoles, *Rana pipiens*. Bulletin of Environmental Contamination and Toxicology 38:1006-1011.
- Dibble, C.J., J.E. Kauffman, E.M. Zuzik, G.R. Smith, and J.E. Rettig. 2009. Effects of potential predator and competitor cues and sibship on Wood Frog (*Rana sylvatica*) embryos. Amphibia-Reptilia 30:294-298.
- Di Berardino, M.A. 1962. The karyotype of *Rana pipiens* and investigation of its stability during embryonic differentiation. Developmental Biology 5:101-126.
- Di Candia, M.R., and E.J. Routman. 2007. Cytonuclear discordance across a leopard frog contact zone. Molecular Phylogenetics and Evolution 45:564-575.
- Dickerson, M.C. 1906. The Frog Book. North American Toads and Frogs with a Study of the Habits and Life Histories of those of the Northeastern States. Doubleday, Page & Co., New York.
- Dickey, L.B. 1921. A new amphibian cestode. Journal of Parasitology 7:129-137.
- Dickinson, W.E. 1965. Handbook of Amphibians and Turtles of Wisconsin. Milwaukee Public Museum, Milwaukee.
- Dickman, M. 1968. The effect of grazing by tadpoles on the structure of a periphyton community. Ecology 49:1188-1190.
- Dickson, N.J. 2002. The natural history and possible extirpation of Blanchard's Cricket Frog, *Acris crepitans blanchardi*, in West Virginia. M.S. thesis, Marshall University, Huntington.
- Didiuk, A. 1997. Status of amphibians in Saskatchewan. SSAR Herpetological Conservation 1:110-116.
- Diekamp, B., and H.C. Gerhardt. 1995. Neurophysiological and behavioral studies of vocal communication in the Gray Treefrog, *Hyla versicolor*. Journal of Comparative Physiology 177A:173-190.
- Diener, R.A. 1965. The occurrence of tadpoles of the Green Treefrog, *Hyla cinerea cinerea* (Schneider), in Trinity Bay, Texas. British Journal of Herpetology 3:198-199.
- Dill, L.M. 1977. "Handedness" in the Pacific Tree Frog (*Hyla regilla*). Canadian Journal of Zoology 55:1926-1929.
- Diller, L.V., and R.L. Wallace. 1999. Distribution and habitat of *Ascaphus truei* in streams on managed, young growth forests in north coastal California. Journal of Herpetology 33:71-79.
- DiMauro, D., and M.L. Hunter Jr. 2002. Reproduction of amphibians in natural and anthropogenic temporary pools in managed forests. Forest Science 48:397-406.
- Dimmitt, M.A., and R. Ruibal. 1980a. Exploitation of food resources by spadefoot toads (*Scaphiopus*). Copeia 1980:854-862.
- Dimmitt, M.A., and R. Ruibal. 1980b. Environmental correlates of emergence in spadefoot toads (*Scaphiopus*). Journal of

- Herpetology 14:21-29.
- Dinehart, S.K., L.M. Smith, S.T. McMurry, T.A. Anderson, P.N. Smith, and D.A. Haukos. 2009. Toxicity of a glufosinate- and several glyphosate-based herbicides to juvenile amphibians from the Southern High Plains, USA. *Science of the Total Environment* 407:1065-1071.
- Dinehart, S.K., L. M. Smith. S. T. McMurry, P. N. Smith, T. A. Anderson and D. A. Haukos. 2010. Acute and chronic toxicity of Roundup WeatherMAX® and Ignite® 280 SL to larval *Spea multiplicata* and *S. bombifrons* from the Southern High Plains, USA. *Environmental Pollution* 158: 2610-2617.
- Dinsmore, A. 2004. Geographic distribution. *Eleutherodactylus planirostris*. *Herpetological Review* 35:403.
- Dirig, R. 1978. A large diurnal breeding assemblage of American Toads, *Bufo americanus americanus*, in the Catskill Mountains. *Pitch Pine Naturalist* 4:1-2.
- Distel, C.A., and M.D. Boone. 2009. Effects of aquatic exposure to the insecticide carbaryl and density on aquatic and terrestrial growth and survival in American toads. *Environmental Toxicology and Chemistry* 28:1963-1969.
- Distel, C.A., and M.D. Boone. 2010. Effects of aquatic exposure to the insecticide carbaryl are species-specific across life stages and mediated by heterospecific competitors in anurans. *Functional Ecology* 24:1342-1352.
- Distel, C.A., and M.D. Boone. 2011a. Pesticide has asymmetric effects on two tadpole species across density gradient. *Environmental Toxicology and Chemistry* 30:650-658.
- Distel, C.A., and M.D. Boone. 2011b. Insecticide has asymmetric effects on two tadpole species despite priority effects. *Ecotoxicology* 20:875-884.
- Dixon, J.R. 1967. The amphibians and reptiles of Los Angeles County California. Los Angeles County Museum, Science Series 23, Zoology No. 10.
- Dixon, J.R. 2000. *Amphibians and Reptiles of Texas*, with Keys, Taxonomic Synopses, Bibliography, and Distribution Maps. 2nd ed. Texas A & M University Press, College Station. [first edition, 1987]
- Dobbs, E.K., M.G. Brown, J.W. Snodgrass and D.R. Ownby. 2012. Salt toxicity to treefrogs (*Hyla chrysoscelis*) depends on depth. *Herpetologica* 68:22-30.
- Dodd, C.K. Jr. 1977. Immobility in juvenile *Bufo woodhousei fowleri*. *Journal of the Mississippi Academy of Sciences* 22:90-94. [reprints imply page numbers are 90-93]
- Dodd, C.K. Jr. 1979. A photographic technique to study tadpole populations. *Brimleyana* 2:131-136.
- Dodd, C.K. Jr. 1991. Drift fence-associated sampling bias of amphibians at a Florida sandhills temporary pond. *Journal of Herpetology* 25:296-301.
- Dodd, C.K. Jr. 1992. Biological diversity of a temporary pond herpetofauna in north Florida sandhills. *Biodiversity and Conservation* 1:125-142.
- Dodd, C.K. Jr. 1994. The effects of drought on population structure, activity, and orientation of toads (*Bufo quercicus* and *B. terrestris*) at a temporary pond. *Ethology Ecology & Evolution* 6:331-349.
- Dodd, C.K. Jr. 1995. The ecology of a sandhills population of the Eastern Narrow-mouthed Toad, *Gastrophryne carolinensis*, during a drought. *Bulletin of the Florida Museum of Natural History* 38:11-41.
- Dodd, C.K. Jr. 1996. Use of terrestrial habitats by amphibians in the sandhill uplands of north-central Florida. *Alytes* 14:42-52.
- Dodd, C.K., Jr. 2003. Monitoring amphibians in Great Smoky Mountains National Park. U.S. Geological Survey, Circular No. 1258.
- Dodd, C.K. Jr. 2004. *The Amphibians of Great Smoky Mountains National Park*. University of Tennessee Press, Knoxville.
- Dodd, C.K. Jr. (ed.). 2010. *Amphibian Ecology and Conservation. A Handbook of Techniques*. Oxford University Press, Oxford.
- Dodd, C.K. Jr., and P.V. Cupp. 1978. The effect of temperature and stage of development on the duration of immobility in selected anurans. *British Journal of Herpetology* 5:783-788.
- Dodd, C.K. Jr., and R.A. Seigel. 1991. Relocation, repatriation and translocation of amphibians and reptiles: are they conservation strategies that work? *Herpetologica* 47:335-350.
- Dodd, C.K. Jr., and B.S. Cade. 1998. Movement patterns and the conservation of amphibians breeding in small, temporary wetlands. *Conservation Biology* 12:331-339.
- Dodd, C.K. Jr., and L.L. Smith. 2003. Habitat destruction and alteration: historical trends and future prospects for amphibians. Pp. 94-112 *In* R.D. Semlitsch (ed.), *Amphibian Conservation*. Smithsonian Books,

- Washington, DC.
- Dodd, C.K. Jr., and W.J. Barichivich. 2007. Establishing a baseline and faunal history in amphibian monitoring programs: the amphibians of Harris Neck, GA. *Southeastern Naturalist* 6:125-134.
- Dodd, C.K. Jr., M.L. Griffey, and J.D. Corser. 2001. The cave associated amphibians of Great Smoky Mountains National Park: review and monitoring. *Journal of the Elisha Mitchell Scientific Society* 117:139-149.
- Dodd, C.K. Jr., W.J. Barichivich, and L.L. Smith. 2004. Effectiveness of a barrier wall and culverts in reducing wildlife mortality on a heavily traveled highway in Florida. *Biological Conservation* 118:619-631.
- Dodd, C.K. Jr., W.J. Barichivich, S.A. Johnson, and J.S. Staiger. 2007. Changes in a northwestern Florida Gulf Coast herpetofaunal community over a 28-y period. *American Midland Naturalist* 158:29-48.
- Dodd, C. K., Jr., J. Loman, D. Cogălniceanu, and M. Puky. 2012. Monitoring Amphibian Populations. Pp. 3577-3635 In: H.H. Heatwole and J. W. Wilkenson (eds.), *Conservation and Decline of Amphibians: Ecological Aspects, Effect of Humans and Management*. *Amphibian Biology*, Volume 10, Surrey Beatty & Sons, Chipping Norton, New South Wales, Australia.
- Dodge, N.N. 1938. Amphibians and reptiles of Grand Canyon National Park. *Grand Canyon Natural History Association, Natural History Bulletin No. 9*.
- Doherty, J.A., and H.C. Gerhardt. 1984. Evolutionary and neurobiological implications of selective phonotaxis in the Spring Peeper (*Hyla crucifer*). *Animal Behaviour* 32:875-881.
- Dole, J.W. 1965a. Summer movements of adult Leopard Frogs, *Rana pipiens* Schreber, in northern Michigan. *Ecology* 46:236-255.
- Dole, J.W. 1965b. Spatial relations in natural populations of the Leopard Frog, *Rana pipiens* Schreber, in northern Michigan. *American Midland Naturalist* 74:464-478.
- Dole, J.W. 1967a. The role of substrate moisture and dew in the water economy of Leopard Frogs, *Rana pipiens*. *Copeia* 1967:141-149.
- Dole, J.W. 1967b. Spring movements of Leopard Frogs, *Rana pipiens* Schreber, in northern Michigan. *American Midland Naturalist* 78:167-181.
- Dole, J.W. 1968. Homing in Leopard Frogs, *Rana pipiens*. *Ecology* 49:386-399.
- Dole, J.W. 1971. Dispersal of recently metamorphosed Leopard Frogs, *Rana pipiens*. *Copeia* 1971:221-228.
- Dole, J.W. 1972a. Homing and orientation of displaced toads, *Bufo americanus*, to their home sites. *Copeia* 1972:151-158.
- Dole, J.W. 1972b. The role of olfaction and audition in the orientation of leopard frogs, *Rana pipiens*. *Herpetologica* 28:258-260.
- Dole, J.W., B.B. Rose, and K.H. Tachiki. 1981. Western Toads (*Bufo boreas*) learn odor of prey insects. *Herpetologica* 37:63-68.
- Donald, D.B., W. T. Aitken, C. Paquette and S.S. Wulff. 2011. Winter snowfall determines the occupancy of northern prairie wetlands by tadpoles of the Wood Frog (*Lithobates sylvaticus*). *Canadian Journal of Zoology* 89: 1063-1073.
- Donnelly, M.A., C.J. Farrell, M.J. Baber, and J.L. Glenn. 2001. The amphibians and reptiles of the Kissimmee River. 1. Patterns of abundance and occurrence in altered floodplain habitats. *Herpetological Natural History* 8:161-170.
- Doody, J.S., and J.E. Young. 1995. Temporal variation in reproduction and clutch mortality of Leopard Frogs (*Rana utricularia*) in south Mississippi. *Journal of Herpetology* 29:614-616.
- Dorcas, M., and W. Gibbons. 2011. *Frogs. The Animal Answer Guide*. Johns Hopkins University Press, Baltimore.
- Dorcas, M.E., S.J. Price, J.C. Beane, and S.C. Owen. 2007. *The Frogs and Toads of North Carolina. Field Guide and Recorded Calls*. North Carolina Wildlife Resources Commission, Raleigh, NC.
- Doty, T.L. 1978. A study of larval amphibian population dynamics in a Rhode Island vernal pond. Ph.D. diss., University of Rhode Island, Kingston.
- Doubledee, R.A., E.B. Miller, and R.M. Nisbet. 2003. Bullfrogs, disturbance regimes, and the persistence of California Red-legged Frogs. *Journal of Wildlife Management* 67:424-438.
- Dougherty, C.K., and G.R. Smith. 2006. Acute effects of road de-icers on the tadpoles of three anurans. *Applied Herpetology* 3:87-93.
- Douglas, C.L. 1966. *Amphibians and reptiles of Mesa Verde National Park, Colorado*. University of Kansas Publications, Museum of Natural History 15:711-744.
- Dowe, B.J. 1979. The effect of time of

- oviposition and microenvironment on growth of larval Bullfrogs (*Rana catesbeiana*) in Arizona. M.S. thesis, Arizona State University, Tempe.
- Dowler, R.C., J.K. McCoy, and L.J. Fohn. 2010. *Scaphiopus couchii* (Couch's Spadefoot). Predation. Herpetological Review 41:480.
- Dowling, H.G. 1957. A review of the amphibians and reptiles of Arkansas. University of Arkansas Museum, Occasional Papers No. 3.
- Doyle, J.M. 2011a. Evaluating the phenotype-linked fertility hypothesis: Do exaggerated male phenotypes advertise potential fecundity benefits to females? Ph.D. diss., Purdue University, West Lafayette, IN.
- Doyle, J.M. 2011b. Sperm depletion and a test of the phenotype-linked fertility hypothesis in Gray Treefrogs (*Hyla versicolor*). Canadian Journal of Zoology 89: 853-858.
- Drake, C.J. 1914. The food of *Rana pipiens* Shreber. The Ohio Naturalist 14:257-269.
- Drake, D.L. 2010. *Lithobates onca* (Relict Leopard Frog). Cannibalistic oophagy. Herpetological Review 41:198-199.
- Drake, D.L., and S.E. Trauth. 2010. *Spea intermontana* (Great Basin Spadefoot). Algal symbiosis. Herpetological Review 41:481-482.
- Drake, D.L., A. Drayer, and S.E. Trauth. 2007. *Bufo americanus* (American Toad). Algal symbiosis. Herpetological Review 38:435-436.
- Drayer, A.N. 2011. Efficacy of constructed wetlands of various depths for natural amphibian community conservation. M.S. thesis, Eastern Kentucky University, Richmond.
- Dreitz, V.J. 2006. Issues in species recovery: an example based on the Wyoming Toad. Bioscience 56:765-771.
- Driver, E.C. 1936. Observations on *Scaphiopus holbrookii* (Harlan). Copeia 1936:67-69.
- Drost, C.A., and G.M. Fellers. 1996. Collapse of a regional frog fauna in the Yosemite area of the California Sierra Nevada. Conservation Biology 10:414-425.
- Duarte, A., D.J. Brown, and M.R.J. Forstner. 2011. Estimating abundance of the endangered Houston toad on a primary recovery site. Journal of Fish and Wildlife Management 2:207-215.
- Dubois, A. 2006. Naming taxa from cladograms: a cautionary tale. Molecular Phylogenetics and Evolution 42:317-330.
- DuBois, R.B., and F.M. Stoll. 1995. Downstream movement of leopard frogs in a Lake Superior tributary exemplifies the concept of a lotic macrodrift. Journal of Freshwater Ecology 10:135-139.
- Duellman, W.E. 1951. Notes on the reptiles and amphibians of Greene County, Ohio. Ohio Journal of Science 51:335-341.
- Duellman, W.E. 1955. Systematic status of the Key West Spadefoot Toad, *Scaphiopus holbrookii albus*. Copeia 1955:141-143.
- Duellman, W.E. 1986. Biology of Amphibians. McGraw Hill, New York.
- Duellman, W.E., and A. Schwartz. 1958. Amphibians and reptiles of southern Florida. Bulletin of the Florida State Museum, Biological Sciences 3:181-324.
- Duffitt, A.D. and M.S. Finkler. 2011. Sex-related differences in somatic stored energy reserves of *Pseudacris crucifer* and *Pseudacris triseriata* during the early breeding season. Journal of Herpetology 45:224-229.
- Duffus, A.L.J., B.D. Pauli, K. Wozney, C.R. Brunetti, and M. Berrill. 2008. Frog Virus 3-like infections in aquatic amphibian communities. Journal of Wildlife Diseases 44:109-120.
- Dumas, P.C. 1957. *Rana sylvatica* Le Conte in Idaho. Copeia 1957:150-151.
- Dumas, P.C. 1966. Studies of the *Rana* species complex in the Pacific Northwest. Copeia 1966:60-74.
- Duméril, A.M.C., and G. Bibron. 1841. Erpetologie General, ou Histoire Naturelle Complete des Reptiles, Vol. 8., Roret, Paris.
- Dunbar, N.J. 1949. Wood frogs at Chimo. The Arctic Circular 2(1):9-10.
- Dundee, H.A. 1974. Recognition characters for *Rana grylio*. Journal of Herpetology 8:275-276.
- Dundee, H.A. 1999. *Gastrophryne olivacea* (Great Plains Narrowmouth Toad). Aggregation with tarantula. Herpetological Review 30:91-92.
- Dundee, H.A., and D.A. Rossman. 1989. The Amphibians and Reptiles of Louisiana. Louisiana State University Press, Baton Rouge.
- Dundee, H.A., C. Shillington and C.M. Yeary. 2012. Interactions between tarantulas (*Aphonopelma hentzi*) and Narrow-Mouthed Toads (*Gastrophryne olivacea*): support for a symbiotic relationship. Tulane Studies in Zoology and Botany 32:31-38.
- Dunlap, D.G. 1955. Inter- and intraspecific variation in Oregon frogs of the genus *Rana*.

- American Midland Naturalist 54:314-331.
- Dunlap, D.G. 1963. The status if [sic] the Gray Treefrog, *Hyla versicolor* in South Dakota. Proceedings of the South Dakota Academy of Science 42:136-139.
- Dunlap, D.G. 1967. Selected records of amphibians and reptiles from South Dakota. Proceedings of the South Dakota Academy of Science 46:100-106.
- Dunlap, D.G. 1977. Wood and Western Spotted Frogs (Amphibia, Anura, Ranidae) in the Big Horn Mountains of Wyoming. Journal of Herpetology 11:85-87.
- Dunlap, D.G., and K.C. Kruse. 1976. Frogs of the *Rana pipiens* complex in the northern and central Plains states. Southwestern Naturalist 20:559-571.
- Dunlap, D.G., and J.E. Platz. 1981. Geographic variation of proteins and call in *Rana pipiens* from the northcentral United States. Copeia 1981:876-879.
- Dunlap, D.G., and C.K. Satterfield. 1985. Habitat selection in larval anurans: early experience and substrate pattern selection in *Rana pipiens*. Developmental Psychobiology 18:37-58.
- Dunn, E.R. 1935. The survival value of specific characters. Copeia 1935:85-98.
- Dunn, E.R. 1937. The status of *Hyla evittata* Miller. Transactions of the Biological Society of Washington 50:9-10.
- Dupuis, L., and D. Steventon. 1999. Riparian management and the tailed frog in northern coastal forests. Forest Ecology and Management 124:35-43.
- Dupuis, L., and P. Friile. 2006. The distribution of the Rocky Mountain Tailed Frog (*Ascaphus montanus*) in relation to the fluvial system: implications for management and conservation. Ecological Research 21:489-502.
- Durham, L., and G.W. Bennett. 1963. Age, growth, and homing in the Bullfrog. Journal of Wildlife Management 27:107-123.
- Dury, R., and R.S. Williams. 1933. Notes on some Kentucky amphibians and reptiles. The Baker-Hunt Foundation Museum, Williams Natural History Collection Bulletin No. 1.
- Dusi, J.L. 1949. The natural occurrence of "redleg," *Pseudomonas hydrophila*, in a population of American Toads, *Bufo americanus*. Ohio Journal of Science 49:70-71.
- Dyche, L.L. 1914. Ponds, pond fish, and pond fish culture. Kansas Department of Fish and Game, Bulletin 1.
- Dyer, W.G. 1991. Helminth parasites of amphibians from Illinois and adjacent Midwestern states. Transactions of the Illinois State Academy of Science 84:125-143.
- Dyrkacz, S. 1981. Recent instances of albinism in North American amphibians and reptiles. SSAR Herpetological Circular No. 11.
- Earl, J.E. 2012. Effects of spatial subsidies and canopy cover on pond communities and multiple life stages in amphibians. Ph.D. diss., University of Missouri, Columbia.
- Earl, J.E., and H.H. Whiteman. 2009. Effects of pulsed nitrate exposure on amphibian development. Environmental Toxicology and Chemistry 28:1331-1337.
- Earl, J.E., and H.H. Whiteman. 2010. Evaluation of phosphate toxicity in Cope's Gray Treefrog (*Hyla chrysoscelis*) tadpoles. Journal of Herpetology 44:201-208.
- Earl, J.E., and R.D. Semlitsch. 2012. Reciprocal subsidies in ponds: does leaf litter input increase frog biomass export? Oecologia 170:1077-1087.
- Earl, J.E., T.M. Luhring, B.K. Williams and R.D. Semlitsch. 2011. Biomass export of salamanders and anurans from ponds is affected differentially by changes in canopy cover. Freshwater Biology 56:2473-2482.
- Earl, J.E., K.E. Cohagen and R.D. Semlitsch. 2012. Effects of leachate from tree leaves and grass litter on tadpoles. Environmental Toxicology and Chemistry 31:1511-1517.
- Eason, G.W. Jr., and J.E. Fauth. 2001. Ecological correlates of anuran species richness in temporary pools: a field study in South Carolina, USA. Israel Journal of Zoology 47:347-365.
- Easteal, S. 1981. The history of introductions of *Bufo marinus* (Amphibia: Anura): a natural experiment in evolution. Biological Journal of the Linnaean Society 16:93-113.
- Eaton, B.R. 2004. Ecology of anurans in boreal Alberta. Ph.D. diss., University of Alberta, Edmonton.
- Eaton, B.R., and C.A. Paszkowski. 1999. *Rana sylvatica* (Wood Frog). Predation. Herpetological Review 30:164.
- Eaton, B.R., and Z.C. Eaton. 2001. An observation of a Mallard, *Anas platyrhynchos*, feeding on a Wood Frog, *Rana sylvatica*. Canadian Field-Naturalist 115:499-500.
- Eaton, B.R., C. Grekul, and C.A. Paszkowski. 1999. An observation of interspecific amplexus

- between Boreal, *Bufo boreas*, and Canadian, *Bufo hemiophrys*, Toads with a range extension for Boreal Toad in central Alberta. Canadian Field-Naturalist 113:512-513.
- Eaton, B.R., C.A. Paszkowski, and R. Chapman. 2003. *Rana sylvatica* (Wood Frog). Parasite. Herpetological Review 34:55.
- Eaton, B.R., S. Eaves, C. Stevens, A. Puchniak, and C.A. Paszkowski. 2004. Deformity levels in wild populations of the Wood Frog (*Rana sylvatica*) in three ecoregions of western Canada. Journal of Herpetology 38:283-287.
- Eaton, B.R., W.W. Tonn, C.A. Paszkowski, A.J. Danylchuk, and S.M. Boss. 2005a. Indirect effects of fish winterkills on amphibian populations in boreal lakes. Canadian Journal of Zoology 83:1532-1539.
- Eaton, B.R., C.A. Paszkowski, K. Kristensen, and M. Hiltz. 2005b. Life-history variation among populations of Canadian Toads in Alberta, Canada. Canadian Journal of Zoology 83:1421-1430.
- Eaton, B.R., A.E. Moenting, C.A. Paszkowski, and D. Shpeley. 2008. Myiasis by *Lucilla silvarum* (Calliphoridae) in amphibian species in boreal Alberta, Canada. Journal of Parasitology 94:949-952.
- Eaton, T.H. Jr. 1935. Report on amphibians and reptiles of the Navajo country. Rainbow Bridge-Monument Valley Expedition Bulletin No. 3, 18 pp.
- Eaton, T.H. Jr., and R.M. Imagawa. 1948. Early development of *Pseudacris clarkii*. Copeia 1948:263-265.
- Eaves, S.E. 2004. Amphibian distribution in the aspen parkland. M.S. thesis, University of Alberta, Edmonton.
- Echaubard, P., K. Little, B. Pauli, and D. Lesbarrères. 2010. Context-dependent effects of ranaviral infection on Northern Leopard Frog life history traits. PLoS One 5(10):e13723.
- Echternacht, A.C. 1964. Albino specimens from Arizona. Herpetologica 20:211-212.
- Eddy, S.B. 1976. Population ecology of the Leopard Frog, *Rana pipiens pipiens* Schreber, at Delta Marsh, Manitoba. M.S. thesis, University of Manitoba, Winnipeg.
- Edge, C.B. D. G. Thompson, C. Hao, J. E. Houlahan. 2012. A silviculture application of the glyphosate-based herbicide VisionMAX to wetlands has limited direct effects on amphibian larvae. Environmental Toxicology and Chemistry 31:2375-2383.
- Edginton, A.N., P.M. Sheridan, G.R. Stephenson, D.G. Thompson, and H.J. Boermans. 2004. Comparative effects of pH and Vision™ herbicide on two life stages of four anuran amphibian species. Environmental Toxicology and Chemistry 23:815-822.
- Edgren, R.A. Jr. 1944. Notes on amphibians and reptiles from Wisconsin. American Midland Naturalist 32:495-498.
- Edgren, R.A. 1954. Factors controlling color change in the tree frog, *Hyla versicolor* Wied. Proceedings of the Society for Experimental Biology and Medicine 87:20-23.
- Edwards, J.R., K.L. Koster, and D.L. Swanson. 2000. Time course for cryoprotectant synthesis in the freeze-tolerant chorus frog, *Pseudacris triseriata*. Comparative Biochemistry and Physiology 125A:367-375.
- Edwards, T.M., K.A. McCoy, T. Barbeau, M.W. McCoy, J.M. Thro, and L.J. Guillette Jr. 2006. Environmental context determines nitrate toxicity in Southern Toad (*Bufo terrestris*) tadpoles. Aquatic Toxicology 78:50-58.
- Egan, R.S. 2001. Within-pond and landscape-level factors influencing the breeding effort of *Rana sylvatica* and *Ambystoma maculatum*. M.S. thesis, University of Rhode Island, Kingston.
- Egan, R.S., and P.W.C. Paton. 2004. Within-pond parameters affecting oviposition by Wood Frogs and Spotted Salamanders. Wetlands 24:1-13.
- Egan, R.S., and P.W.C. Paton. 2008. Multiple scale habitat characteristics of pond-breeding amphibians across a rural-urban gradient. Pp. 53-65 In J.C. Mitchell, R.E. Jung Brown, and B. Bartholomew (eds.), Urban Herpetology. Herpetological Conservation 3. Society for the Study of Amphibians and Reptiles, Salt Lake City, UT.
- Ehrlich, D. 1979. Predation by Bullfrog tadpoles (*Rana catesbeiana*) on eggs and newly hatched larvae of the Plains Leopard Frog (*Rana blairi*). Bulletin of the Maryland Herpetological Society 15:25-26.
- Eigenbrod, F., S.J. Hecnar, and L. Fahrig. 2008. The relative effects of road traffic and forest cover on anuran populations. Biological Conservation 141:35-46.
- Eigenbrod, F., S.J. Hecnar, and L. Fahrig. 2009. Quantifying the road-effect zone: threshold effects of a motorway on anuran populations in Ontario, Canada. Ecology and Society 14(1):24. <http://www.ecologyandsociety.org>

- /Vol14/iss1/art24/.
- Einem, G.E., and L.D. Ober. 1956. The seasonal behavior of certain Floridian Salientia. *Herpetologica* 12:205-212.
- Eklöv, P. 2000. Chemical cues from multiple predator-prey interactions induce changes in behavior and growth of anuran larvae. *Oecologia* 123:192-199.
- El Balaa, R., and G. Blouin-Demers. 2011. Unpalatability of Northern Leopard Frog *Lithobates pipiens* Schreber, 1782 tadpoles. *Herpetology Notes* 4:159.
- Elinson, R.P. 1974. A block to cross-fertilization located in the egg jelly of the frog *Rana clamitans*. *Journal of Embryology and Experimental Morphology* 32:325-335.
- Elinson, R.P. 1975a. Viable amphibian hybrids produced by circumventing a block to cross-fertilization (*Rana clamitans* ♀ X *Rana catesbeiana* ♂). *Journal of Experimental Zoology* 192:323-329.
- Elinson, R.P. 1975b. Fertilization of Green Frog (*Rana clamitans*) eggs in their native jelly by Bullfrog (*Rana catesbeiana*) sperm. *Journal of Experimental Zoology* 193:419-423.
- Elliott, L., C. Gerhardt, and C. Davidson. 2009. *The Frogs and Toads of North America*. Houghton Mifflin Harcourt, Boston.
- Ellis, M.M., and J. Henderson. 1913. Amphibia and reptilia of Colorado. Part 1. University of Colorado Studies 10:39-129.
- Ellis, M.M., and J. Henderson. 1915. Amphibia and reptilia of Colorado. Part 2. University of Colorado Studies 11:253-263.
- Ely, C. 1944. Development of *Bufo marinus* larvae in dilute sea water. *Copeia* 1944:256.
- Emerson, S.B., J. Travis and M. Blouin. 1988. Evaluating a hypothesis about heterochrony: larval life-history traits and juvenile hind-limb morphology in *Hyla crucifer*. *Evolution* 42: 68-78.
- Emery, A.R., A.H. Berst, and K. Kodaira. 1972. Under-ice observations of wintering sites of leopard frogs. *Copeia* 1972:123-126.
- Emlen, S.T. 1968. Territoriality in the Bullfrog, *Rana catesbeiana*. *Copeia* 1968:240-243.
- Emlen, S.T. 1976. Lek organization and mating strategies in the Bullfrog. *Behavioral Ecology and Sociobiology* 1:283-313.
- Emlen, S.T. 1977. "Double-clutching" and its possible significance in the Bullfrog. *Copeia* 1977:749-751.
- Emmett, A.D., and F.P. Allen. 1919. Nutritional studies on the growth of frog larvae (*Rana pipiens*). *Journal of Biological Chemistry* 38:325-344.
- Enderson, E.F., and R.L. Bezy. 2000. Geographic distribution: *Pternohyla fodiens* (Lowland Burrowing Treefrog). *Herpetological Review* 31:251-252.
- Engbrecht, N.J. 2010. The status of Crawfish Frogs (*Lithobates areolatus*) in Indiana, and a tool to assess populations. M.S. thesis, Indiana State University, Terre Haute.
- Engbrecht, N.J., and J.L. Heemeyer. 2010. *Lithobates areolatus circulosus* (Northern Crawfish Frog). *Heterodon platirhinos* (Eastern Hog-nosed Snake). Predation. *Herpetological Review* 41:168-170.
- Engbrecht, N.J., and M.J. Lannoo. 2010. A review of the status and distribution of Crawfish Frogs (*Lithobates areolatus*) in Indiana. *Proceedings of the Indiana Academy of Science* 119:64-73.
- Engbrecht, N.J., S.J. Lannoo, J.O. Whitaker and M.J. Lannoo. 2011. Comparative morphometrics in ranid frogs (subgenus *Nenirana*): are apomorphic elongation and a blunt snout responses to small-bore burrow dwelling in Crawfish Frogs (*Lithobates areolatus*)? *Copeia* 2011:285-295.
- Engbrecht, N.J., J.L. Heemeyer, V.C. Kinney and M.J. Lannoo. 2012. *Lithobates areolatus circulosus* (Northern Crawfish Frog). Thwarted predation. *Herpetological Review* 43:323-324.
- Enge, K.M. 1984. Effects of clearcutting and site preparation on the herpetofauna of a north Florida flatwoods. M.S. thesis, University of Florida, Gainesville.
- Enge, K.M. 1998a. Herpetofaunal survey of an upland hardwood forest in Gadsden County, Florida. *Florida Scientist* 61:141-159.
- Enge, K.M. 1998b. Herpetofaunal drift-fence survey of steephead ravines in 2 river drainages. *Proceedings of the Annual Conference of Southeastern Association of Fish and Wildlife Agencies* 1998:336-348.
- Enge, K.M. 2002. Herpetofaunal drift-fence survey of two seepage bogs in Okaloosa County, Florida. *Florida Scientist* 65:67-82.
- Enge, K.M. 2005a. Commercial harvest of amphibians and reptiles in Florida for the pet trade. Pp. 198-211 In W.E. Meshaka Jr. and K.J. Babbitt (eds.), *Amphibians and Reptiles. Status and Conservation in Florida*. Krieger Publishing, Malabar, FL.
- Enge, K.M. 2005b. Herpetofaunal drift-fence

- surveys of steephead ravines in the Florida Panhandle. *Southeastern Naturalist* 4:657-678.
- Enge, K.M., and W.R. Marion. 1986. Effects of clearcutting and site preparation on herpetofauna of a north Florida flatwoods. *Forest Ecology and Management* 14:177-192.
- Enge, K.M., and K.N. Wood. 1998. Herpetofaunal surveys of the Big Bend Wildlife Management Area, Taylor County, Florida. *Florida Scientist* 61:61-87.
- Enge, K.M., and K.N. Wood. 2000. A herpetofaunal survey of Chassahowitzka Wildlife Management Area, Hernando County, Florida. *Herpetological Natural History* 7:117-144.
- Enge, K.M., and K.N. Wood. 2001. Herpetofauna of Chinsegut Nature Center, Hernando County, Florida. *Florida Scientist* 64:283-305.
- Enge, K.M., D.T. Cobb, G.L. Sprandel, and D.L. Francis. 1996. Wildlife captures in a pipeline trench in Gadsden County, Florida. *Florida Scientist* 59:1-11.
- Engels, W.L. 1942. Vertebrate fauna of North Carolina coastal islands. A study in the dynamics of animal distribution. 1. Ocracoke Island. *American Midland Naturalist* 28:273-304.
- Engels, W.L. 1952. Vertebrate fauna of North Carolina coastal islands. 2. Shackleford Banks. *American Midland Naturalist* 47:702-742.
- Engeman, R.M., and E.M. Engeman. 1996. Longevity of Woodhouse's toad in Colorado. *Northwestern Naturalist* 77:23.
- Engle, J.E. 2001. Population biology and natural history of Columbia spotted frogs (*Rana luteiventris*) in the Owyhee Uplands of southwest Idaho: implications for monitoring and management. M.S. thesis, Boise State University, Boise, ID.
- Epple, A.O. 1983. The Amphibians of New England. Down East Books, Camden, Maine.
- Ernst, C.H. 2001. Some ecological parameters of the Wood Turtle, *Clemmys insculpta*, in southeastern Pennsylvania. *Chelonian Conservation and Biology* 4:94-99.
- Ernst, J.A. 2001. Assessment of the *Rana pipiens* complex in southwestern South Dakota. M.S. thesis, University of Wisconsin-Stevens Point.
- Ervin, E.L. 2005. *Pseudacris cadaverina* (Cope, 1866). California Treefrog. Pp. 467-470 In M.J. Lannoo (ed.), *Amphibian Declines. The Conservation Status of United States Species*. University of California Press, Berkeley.
- Ervin, E.L., and R.N. Fisher. 2001. *Thamnophis hammondii* (Two-striped Garter Snake). Prey. *Herpetological Review* 32:265-266.
- Ervin, E.L., and T.L. Cass. 2007. *Spea hammondii* (Western Spadefoot). Reproductive pattern. *Herpetological Review* 38:196-197.
- Ervin, E.L., and R.N. Fisher. 2007. *Thamnophis hammondii* (Two-striped Gartersnake). Foraging behavior. *Herpetological Review* 38:345-346.
- Ervin, E.L., R.N. Fisher, and K. Madden. 2000. *Hyla cadaverina* (California Treefrog). Predation. *Herpetological Review* 31:234.
- Ervin, E.L., A.E. Anderson, T.L. Cas, and R.E. Murcia. 2001. *Spea hammondii* (Western Spadefoot Toad). Elevation record. *Herpetological Review* 32:36.
- Ervin, E.L., S.J. Mullin, M.L. Warburton, and R.N. Fisher. 2003. *Thamnophis hammondii* (Two-striped Garter Snake). Prey. *Herpetological Review* 34:74-75.
- Ervin, E.L., C.D. Smith, and S.V. Christopher. 2005. *Spea hammondii* (Western Spadefoot). Reproduction. *Herpetological Review* 36:309-310.
- Ervin, E.L., D.A. Kisner, and R.N. Fisher. 2006. *Bufo californicus* (Arroyo Toad). Mortality. *Herpetological Review* 37:199.
- Ervin, E.L., A.K. Gonzales, D.S. Johnston, and J.P. Pittman. 2007. *Spea hammondii* (Western Spadefoot). Predation. *Herpetological Review* 38:197-198.
- Evans, H.E., and R.M. Roecker. 1951. Notes on the herpetology of Ontario, Canada. *Herpetologica* 7:69-71.
- Evenden, F.G. Jr. 1948. Food habits of *Triturus granulosus* in western Oregon. *Copeia* 1948:219-220.
- Evermann, B.W. and H.W. Clark. 1920. Lake Maxinkuckee. A Physical and Biological Survey. Volume 1. Indiana Department of Conservation, Publication No. 7. [amphibians on pages 620-644]
- Evrard, J.O., and S.R. Hoffman. 2000. Amphibians and reptiles captured in drift fences in northwest Wisconsin pine barrens. *Journal of the Iowa Academy of Science* 107:182-186.
- Ewert, M.A. 1969. Seasonal movements of the toads *Bufo americanus* and *B. cognatus* in northwestern Minnesota. Ph.D. diss., University of Minnesota, Minneapolis.
- Faeh, S.A., D.K. Nichols, and V.R. Beasley. 1998. Infectious diseases of amphibians. Pp.

- 259- 265 In M.J. Lannoo (ed.), *Status & Distribution of Midwestern Amphibians*. University of Iowa Press, Iowa City.
- Fair, J.W. 1969. Survival of weevils through the digestive tract of an amphibian. *Bulletin of the Southern California Academy of Science* 68:260-261.
- Fair, J.W. 1970. Comparative rates of rehydration from soil in two species of toads, *Bufo boreas* and *Bufo punctatus*. *Comparative Biochemistry and Physiology* 34:281-287.
- Fairchild, L. 1981. Mate selection and behavioral thermoregulation in Fowler's Toads. *Science* 212:950-951.
- Fairchild, L. 1984. Male reproductive tactics in an explosive breeding toad population. *American Zoologist* 24:407-418.
- Faivovich, J., C.F.B. Haddad, P.C.A. Garcia, D.R. Frost, J.A. Campbell, and W.C. Wheeler. 2005. Systematic review of the frog family Hylidae, with special reference to Hylinae: phylogenetic analysis and taxonomic revision. *Bulletin of the American Museum of Natural History* 294:1-240.
- Farmer, A.L., L.L. Smith, S.B. Castleberry and J.W. Gibbons. 2009. A comparison of techniques for sampling amphibians in isolated wetlands in Georgia, USA. *Applied Herpetology* 6:327-341.
- Farrell, M.P. 1971. Effect of temperature and photoperiod acclimations on the water economy of *Hyla crucifer*. *Herpetologica* 27:41-48.
- Farrell, T.M., M.A. Pilgrim, P.G. May and W.B. Blihovde. 2011. The herpetofauna of Lake Woodruff National Wildlife Refuge, Florida. *Southeastern Naturalist* 10:647-658.
- Farringer, J.E. 1972. The determination of acute toxicity of rotenone and bayer 73 to selected aquatic organisms. M.S. thesis, University of Wisconsin-La Crosse.
- Farris, J.S., A. Kluge, and M.F. Margoliash. 1979. Paraphyly of the *Rana boylii* species group. *Systematic Zoology* 28:627-634.
- Farris, J.S., A. Kluge, and M.F. Margoliash. 1982. Immunological distance and the phylogenetic relationships of the *Rana boylii* species group. *Systematic Zoology* 31:479-491.
- Fashingbauer, B.A. 1957. The effect of aerial spraying with DDT on a population of Wood Frogs. *Flicker* 29(4):160.
- Feaver, P.E. 1971. Breeding pool selection and larval mortality of three California amphibians: *Ambystoma tigrinum californiense* Gray, *Hyla regilla* Baird and Girard, and *Scaphiopus hammondii* Girard. M.A. thesis, Fresno State College, Fresno, CA.
- Feder, J.H. 1979. Natural hybridization and genetic divergence between the toads *Bufo boreas* and *Bufo punctatus*. *Evolution* 33:1089-1097.
- Fedewa, L. 2003. Microbial ecology of developing Southern Toads, Spring Peepers, and Narrow-mouthed Toads. M.S. thesis, University of Georgia, Athens.
- Federighi, H. 1938. Albinism in *Rana pipiens* (Schreber). *Ohio Journal of Science* 38:37-40.
- Feliciano, S.L. 2000. A comparison of two Northern Cricket Frog (*Acris crepitans*) populations and their habitats during drought conditions in southeastern New York and the Florida Panhandle. M.S. thesis, University of Florida, Gainesville.
- Fellers, G.M. 1975. Behavioral interactions in North American treefrogs (Hylidae). *Chesapeake Science* 16:218-219.
- Fellers, G.M. 1976. Social interactions in North American treefrogs. Ph.D. diss., University of Maryland, College Park.
- Fellers, G.M. 1979a. Aggression, territoriality, and mating behaviour in North American treefrogs. *Animal Behaviour* 27:107-119.
- Fellers, G.M. 1979b. Mate selection in the Gray Treefrog, *Hyla versicolor*. *Copeia* 1979:286-290.
- Fellers, G.M., and C.A. Drost. 1993. Disappearance of the Cascades Frog *Rana cascadae* at the southern end of its range, California, USA. *Biological Conservation* 65:177-181.
- Fellers, G.M., and P.M. Kleeman. 2007. California Red-legged Frog (*Rana draytonii*) movement and habitat use: implications for conservation. *Journal of Herpetology* 41:276-286.
- Fellers, G.M., D.E. Green, and J.E. Longcore. 2001. Oral chytridiomycosis in the Mountain Yellow-legged Frog (*Rana muscosa*). *Copeia* 2001:945-953.
- Fellers, G.M., L.L. McConnell, D. Pratt, and S. Datta. 2004. Pesticides in Mountain Yellow-legged Frogs (*Rana muscosa*) from the Sierra Nevada Mountains of California, USA. *Environmental Toxicology and Chemistry* 23:2170-2177.
- Fellers, G.M., D.F. Bradford, D. Pratt, and L.L. Wood. 2007a. Demise of repatriated

- populations of Mountain yellow-legged Frogs (*Rana muscosa*) in the Sierra Nevada of California. Herpetological Conservation and Biology 2:5-21.
- Fellers, G.M., K.L. Pope, J.E. Stead, M.S. Koo, and H.H. Welsh Jr. 2007b. Turning population trend monitoring into active conservation: can we save the Cascades Frog (*Rana cascadae*) in the Lassen Region of California. Herpetological Conservation and Biology 3:28-39.
- Fellers, G.M., R.A. Cole, D.M. Rentz and P.M. Kleeman. 2011. Amphibian chytrid fungus (*Batrachochytrium dendrobatidis*) in coastal and montane California, USA anurans. Herpetological Conservation and Biology 6:383-394.
- Felson, A.J. 2010. Suburbanization and amphibians: designed ecological solutions. Ph.D. diss., Rutgers University, New Brunswick, NJ.
- Feminella, J.W., and C.P. Hawkins. 1994. Tailed frog tadpoles differentially alter their feeding behavior in response to non-visual cues from four predators. Journal of the North American Bentholological Society 13:310-320.
- Fenoilio, D.B., G.O. Graening, and J.F. Stout. 2005. Seasonal movement patterns of Pickerel Frogs (*Rana palustris*) in an Ozark cave and trophic implications supported by stable isotope evidence. Southwestern Naturalist 50:385-389.
- Ferguson, D.E. 1960. Observations on movements and behavior of *Bufo fowleri* in residential areas. Herpetologica 16:112-114.
- Ferguson, D.E. 1961. The herpetofauna of Tishomingo County, Mississippi, with comments on its zoogeographic affinities. Copeia 1961:391-396.
- Ferguson, D.E. 1963. Orientation in three species of anuran amphibians. Ergebnisse der Biologie 26:128-134.
- Ferguson, D.E. 1966a. Sun-compass orientation in anurans. Pp. 21-33 In R.M. Storm (ed.), Animal Orientation and Navigation. Oregon State University Press, Corvallis.
- Ferguson, D.E. 1966b. Evidence of sun-compass orientation in the chorus frog, *Pseudacris triseriata*. Herpetologica 22:106-112.
- Ferguson, D.E., and H.F. Landreth. 1966. Celestial orientation of Fowler's Toad *Bufo fowleri*. Behaviour 26:107-123.
- Ferguson, D.E., and C.C. Gilbert. 1968. Tolerances of three species of anuran amphibians to five chlorinated hydrocarbon insecticides. Journal of the Mississippi Academy of Sciences 13:135-138.
- Ferguson, D.E., K.E. Payne, and R.M. Storm. 1958. Notes on the herpetology of Baker County, Oregon. Great Basin Naturalist 18:63-65.
- Ferguson, D.E., H.F. Landreth, and M.R. Turnipseed. 1965. Astronomical orientation of the Southern Cricket Frog, *Acris gryllus*. Copeia 1965:58-66.
- Ferguson, D.E., H.F. Landreth, and J.P. McKeown. 1967. Sun compass orientation of the Northern Cricket Frog, *Acris crepitans*. Animal Behaviour 15:45-53.
- Ferguson, D.E., J.P. McKeown, O.S. Bosarge, and H.F. Landreth. 1968. Sun-compass orientation of Bullfrogs. Copeia 1968:230-235.
- Ferguson, J.H., and C.H. Lowe. 1969. Evolutionary relationships in the *Bufo punctatus* group. American Midland Naturalist 81:435-466.
- Ferner, J.W., T. Rice, and K.S. Neltner. 1992. Predation on birds, at a birdfeeder, by Bullfrogs, *Rana catesbeiana* Shaw. Pp. 61-62 In P.D. Strimple and J.L. Strimple (eds.), Contributions in Herpetology. Greater Cincinnati Herpetological Society, Cincinnati, OH.
- Fetkovich, C., and L.J. Livo. 1998. Late-season Boreal Toad tadpoles. Northwestern Naturalist 79:120-121.
- Ficetola, G.F., C. Miaud, F. Pompanon, and P. Taberlet. 2009. Species detection using environmental DNA from water samples. Biology Letters 4:423-425.
- Fichter, E., and A.D. Linder. 1964. The amphibians of Idaho. Idaho State University Museum, Pocatello.
- Fidenci, P. 2004. The California Red-legged Frog, *Rana aurora draytonii*, along the Arroyo Santo Domingo, northern Baja California, Mexico. Herpetological Bulletin 88:27-31.
- Fidenci, P. 2006. *Rana boylii* (Foothill Yellow-legged Frog). Predation. Herpetological Review 37:208.
- Filho, C.B.C., H.C. Costa, E.T Da Silva, O.P. Ribeiro Filho, and R.N. Feio. 2008. *Lithobates catesbeianus* (American Bullfrog). Prey. Herpetological Review 39:338.
- Fincel, E.A. 2006. Urea : a natural cryoprotectant in the freeze-tolerant Wood Frog (*Rana sylvatica*). M.S. thesis, Eastern Illinois University, Charleston, IL.

- Findlay, C.S., L. Lenton, and L. Zheng. 2001. Land-use correlates of anuran community richness and composition in southeastern Ontario wetlands. *Ecoscience* 8:336-343.
- Findley, J.S. 1964. Verification of the occurrence of *Bufo microscaphus* Cope in New Mexico. *Southwestern Naturalist* 9:102-109.
- Finlay, J.C., and V.T. Vredenburg. 2007. Introduced trout sever trophic connections in watersheds: consequences for a declining amphibian. *Ecology* 88:2187-2198.
- Fischer, T.D. 1998. Anura of eastern South Dakota: their distribution and characteristics of their wetland habitats, 1997-1998. M.S. thesis, South Dakota State University, Brookings.
- Fishbeck, D.W., and J.C. Underhill. 1971. Distribution of stripe polymorphism in Wood Frogs, *Rana sylvatica* LeConte, from Minnesota. *Copeia* 1971:253-259.
- Fisher, C., A. Joynt and R.J. Brooks. 2007. Reptiles and Amphibians of Canada. Lone Pine Publishing, Edmonton, Alberta.
- Fisher, H.T., and A. Richards. 1950. The annual ovarian cycle of *Acris crepitans* Baird. Pp. 129-142 *In* Researches on the Amphibia of Oklahoma, University of Oklahoma Press, Norman.
- Fisher, M.C., and T.W.J. Garner. 2007. The relationship between the emergence of *Batrachochytrium dendrobatidis*, the international trade in amphibians and introduced amphibian species. *Fungal Biology Reviews* 21:2-9.
- Fisher, R.N., and H.B. Shaffer. 1996. The decline of amphibians in California's Great Central Valley. *Conservation Biology* 10:1387-1397.
- Fishwild, T.G., R.A. Schemidt, K.M. Jankens, K.A. Berven, G.J. Gamboa, and C.M. Richards. 1990. Sibling recognition by larval frogs (*Rana pipiens*, *R. sylvatica*, and *Pseudacris crucifer*). *Journal of Herpetology* 24:40-44.
- Fitch, H.S. 1936. Amphibians and reptiles of the Rogue River Basin, Oregon. *American Midland Naturalist* 17:634-652.
- Fitch, H.S. 1956a. Temperature responses in free-living amphibians and reptiles of northeastern Kansas. University of Kansas Publications, Museum of Natural History 8:417-476.
- Fitch, H.S. 1956b. A field study of the Kansas ant-eating frog, *Gastrophryne olivacea*. University of Kansas Publications, Museum of Natural History 8:275-306.
- Fitch, H.S. 1958. Home ranges, territories, and seasonal movements of vertebrates of the Natural History Reservation. University of Kansas Publications, Museum of Natural History 11:63-326.
- Fitch, H.S. 1960. Autecology of the copperhead. University of Kansas Publications, Museum of Natural History 13:85-288.
- Fite, K.V., A. Blaustein, L. Bengston, and H.E. Hewitt. 1998. Evidence of retinal light damage in *Rana cascadae*: a declining amphibian species. *Copeia* 1998:906-914.
- Fitzgerald, G.J., and J.R. Bider. 1974a. Seasonal activity of the toad *Bufo americanus* in southern Quebec as revealed by a sand transect technique. *Canadian Journal of Zoology* 52:1-5.
- Fitzgerald, G.J., and J.R. Bider. 1974b. Evidence for a relationship between geotaxis and seasonal movements in the toad *Bufo americanus*. *Oecologia* 17:277-280.
- Fitzgerald, G.J., and J.R. Bider. 1974c. Evidence of a relationship between age and activity in the toad *Bufo americanus*. *Canadian Field-Naturalist* 88:499-501.
- Fleet, R., and B. Autry. 1999. Herpetofaunal assemblages of four forest types from the Caddo Lake area of northeastern Texas. *Texas Journal of Science* 51:297-308.
- Fleming, P.L. 1976. A study of the distribution and ecology of *Rana clamitans* Latreille. Ph.D. diss., University of Minnesota, Minneapolis.
- Flores, G. 1978. The reproductive ecology of the Northern Spring Peeper, *Hyla crucifer crucifer*, in southern Connecticut. HERP, Bulletin of the New York Herpetological Society 14:22-25.
- Florey, J., and S.J. Mullin. 2005. A survey of anuran breeding activity in Illinois, 1986-1989. *Transactions of the Illinois State Academy of Science* 98:39-47.
- Florida Department of Agriculture. 1952. Bullfrog farming and frogging in Florida. Bulletin (new series) No. 56.
- Flowers, M.A. 1994. Feeding ecology and habitat use of juvenile Great Plains Toads (*Bufo cognatus*) and Woodhouse's Toads (*B. woodhousei*). M.A. thesis, University of South Dakota, Vermillion.
- Flowers, M.A., and B.M. Graves. 1995. Prey selectivity and size-specific diet changes in *Bufo cognatus* and *B. woodhousii* during early postmetamorphic ontogeny. *Journal of Herpetology* 29:608-612.

- Flowers, M.A., and B.M. Graves. 1997. Juvenile toads avoid chemical cues from snake predators. *Animal Behaviour* 53:641-646.
- Floyd, T.M., and E.S. Kilpatrick. 2002. *Pseudacris brachyphona* (Mountain Chorus Frog). Verification of historical occurrence. *Herpetological Review* 33:48.
- Floyd, T.M., K.R. Russell, C.E. Moorman, D.H. Van Lear, D.C. Guynn Jr., and J.D. Lanham. 2002. Effects of prescribed fire on herpetofauna within hardwood forests of the upper Piedmont of South Carolina: a preliminary analysis. Pp. 123-127 In K.W. Outcalt (ed.), Proceedings of the 11th Biennial Southern Silvicultural Research Conference. USDA Forest Service, Southern Research Station, General, and Technical Report SRS-48, Asheville, NC.
- Flury, A.G. 1951. Variations in some local populations of *Hyla versicolor* in central Texas. M.A. thesis, University of Texas, Austin.
- Flury, A.G. 1957. The leopard frog. *Texas Game and Fish* 15(4):4-5, 22-23.
- Fogell, D.D. 2010. A Field Guide to the Amphibians and Reptiles of Nebraska. Institute of Agriculture and Natural Resources, University of Nebraska-Lincoln.
- Fogleman, J.C., P.S. Corn, and D. Pettus. 1980. The genetic basis for a dorsal color polymorphism in *Rana pipiens*. *Journal of Heredity* 71:439-440.
- Fontenot, C.L. Jr. 2011. *Hyla cinerea* (Green Treefrog). Winter aggregation. *Herpetological Review* 42:84-85.
- Force, E.R. 1925. Notes on reptiles and amphibians of Okmulgee County, Oklahoma. *Copeia* (141):25-27.
- Force, E.R. 1930. The amphibians and reptiles of Tulsa County, Oklahoma, and vicinity. *Copeia* 1930:25-39.
- Force, E.R. 1933. The age of attainment of sexual maturity of the Leopard Frog *Rana pipiens* (Scheber) in northern Michigan. *Copeia* 1933:128-131.
- Ford, L.S., and D.C. Cannatella. 1993. The major clades of frogs. *Herpetological Monographs* 7:94-117.
- Forester, D.C. 1973. Mating call as a reproductive isolating mechanism between *Scaphiopus bombifrons* and *S. hammondii*. *Copeia* 1973:60-67.
- Forester, D.C. 1975. Laboratory evidence for potential gene flow between two species of spadefoot toads, *Scaphiopus bombifrons* and *Scaphiopus hammondii*. *Herpetologica* 31:282-286.
- Forester, D.C., and R. Czarnowsky. 1985. Sexual selection in the spring peeper, *Hyla crucifer* (Amphibia, Anura): role of the advertisement call. *Behaviour* 92:112-128.
- Forester, D.C., and R. Daniel. 1986. Observations on the social behavior of the southern cricket frog, *Acris gryllus* (Anura: Hylidae). *Brimleyana* 12:5-11.
- Forester, D.C., and D.V. Lykens. 1986. Significance of satellite males in a population of Spring Peepers (*Hyla crucifer*). *Copeia* 1986:719-724.
- Forester, D.C., and D.V. Lykens. 1988. The ability of Wood Frog eggs to withstand prolonged terrestrial stranding: an empirical study. *Canadian Journal of Zoology* 66:1733-1735.
- Forester, D.C., and K.J. Thompson. 1998. Gauntlet behaviour as a male sexual tactic in the American Toad (Amphibia: Bufonidae). *Behaviour* 135:99-119.
- Forester, D.C., S. Knoedler, and R. Sanders. 2003. Life history and status of the Mountain Chorus Frog (*Pseudacris brachyphona*) in Maryland. *Maryland Naturalist* 46:1-15.
- Forester, D.C., J.W. Snodgrass, K. Marsalek, and Z. Lanham. 2006. Post-breeding dispersal and summer home range of female American Toads (*Bufo americanus*). *Northeastern Naturalist* 13:59-72.
- Formanowicz, D.R. Jr., and E.D. Brodie Jr. 1979. Palatability and antipredator behavior of selected *Rana* to the shrew *Blarina*. *American Midland Naturalist* 101:456-458.
- Formanowicz, D.R. Jr., and E.D. Brodie Jr. 1982. Relative palatabilities of members of a larval amphibian community. *Copeia* 1982:91-97.
- Formanowicz, D.R. Jr., and M.S. Bobka. 1989. Predation risk and microhabitat preference: an experimental study of the behavioral responses of prey and predator. *American Midland Naturalist* 121:379-386.
- Forsman, E.D., and J.K. Swingle. 2007. Use of arboreal nests of Tree Voles (*Arborimus* spp.) by amphibians. *Herpetological Conservation and Biology* 2:113-118.
- Forstner, J.M., M.R.J. Forstner, and J.R. Dixon. 1998. Ontogenetic effects on prey selection and food habits of two sympatric east Texas ranids: the Southern Leopard Frog, *Rana sphenocephala*, and the Bronze Frog, *Rana*

- clamitans clamitans*. Herpetological Review 29:208-211.
- Fort, D.J., R.L. Rogers, J.H. Thomas, W.A. Hopkins and C. Schlekat. 2006. Comparative developmental toxicity of nickel to *Gastrophryne carolinensis*, *Bufo terrestris*, and *Xenopus laevis*. Archives of Environmental Contamination and Toxicology 51:703-710.
- Fortin, C., M. Ouellet, and M.-J. Grimard. 2003. La Rainette faux-grillon boréale (*Pseudacris maculata*): présence officiellement validée au Québec. Le naturaliste canadien 127:71-75.
- Fortin, C., M. Ouellet, and P. Galois. 2004a. Les amphibiens et les reptiles des îles de l'estuaire du Saint-Laurent: mieux connaître pour mieux conserver. Le naturaliste canadien 128:61-67.
- Fortin, C., P. Galois, M. Ouellet, and G.J. Doucet. 2004b. Utilisation des emprises de lignes de transport d'énergie électrique par les amphibiens et les reptiles en forêt décidue au Québec. Le naturaliste canadien 128:68-75.
- Fortman, J.R. 1973. Characters of F₁ hybrid tadpoles and adults between six species of *Hyla* (Hylidae, Anura). Ph.D. diss., Mississippi State University, Mississippi State.
- Fortman, J., and R. Altig. 1973. Characters of F₁ hybrid tadpoles between six species of *Hyla*. Copeia 1973:411-416.
- Foster, B.J., D.W. Sparks, and J.E. Duchamp. 2004. Urban herpetology. 2. Amphibians and reptiles of the Indianapolis Airport conservation lands. Proceedings of the Indiana Academy of Science 113:53-59.
- Foster, C.D., and S.J. Mullin. 2008. Speed and endurance of *Thamnophis hammondii* are not affected by consuming the toxic frog *Xenopus laevis*. Southwestern Naturalist 53:370-373.
- Fouquette, M.J. Jr. 1954. Food competition among four sympatric species of garter snakes, genus *Thamnophis*. Texas Journal of Science 6:172-188.
- Fouquette, M.J. Jr. 1960. Call structure in frogs of the Family Leptodactylidae. Texas Journal of Science 12:201-215.
- Fouquette, M.J. Jr. 1968. Remarks on the type specimen of *Bufo alvarius* Girard. Great Basin Naturalist 28:70-72.
- Fouquette, M.J. Jr. 1975. Speciation in chorus frogs. 1. Reproductive character displacement in the *Pseudacris nigrita* complex. Systematic Zoology 24:16-23.
- Fouquette, M.J. Jr. 1980. Effect of environmental temperatures on body temperature of aquatic calling anurans. Journal of Herpetology 14: 347-352.
- Fouquette, M.J. Jr. 2005. *Rhinophryne dorsalis* Dumeril and Bibron, 1841. Burrowing Toad (Sapo Borracho). Pp. 599-600 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Fournier, M.A. 1997. Amphibians in the Northwest Territories. SSAR Herpetological Conservation 1:100-106.
- Fournier, M.A. undated. Amphibians & reptiles in the Northwest Territories. Ecology North, Yellowknife, Northwest Territories. http://www.enr.gov.nt.ca/_live/documents/documentManagerUpload/amphibians_reptiles_pamphlet.pdf [Accessed 28 July 2010]
- Fowler, H.W. 1905. The sphagnum frog of New Jersey—*Rana virgatipes* Cope. Proceedings of the Academy of Natural Sciences of Philadelphia 1905:662-664.
- Fowler, H.W. 1918. An albino spring frog in winter. Copeia (61):84.
- Fowler, J.A., and G. Orton. 1947. The occurrence of *Hyla femoralis* in Maryland. Maryland, A Journal of Natural History 17:6-7.
- Fowler, J.A., and R.L. Hoffman. 1951. *Gastrophryne carolinensis carolinensis* (Holbrook) in southwestern Virginia. Virginia Journal of Science 2:101.
- Fox, S.F., P.A. Shipman, R.E. Thill, J.P. Phelps, and D.M. Leslie Jr. 2004. Amphibian communities under diverse forest management in Ouachita Mountains, Arkansas. Pp. 164-173 In J.M. Guldin (compiler), Ouachita and Ozark Mountains Symposium. Ecosystem Management Research. USDA Forest Service General and Technical Report SRS-74, Asheville, NC, USA.
- Fracz, A. 2012. Importance of hydrologic connectivity for coastal wetlands to open water of eastern Georgian Bay. M.S. thesis, McMaster University, Hamilton, Ontario.
- Fraker, M.E. 2007. Predation risk assessment and the anti-predator behavioral dynamics of larval anurans. Ph.D. diss., University of Michigan, Ann Arbor.
- Fraker, M.E. 2010. Risk assessment and anti-predator behavior of Wood Frog (*Rana sylvatica*) tadpoles: a comparison with Green Frog (*Rana clamitans*) tadpoles. Journal of Herpetology 44:390-398.
- Fraker, M., E. F. Hu, V. Cuddapah, S. A.

- McCollum, R. A. Relyea, J. Hempel and R. J. Denver. 2009. Characterization of an alarm pheromone secreted by amphibian tadpoles that induces behavioral inhibition and suppression of the neuroendocrine stress axis. *Hormones and Behavior* 55:520-529.
- Franz, R. 1967. Annotated checklist of cave-associated reptiles and amphibians of Maryland. *Bulletin of the Maryland Herpetological Society* 3:51-53.
- Franz, R. 1970. Egg development of the Tailed Frog under natural conditions. *Bulletin of the Maryland Herpetological Society* 6:27-30.
- Franz, R. 1971. Notes on the distribution and ecology of the herpetofauna of northwestern Montana. *Bulletin of the Maryland Herpetological Society* 7:1-10.
- Franz, R. 1972. Feeding in Florida Cricket Frogs. *Bulletin of the Maryland Herpetological Society* 8:89-90.
- Franz, R. 1986. The Florida Gopher Frog and the Florida Pine Snake as burrow associates of the Gopher Tortoise in northern Florida. Pp. 16-20 *In* D.R. Jackson and R.J. Bryant (eds.), *The Gopher Tortoise and its Community*. Proceedings of the 5th Annual Meeting of the Gopher Tortoise Council, Florida State Museum, Gainesville.
- Franz, R. 2005. *Hyla gratiosa* (Barking Treefrog). Winter retreat. *Herpetological Review* 36:434-435.
- Franz, R., and D.S. Lee. 1970. The ecological and biogeographical distribution of the Tailed Frog, *Ascaphus truei*, in the Flathead River Drainage of northwestern Montana. *Bulletin of the Maryland Herpetological Society* 6:62-73.
- Franz, R., C.K. Dodd Jr., and C. Jones. 1988. *Rana areolata aesopus* (Florida Gopher Frog). Movement. *Herpetological Review* 19:82.
- Franz, R., C.K. Dodd Jr., and A.M. Bard. 1992. The non-marine herpetofauna of Egmont Key, Hillsborough County, Florida. *Florida Scientist* 55:179-183.
- Freda, J. 1986. The influence of acidic pond water on amphibians: a review. *Water, Air and Soil Pollution* 30:439-450.
- Freda, J., and W.A. Dunson. 1984. Sodium balance of amphibian larvae exposed to low environmental pH. *Physiological Zoology* 57:435-443.
- Freda, J., and W.A. Dunson. 1985. Field and laboratory studies of ion balance and growth rates of ranid tadpoles chronically exposed to low pH. *Copeia* 1985:415-423.
- Freda, J., and W.A. Dunson. 1986. Effects of low pH and other chemical variables on the local distribution of amphibians. *Copeia* 1986:454-466.
- Freda, J., and D.G. McDonald. 1990. Effects of aluminum on the leopard frog, *Rana pipiens*: life stage comparisons and aluminum uptake. *Canadian Journal of Fisheries and Aquatic Sciences* 47:210-216.
- Freda, J., and D.H. Taylor. 1992. Behavioral response of amphibian larvae to acidic water. *Journal of Herpetology* 26:429-433.
- Freda, J., and D.G. McDonald. 1993. Toxicity of amphibian breeding ponds in the Sudbury Region. *Canadian Journal of Fisheries and Aquatic Sciences* 50:1497-1503.
- Freda, J., W.J. Sadinski, and W.A. Dunson. 1991. Long term monitoring of amphibian populations with respect to the effects of acidic precipitation. *Water, Air, and Soil Pollution* 55:445-462.
- Freed, A.N. 1980a. Prey selection and feeding behavior of the Green Treefrog (*Hyla cinerea*). *Ecology* 61:461-465.
- Freed, A.N. 1980b. An adaptive advantage of basking behavior in an anuran amphibian. *Physiological Zoology* 53:433-444.
- Freed, A.N. 1982. A treefrog's menu: selection for an evening's meal. *Oecologia* 53:20-26.
- Freed, P.S., and K. Neitman. 1988. Notes on predation on the endangered Houston Toad, *Bufo houstonensis*. *Texas Journal of Science* 40:454-456.
- Freiburg, R.E. 1951a. An ecological study of the narrow-mouthed toad (*Microhyla*) in northeastern Kansas. M.A. thesis, University of Kansas, Lawrence.
- Freiburg, R.E. 1951b. An ecological study of the narrow-mouthed toad (*Microhyla*) in northeastern Kansas. *Transactions of the Kansas Academy of Science* 54:374-386.
- Freidenburg, L.K. 2003. Spatial ecology of the Wood Frog, *Rana sylvatica*. Ph.D. diss., University of Connecticut, Storrs, CT.
- Freidenburg, L.K., and D.K. Skelly. 2004. Microgeographic variation in thermal preference by an amphibian. *Ecology Letters* 7:369-373.
- Freidenfelds, N.A. 2012. *Acris crepitans* (Northern Cricket Frog). Fire ant envenomation. *Herpetological Review* 43:117.
- Freidenfelds, N.A., J.L. Purrenhaege, and K.J. Babbitt. 2011. Effects of clearcuts and forest buffer size on post-breeding emigration of

- Wood Frogs (*Lithobates sylvaticus*). Forest Ecology and Management. 261:2115-2122.
- Friebele, E., and J. Zambo. 2004. A Guide to the Amphibians and Reptiles of Jug Bay. Jug Bay Wetlands Sanctuary, Lothian, MD.
- Friet, S.C. 1993. Aquatic overwintering of the Bullfrog (*Rana catesbeiana*) during natural hypoxia in an ice-covered pond. M.S. thesis, Dalhousie University, Halifax, Nova Scotia.
- Frisbie, M.P., J. P. Costanzo and R. E. Lee. 2000. Physiological and ecological aspects of low-temperature tolerance in embryos of the Wood Frog, *Rana sylvatica*. Canadian Journal of Zoology 78: 1032-1041.
- Frost, D. 1983. Past occurrence of *Acris crepitans* (Hylidae) in Arizona. Southwestern Naturalist 28:105.
- Frost, D.R. (ed.). 1985. Amphibian Species of the World. Allen Press and the Association of Systematics Collections, Lawrence, KS.
- Frost, D.R., T. Grant, J. Faivovich, R.H. Bain, A. Haas, C.F.B. Haddad, R.O. de Sá, A. Channing, M. Wilkinson, S.C. Donnellan, C.J. Raxworthy, J.A. Campbell, B.L. Blotto, P. Moler, R.C. Drewes, R.A. Nussbaum, J.D. Lynch, D.M. Green, and W.C. Wheeler. 2006a. The amphibian tree of life. Bulletin of the American Museum of Natural History 297:1-370.
- Frost, D.R., T. Grant, and J.R. Mendelson III. 2006b. *Ollotis* Cope, 1875 is the oldest name for the genus currently referred to as *Cranopsis* Cope, 1875 (Anura: Hyloides: Bufonidae). Copeia 2006:558.
- Frost, D.R., T. Grant, J. Faivovich, R.H. Bain, A. Haas, C.F.B. Haddad, R.O. de Sá, A. Channing, M. Wilkinson, S.C. Donnellan, C.J. Raxworthy, J.A. Campbell, B.L. Blotto, P. Moler, R.C. Drewes, R.A. Nussbaum, J.D. Lynch, D.M. Green, and W.C. Wheeler. 2007. Is *The Amphibian Tree of Life* really fatally flawed? Cladistics 24:385-395.
- Frost, J.S., and J.T. Bagnara. 1976. A new species of Leopard Frog (*Rana pipiens* complex) from northwestern Mexico. Copeia 1976:332-338.
- Frost, J.S., and J.T. Bagnara. 1977. Sympatry between *Rana blairi* and the southern form of leopard frog in southeastern Arizona (Anura: Ranidae). Southwestern Naturalist 22: 443-453.
- Frost, J.S., and J.E. Platz. 1983. Comparative assessment of modes of reproductive isolation among four species of leopard frogs (*Rana pipiens* complex). Evolution 37:66-78.
- Frost, S.W. 1924. Frogs as insect collectors. Bulletin of the New York Entomological Society 32:174-185.
- Frost, S.W. 1935. The food of *Rana catesbeiana* Shaw. Copeia 1935:15-18.
- Fucik, E.M. 2011. Interactions between invasive species and climate change: the effect on an East Texas anuran. M.S. thesis, Stephen F. Austin State University, Nacogdoches, TX.
- Fulk, F.D., and J.O. Whitaker Jr. 1969. The food of *Rana catesbeiana* in three habitats in Owen County, Indiana. Proceedings of the Indiana Academy of Science 78:491-496.
- Fuller, T.E., K.L. Pope, D.T. Ashton, and H.H. Welsh Jr. 2011. Linking the distribution of an invasive amphibian (*Rana catesbeiana*) to habitat conditions in a managed river system in northern California. Restoration Ecology 19:204-213.
- Fulmer, T., and R. Tumlison. 2004. Important records of the Bird-voiced Treefrog (*Hyla avivoca*) in the headwaters of the Ouachita River drainage of southwestern Arkansas. Southeastern Naturalist 3:259-266.
- Fulton, M.H., and J.E. Chambers. 1985. The toxic and teratogenic effects of selected organophosphorus compounds on the embryos of three species of amphibians. Toxicology Letters 26:175-180.
- Funderburg, J.B., C.H. Hotchkiss, and P. Hertl. 1974a. The Wood Frog, *Rana sylvatica* LeConte, in the Virginia coastal plain. Bulletin of the Maryland Herpetological Society 10:58.
- Funderburg, J.B., P. Hertl, and W.M. Kerfoot. 1974b. A range extension for the Carpenter Frog, *Rana virgatipes* Cope, in the Chesapeake Bay region. Bulletin of the Maryland Herpetological Society 10:77-79.
- Funk, W.C., M.S. Blouin, P.S. Corn, B.A. Maxwell, D.S. Pilliod, S. Amish, and F.W. Allendorf. 2005a. Population structure of Columbia Spotted Frogs (*Rana luteiventris*) is strongly affected by the landscape. Molecular Ecology 14:483-496.
- Funk, W.C., A.E. Greene, P.S. Corn, and F.W. Allendorf. 2005b. High dispersal in a frog species suggests that it is vulnerable to habitat fragmentation. Biology Letters 1:13-16.
- Funk, W.C., C.A. Pearl, H.M. Draheim, M.J. Adams, T.D. Mullins, and S.M. Haig. 2008. Range-wide phylogeographic analysis of the Spotted Frog Complex (*Rana luteiventris* and *Rana pretiosa*) in northwestern North America.

- Molecular Phylogenetics and Evolution 49:198-210.
- Funk, W.C., T.S. Garcia, G.A. Cortina, and R.H. Hill. 2011. Population genetics of introduced Bullfrogs, *Rana (Lithobates) catesbeianus* [sic], in the Willamette Valley, Oregon, USA. Biological Invasions 13:651-658.
- Funkhouser, A. 1976. Observations on pancreas: body weight ratio change during development of the Bullfrog, *Rana catesbeiana*. Herpetologica 32:370-371.
- Gaertner, J.P., D. McHenry, M.R.J. Forstner, and D. Hahn. 2010. Annual variation of *Batrachochytrium dendrobatidis* in the Houston Toad (*Bufo houstonensis*) and a sympatric congener (*Bufo nebulifer*). Herpetological Review 41:456-459.
- Gaertner, J.P., D.J. Brown, J.A. Mendoza, M.R.J. Forstner, T. Bonner and D. Hahn. 2012. Geographic variation in *Batrachochytrium dendrobatidis* occurrence among populations of *Acris crepitans blanchardi* in Texas, USA. Herpetological Review 43:274-278.
- Gage, M.W. 2011. Biodiversity in an isolated suburban reservation: amphibians in the Middlesex Fells. M.S. thesis, University of Massachusetts, Boston.
- Gage, S.H. 1897. Life history of the toad. Cornell Nature Leaflet No. 9. [reprinted in Cornel Nature-Study Leaflets, New York Department of Agriculture Nature-Study Bulletin No. 1, pp. 185-206, 1904]
- Gahl, M.K. 2007. Spatial and temporal patterns of amphibian disease in Acadia National Park wetlands. Ph.D. diss., University of Maine, Orono.
- Gahl, M.K. and A.J.K. Calhoun. 2010. The role of multiple stressors in ranavirus-caused amphibian mortalities in Acadia National Park wetlands. Canadian Journal of Zoology 88: 108-121.
- Gahl, M.K., J.E. Longcore and J.E. Houlahan. 2011a. Varying responses of northeastern North American amphibians to the chytrid pathogen *Batrachochytrium dendrobatidis*. Conservation Biology 26:135-141.
- Gahl, M. K., B. D. Pauli and J. E. Houlahan. 2011b. Effects of chytrid fungus and a glyphosate-based herbicide on survival and growth of Wood Frogs (*Lithobates sylvaticus*) Ecological Applications 21:2521-2529.
- Gaige, H.T. 1920. Observations upon the habits of *Ascaphus truei* Stejneger. Occasional Papers of the Museum of Zoology, University of Michigan 84:1-9.
- Gaige, H.T. 1931. Notes on *Syrrhophus marnockii* Cope. Copeia 1931:63.
- Gaige, H.T. 1932. The status of *Bufo copei*. Copeia 1932:134.
- Gallie, J.A., R.L. Mumme, and S.A. Wissinger. 2001. Experience has no effect on the development of chemosensory recognition of predators by tadpoles of the American Toad, *Bufo americanus*. Herpetologica 57:376-383.
- Galois, P., and M. Ouellet. 2005. Le Grand Bois de Saint-Grégoire, un refuge pour l'herpétofaune dans la plaine montérégienne. Le naturaliste canadien 129:37-43.
- Gamble, T., P.B. Berendzen, H.B. Shaffer, D.E. Starkey, and A.M. Simons. 2008. Species limits and phylogeography of North American cricket frogs (*Acris*: Hylidae). Molecular Phylogenetics and Evolution 48:112-125.
- Gambs, R.D., and M.J. Littlejohn. 1979. Acoustic behavior of males of the Rio Grande Leopard Frog (*Rana berlandieri*): an experimental analysis through field playback trials. Copeia 1979:643-650.
- Garcia, T.S., D.J. Paoletti and A.R. Blaustein. 2009. Correlated trait responses: comparing defense strategies across a stress gradient. Canadian Journal of Zoology 87: 41-49.
- García-París, M., D.R. Buchholz, and G. Parra-Olea. 2003. Phylogenetic relationships of Pelobatoidea re-examined using mtDNA. Molecular Phylogenetics and Evolution 28:12-23.
- Gardiner, D.M., and D.M. Hoppe. 1999. Environmentally induced limb malformations in Mink Frogs (*Rana septentrionalis*). Journal of Experimental Zoology 284:207-216.
- Garman, H. 1892. A synopsis of the reptiles and amphibians of Illinois. Illinois Laboratory of Natural History Bulletin 3(13):215-388.
- Garman, H. 1901. The food of the toad. Kentucky Agricultural Experiment Station, Bulletin No. 91:60-68.
- Garman, S. 1877. On a variation in the colors of animals. Proceedings of the American Association for the Advancement of Science 25:194.
- Garman, S. 1884. The North American reptiles and batrachians. Bulletin of the Essex Institute 16:3-64.
- Garman, S. 1887. Reptiles and batrachians of Texas and Mexico. Bulletin of the Essex Institute 19:1-20.
- Garner, T.W.J., M.W. Perkins, P. Govindarajulu,

- D. Seglie, S. Walker, A.A. Cunningham, and M.C. Fisher. 2006. The emerging amphibian pathogen *Batrachochytrium dendrobatidis* globally infects introduced populations of the North American bullfrog, *Rana catesbeiana*. *Biology Letters* 2:455-459.
- Garnier, J.H. 1883. The mink or hoosier frog. *American Naturalist* 17:945-954.
- Garrett, J.M., and D.G. Barker. 1987. A Field Guide to the Reptiles and Amphibians of Texas. Texas Monthly Press, Austin.
- Garton, E.R., F. Grady, and S.D. Carey. 1993. The vertebrate fauna of West Virginia caves. *West Virginia Speleological Survey Bulletin* 11.
- Garton, J.D., and H.R. Mushinsky. 1979. Integumentary toxicity and unpalatability as an antipredator mechanism in the narrow mouthed toad, *Gastrophryne carolinensis*. *Canadian Journal of Zoology* 57:1965-1973.
- Garton, J.S., and R.A. Brandon. 1975. Reproductive ecology of the green treefrog, *Hyla cinerea*, in southern Illinois (Anura: Hylidae). *Herpetologica* 31:150-161.
- Gartside, D.F. 1980. Analysis of a hybrid zone between chorus frogs of the *Pseudacris nigrita* complex in the southern United States. *Copeia* 1980:56-66.
- Garwood, J.M., and C.W. Anderson. 2010. *Rana cascadae* (Cascades Frog). Necrogamy. *Herpetological Review* 41:204.
- Garwood, J.M., C.A. Wheeler, R.M. Bourque, M.D. Larson, and H.H. Welsh Jr. 2007. Egg mass drift increases vulnerability during early development of Cascades frogs (*Rana cascadae*). *Northwestern Naturalist* 88:95-97.
- Garwood, J.M., C. W. Anderson and S.J. Ricker. 2010. Bullfrog predation on a juvenile Coho salmon in Humboldt County, California. *Northwestern Naturalist* 91:99-101.
- Gascon, C., and D. Planas. 1986. Spring pond water chemistry and the reproduction of the Wood Frog, *Rana sylvatica*. *Canadian Journal of Zoology* 64:543-550.
- Gascon, C., and J. Travis. 1992. Does the spatial scale of experimentation matter? A test with tadpoles and dragonflies. *Ecology* 73:2237-2243.
- Gates, G.O. 1957. A study of the herpetofauna in the vicinity of Wickenburg, Maricopa County, Arizona. *Transactions of the Kansas Academy of Science* 60:403-418.
- Gatten, R.E. Jr., and C.J. Hill. 1984. Social influence on thermal selection by *Hyla crucifer*. *Journal of Herpetology* 18:87-88.
- Gatz, A.J. Jr. 1981a. Non-random mating by size in American toads, *Bufo americanus*. *Animal Behaviour* 29:1004-1012.
- Gatz, A.J. Jr. 1981b. Selective size mating in *Hyla versicolor* and *Hyla crucifer*. *Journal of Herpetology* 15:113-114.
- Gaudin, A.J. 1964. The tadpole of *Hyla californiae* Gorman. *Texas Journal of Science* 16:80-84.
- Gaudin, A.J. 1965. Larval development of the tree frogs *Hyla regilla* and *Hyla californiae*. *Herpetologica* 21:117-130.
- Gaudin, A.J. 1969. A comparative study of the osteology and evolution of the Holarctic treefrogs: *Hyla*, *Pseudacris*, *Acris* and *Limnaeodus*. Ph.D. diss., University of Southern California, Los Angeles.
- Gaul, R.W. Jr., and J.C. Mitchell. 2007. The herpetofauna of Dare County, North Carolina: history, natural history, and biogeography. *Journal of the North Carolina Academy of Science* 123:65-109.
- Gaulke, C.A., R.S. Wagner, J.E. Johnson, and J.T. Irwin. 2010. Northern Leopard Frogs (*Rana pipiens*) infected with *Batrachochytrium dendrobatidis* in the amphibian trade. *Herpetological Review* 41:322-323.
- Gaulke, C.A., J.T. Irwin and R.S. Wagner. 2011. Prevalence and distribution of *Batrachochytrium dendrobatidis* at montane sites in central Washington, USA. *Herpetological Review* 42:209-211.
- Gehlbach, F.R. 1965. Herpetology of the Zuni Mountains region, northwestern New Mexico. *Proceedings of the United States National Museum* 116:243-332.
- Gehlbach, F.R., and B.B. Collette. 1959. Distributional and biological notes on the Nebraskka [sic] herpetofauna. *Herpetologica* 15:141-143.
- Gelcisz, L., and C. Drost. 2004. A surprise in Surprise Canyon: a new amphibian species for Grand Canyon National Park. [Grand Canyon National Park] *Nature Notes* (Fall):1-3.
- Geluso, K., and G.D. Wright. 2010. Geographic distribution. *Gastrophryne olivacea* (Western Narrow-mouthed Toad). *Herpetological Review* 41:103.
- Gendron, A.D., D.J. Marcogliese, S. Barbeau, M.-S. Christin, P. Brousseau, S. Ruby, D. Cyr, and M. Fournier. 2003. Exposure of leopard frogs to a pesticide mixture affects life history

- characteristics of the lungworm *Rhabdias ranae*. *Oecologia* 135:469-476.
- Gentry, G. 1955. An annotated [sic] check list of the amphibians and reptiles of Tennessee. *Journal of the Tennessee Academy of Science* 30:168-176.
- George, I.D. 1940. A study of the Bullfrog, *Rana catesbeiana* Shaw, at Baton Rouge, Louisiana. Ph.D. diss., University of Michigan, Ann Arbor.
- Georgel, C.T.W. 2001. Activity, diet, and microhabitat of the Carpenter Frog (*Rana virgatipes* Cope) in Virginia. M.S. thesis, Christopher Newport University, Newport News, VA.
- Gergus, E.W.A., K.B. Malmos, and B.K. Sullivan. 1999. Natural hybridization among distantly related toads (*Bufo alvarius*, *Bufo cognatus*, *Bufo woodhousii*) in central Arizona. *Copeia* 1999:281-286.
- Gergus, E.W.A., T.W. Reeder, and B.K. Sullivan. 2004. Geographic variation in *Hyla wrightorum*: advertisement calls, allozymes, mtDNA, and morphology. *Copeia* 2004:758-769.
- Gerhardt, H.C. 1968. Evolutionary aspects of vocal communication and reproductive behavior in the *Hyla cinerea* species group. M.A. thesis, University of Texas, Austin.
- Gerhardt, H.C. 1973. Reproductive interactions between *Hyla crucifer* and *Pseudacris ornata* (Anura: Hylidae). *American Midland Naturalist* 89:81-88.
- Gerhardt, H.C. 1974a. Mating call differences between eastern and western populations of the treefrog *Hyla chrysoscelis*. *Copeia* 1974:534-536.
- Gerhardt, H.C. 1974b. Behavioral isolation of the tree frogs, *Hyla cinerea* and *Hyla andersonii*. *American Midland Naturalist* 91:424-433.
- Gerhardt, H.C. 1975. Sound pressure levels and radiation patterns of the vocalizations of some North American frogs and toads. *Journal of Comparative Physiology* 102:1-12.
- Gerhardt, H.C. 1978a. Temperature coupling in the vocal communication system of the Gray Tree Frog, *Hyla versicolor*. *Science* 199:992-994.
- Gerhardt, H.C. 1978b. Discrimination of intermediate sounds in a synthetic call continuum by female Green Tree Frogs. *Science* 199:1089-1091.
- Gerhardt, H.C. 1982. Sound pattern recognition in some North American treefrogs (Anura: Hylidae): implications for mate choice. *American Zoologist* 22:581-595.
- Gerhardt, H.C. 1987. Evolutionary and neurobiological implications of selective phonotaxis in the Green Treefrog, *Hyla cinerea*. *Animal Behaviour* 35:1479-1489.
- Gerhardt, H.C., and J. Rheinlaender. 1982. Localization of an elevated sound source by the Green Tree Frog. *Science* 217:662-663.
- Gerhardt, H.C., and G.M. Klump. 1988. Masking of acoustic signals by the chorus background noise in the green tree frog: a limitation on mate choice. *Animal Behaviour* 36:1247-1249.
- Gerhardt, H.C., and M.A. Bee. 2007. Recognition and localization of acoustic signals. Pp. 113-146 In A.S. Feng, P.M. Narins, R.R. Fay, and A.N. Popper (eds.), *Hearing and Sound Communication in Amphibians*. Springer Handbook of Auditory Research. Springer, New York.
- Gerhardt, H.C., S.I. Guttman, and A.A. Karlin. 1980. Natural hybrids between *Hyla cinerea* and *Hyla gratiosa*: morphology, vocalization and electrophoretic analysis. *Copeia* 1980:577-584.
- Gerhardt, H.C., B. Diekamp, and M. Ptacek. 1989. Inter-male spacing in choruses of the Spring Peeper, *Pseudacris (Hyla) crucifer*. *Animal Behaviour* 38:1012-1024.
- Gerlanc, N.M. 1999. Effects of breeding pool permanence on developmental rate of Western Chorus Frogs, *Pseudacris triseriata*, in tallgrass prairie. M.S. thesis, Kansas State University, Manhattan.
- Gerlanc, N.M., and G.A. Kaufman. 2003. Use of bison wallows by anurans on Konza Prairie. *American Midland Naturalist* 150:158-168.
- Germaine, S.S., and D.W. Hays. 2009. Distribution and postbreeding environmental relationships of Northern Leopard Frogs (*Rana [Lithobates] pipiens*) in Washington. *Western North American Naturalist* 69:537-547.
- Gerow, K., N.C. Cline, D.E. Swann and M. Pokorny. 2010. Estimating annual vertebrate mortality on roads at Saguaro National Park, Arizona. *Human-Wildlife Interactions* 4:283-292.
- Ghioca, D.M. 2005. Effect of landuse on larval amphibian communities in playa wetlands of the Southern High Plains. Ph.D. diss., Texas Tech University, Lubbock.
- Ghioca, D.M., and L.M. Smith. 2007. Biases in

- trapping larval amphibians in Playa wetlands. *Journal of Wildlife Management* 71:991-995.
- Ghioca-Robrecht, D.M., and L.M. Smith. 2011. The role of spadefoot toad tadpoles in wetland trophic structure as influenced by environmental and morphological factors. *Canadian Journal of Zoology* 89: 47-59.
- Ghioca-Robrecht, D.M., L. M. Smith, and L. D. Densmore. 2009. Ecological correlates of trophic polyphenism in spadefoot tadpoles inhabiting playas. *Canadian Journal of Zoology* 87: 229-238.
- Gibbons, J.W., and D.H. Bennett. 1974. Determination of anuran terrestrial activity patterns by a drift fence. *Copeia* 1974:236-243.
- Gibbons, J.W., and J.W. Coker. 1978. Herpetofaunal colonization patterns of Atlantic Coast barrier islands. *American Midland Naturalist* 99:219-233.
- Gibbons, J.W., and J.R. Harrison III. 1981. Reptiles and amphibians of Kiawah and Capers Islands, South Carolina. *Brimleyana* 5:145-162.
- Gibbons, J.W., and R.D. Semlitsch. 1982. Terrestrial drift fences with pitfall traps: an effective technique for quantitative sampling of animal populations. *Brimleyana* 7:1-16.
- Gibbons, J.W., and R.D. Semlitsch. 1991. Guide to the Reptiles and Amphibians of the Savannah River Site. University of Georgia Press, Athens.
- Gibbons, J.W., V.J. Burke, J.E. Lovich, R.D. Semlitsch, T.D. Tuberville, J.R. Bodie, J.L. Greene, P.H. Niewiarowski, H.H. Whiteman, D.E. Scott, J.H.K. Pechmann, C.R. Harrison, S.H. Bennett, J.D. Krenz, M.S. Mills, K.A. Buhlmann, J.R. Lee, R.A. Seigel, A.D. Tucker, T.M. Mills, T. Lamb, M.E. Dorcas, J.D. Congdon, M.H. Smith, D.H. Nelson, M.B. Dietsch, H.G. Hanlin, J.A. Ott and D.J. Karapataki. 1997. Perceptions of species abundance, distribution, and diversity: lessons from four decades of sampling on a government-managed reserve. *Environmental Management* 21:259-268.
- Gibbons, J.W., C.T. Winne, D.E. Scott, J.D. Willson, X. Glaudas, K.M. Andrews, B.D. Todd, L.A. Fedewa, L. Wilkinson, R.N. Tsaliagos, S.J. Harper, J.L. Greene, T. Tuberville, B.S. Metts, M.E. Dorcas, J.P. Nestor, C.A. Young, T. Akre, R.N. Reed, K.A. Buhlman, J. Norman, D.A. Croshaw, C. Hagen and B.B. Rothermel. 2006. Remarkable amphibian biomass and abundance in an isolated wetland: implications for wetland conservation. *Conservation Biology* 20:1457-1465.
- Gibbs, E.L., G.W. Nace, and M.B. Emmons. 1971. The live frog is almost dead. *Bioscience* 21:1027-1034.
- Gibbs, J.P. 1998a. Amphibian movements in response to forest edges, roads, and streambeds in southern New England. *Journal of Wildlife Management* 62:584-589.
- Gibbs, J.P. 1998b. Distribution of woodland amphibians along a forest fragmentation gradient. *Landscape Ecology* 13:263-268.
- Gibbs, J.P., and W.G. Shriner. 2005. Can road mortality limit populations of pond-breeding amphibians? *Wetlands, Ecology & Management* 13:281-289.
- Gibbs, J.P., K.K. Whiteleather, and F.W. Schueler. 2005. Changes in frog and toad populations over 30 years in New York State. *Ecological Applications* 15:1148-1157.
- Gibbs, J.P., A.R. Breisch, P.K. Ducey, G. Johnson, J.L. Behler, and R.C. Bothner. 2007. *The Amphibians and Reptiles of New York State*. Oxford University Press, Oxford.
- Gibbs, R.H. Jr. 1957. The chorus frog, *Pseudacris nigrita*, at Plattsburgh, New York. *Copeia* 1957:311-312.
- Gilbertson, M.-K. 2001. Pesticide-induced immunosuppression in Northern Leopard Frogs (*Rana pipiens*). Ph.D. diss., University of Windsor, Windsor, Ontario.
- Gilbertson, M.-K., G.D. Haffner, K.G. Drouillard, A. Albert, and B. Dixon. 2003. Immunosuppression in the northern leopard frog (*Rana pipiens*) induced by pesticide exposure. *Environmental Toxicology and Chemistry* 22:101-110.
- Gilhen, J. 1984. *Amphibians and Reptiles of Nova Scotia*. Nova Scotia Museum, Halifax.
- Gilliland, M. G., III, and P. M. Muzzall. 1999. Helminths infecting froglets of the Northern Leopard Frog (*Rana pipiens*) from Foggy Bottom Marsh, Michigan. *Journal of the Helminthological Society of Washington* 66:73-77.
- Gillis, J.E. 1975. Characterization of a hybridizing complex of leopard frogs. Ph.D. diss., Colorado State University, Fort Collins.
- Gillis, J.E. 1979. Adaptive differences in the water economies of two species of leopard frogs from eastern Colorado (Amphibia, Anura, Ranidae). *Journal of Herpetology* 13:445-450.

- Gilmore, R.J. 1924. Notes on the life history and feeding habits of the spadefoot toad of the western plains. Colorado College Publication, Science Series 13:1-12.
- Girard, C. 1854. A list of the North American bufonids, with diagnoses of new species. Proceedings of the Academy of Natural Sciences of Philadelphia 7:86-88.
- Girard, C. 1855. Abstract of a report to Lieutenant James McGillis, U.S.N., upon the reptiles collected during the U.S.N. Astronomical Expedition to Chili. Proceedings of the Academy of Natural Sciences of Philadelphia 7:226-227.
- Girard, C. 1859. In S.F. Baird, Reptiles of the Boundary. United States and Mexican Boundary Survey, under the order of Lieut. Col. W.H. Emory. United States Government Printing Office, Washington, DC.
- Given, M.F. 1987. Vocalizations and acoustic interactions of the Carpenter Frog, *Rana virgatipes*. Herpetologica 43:467-481.
- Given, M.F. 1988a. Growth rate and the cost of calling activity in male Carpenter Crogs, *Rana virgatipes*. Behavioral Ecology and Sociobiology 22:153-160.
- Given, M.F. 1988b. Territoriality and aggressive interactions of male carpenter frogs, *Rana virgatipes*. Copeia 1988:411-421.
- Given, M.F. 1990. Spatial distribution and vocal interaction in *Rana clamitans* and *R. virgatipes*. Journal of Herpetology 24:377-382.
- Given, M.F. 1993. Male response to female vocalizations in the Carpenter Frog, *Rana virgatipes*. Animal Behaviour 46:1139-1149.
- Given, M.F. 1996. Intensity modulation of advertisement calls in *Bufo woodhousii fowleri*. Copeia 1996:970-977.
- Given, M.F. 1999a. Distribution records of *Rana virgatipes* and associated anuran species along Maryland's Eastern Shore. Herpetological Review 30:144-146.
- Given, M.F. 1999b. Frequency alteration of the advertisement call in the Carpenter Frog, *Rana virgatipes*. Herpetologica 55:304-317.
- Given, M.F. 2002. Interrelationships among calling effort, growth rate, and chorus tenure in *Bufo fowleri*. Copeia 2002:979-987.
- Given, M.F. 2005. Vocalizations and reproductive behavior of male Pickerel Frogs, *Rana palustris*. Journal of Herpetology 39:223-233.
- Given, M.F. 2008. Does physical or acoustical disturbance cause male Pickerel Frogs, *Rana palustris*, to vocalize underwater? Amphibia-Reptilia 29:177-184.
- Glennemeier, K.A., and L.J. Begnoche. 2002. Organochlorine contamination on amphibian populations in southwestern Michigan. Journal of Herpetology 36:233-244.
- Glennemeier, K.A., and R.J. Denver. 2002. Role for corticoids in mediating the response of *Rana pipiens* tadpoles to intraspecific competition. Journal of Experimental Zoology 292:32-40.
- Glista, D.J., T.L. DeVault, and J.A. DeWoody. 2008. Vertebrate road mortality predominantly impacts amphibians. Herpetological Conservation and Biology 3:77-87.
- Glooschenko, V., W.F. Weller, P.G.R. Smith, R. Alvo, and J.H.G. Archbold. 1992. Amphibian distribution with respect to pond water chemistry near Sudbury, Ontario. Canadian Journal of Fisheries and Aquatic Science 49 (Suppl. 1):114-121.
- Glorioso, B.M., J.H. Waddle, M.E. Crockett, K.G. Rice, and H.F. Percival. 2012. Diet of the invasive Cuban Treefrog (*Osteopilus septentrionalis*) in pine rockland and mangrove habitats in South Florida. Caribbean Journal of Science 46:346-355.
- Gloyd, H.K., and R. Conant. 1990. Snakes of the *Agkistrodon* Complex. A Monographic Review. Society for the Study of Amphibians and Reptiles, Contributions in Herpetology No. 6.
- Goater, C.P., and R.E. Vandebos. 1997. Effects of larval history and lungworm infection on the growth and survival of juvenile Wood Frogs (*Rana sylvatica*). Herpetologica 53:331-338.
- Goater, C.P., M. Mulvey, and G.W. Esch. 1990. Electrophoretic differentiation of two *Halipegus* (Trematoda: Hemiuridae) congeners in an amphibian population. Journal of Parasitology 76:431-434.
- Godwin, G.J., and S.M. Roble. 1983. Mating success in male treefrogs, *Hyla chrysoscelis* (Anura: Hylidae). Herpetologica 39:141-146.
- Goebel, A.M. 2005. Conservation systematics: the *Bufo boreas* species group. Pp. 210-221 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Goebel, A.M., T.A. Ranker, P.S. Corn, and R.G. Olmstead. 2009. Mitochondrial DNA evolution in the *Anaxyrus boreas* species group. Molecular Phylogenetics and Evolution 50:209-225.

- Goin, C.J. 1943. The lower vertebrate fauna of the water hyacinth community in northern Florida. Proceedings of the Florida Academy of Sciences 6:143-154.
- Goin, C.J. 1944. *Eleutherodactylus ricordii* at Jacksonville, Florida. Copeia 1944:192.
- Goin, C.J. 1947a. A note on the food of *Heterodon simus*. Copeia 1947:275.
- Goin, C.J. 1947b. Studies on the life history of *Eleutherodactylus ricordii planirostris* (Cope) in Florida. University of Florida Studies, Biological Science Series 4:1-66.
- Goin, C.J. 1948. The peep order in peepers: a swamp water serenade. Quarterly Journal of the Florida Academy of Science 11:59-61.
- Goin, C.J., and M.G. Netting. 1940. A new Gopher Frog from the Gulf Coast, with comments upon the *Rana areolata* group. Annals of the Carnegie Museum 28:137-168.
- Goin, C.J., and L.H. Ogren. 1956. Parasitic copepods (Argulidae) on amphibians. Journal of Parasitology 42:154.
- Goin, O.B. 1955. The World Outside My Door. Macmillan Press, New York.
- Goin, O.B. 1958. A comparison of the nonbreeding habits of two treefrogs, *Hyla squirella* and *Hyla cinerea*. Quarterly Journal of the Florida Academy of Sciences 21:49-60.
- Goldberg, C.S. 2002. Habitat, spatial population structure, and methods for monitoring Barking Frogs (*Eleutherodactylus augusti*) in southern Arizona. M.S. thesis, University of Arizona, Tucson.
- Goldberg, C.S., and C.R. Schwalbe. 2004. Considerations for monitoring a rare anuran (*Eleutherodactylus augusti*). Southwestern Naturalist 49:442-448.
- Goldberg, C.S., and L.P. Waits. 2009. Using habitat models to determine conservation priorities for pond-breeding amphibians in a privately-owned landscape of northern Idaho, USA. Biological Conservation 142:1096-1104.
- Goldberg, C.S., and L.P. Waits. 2010. Comparative landscape genetics of two pond-breeding amphibian species in a highly modified agricultural area. Molecular Ecology 19:3650-3663.
- Goldberg, C.S., K.J. Field, and M.J. Sredl. 2004a. Mitochondrial DNA sequences do not support species status of the Ramsey Canyon Leopard Frog (*Rana subaquavocalis*). Journal of Herpetology 38:313-319.
- Goldberg, C.S., B.K. Sullivan, J.H. Malone, and C.R. Schwalbe. 2004b. Divergence among Barking Frogs (*Eleutherodactylus augusti*) in the southwestern United States. Herpetologica 60:312-320.
- Goldberg, C.S., D.S. Pilliod, R.S. Arkle, and L.P. Waits. 2011. Molecular detection of vertebrates in stream waters: a demonstration using Rocky Mountain tailed frogs and Idaho Giant Salamanders. PLoS One 6(7):e22746.
- Goldberg, S.R., and C.R. Bursey. 1991a. Helminths from the Red-spotted Toad, *Bufo punctatus* (Anura: Bufonidae), from southern Arizona. Journal of the Helminthological Society of Washington 58:267-269.
- Goldberg, S.R., and C.R. Bursey. 1991b. Helminths of three toads, *Bufo alvarius*, *Bufo cognatus* (Bufonidae), and *Scaphiopus couchii* (Pelobatidae), from southern Arizona. Journal of the Helminthological Society of Washington 58:142-146.
- Goldberg, S.R., and C.R. Bursey. 1996. Helminths of the Oak Toad (*Bufo quercicus*, Bufonidae) from Florida (USA). Alytes 14:122-126.
- Goldberg, S.R., and C.R. Bursey. 2001a. Helminths of the California Treefrog, *Hyla cadaverina* (Hylidae) from southern California. Bulletin of the Southern California Academy of Sciences 100:117-122.
- Goldberg, S.R., and C.R. Bursey. 2001b. Persistence of the nematode *Ozwaldochuzia pipiens* (Molineidae), in the Pacific Treefrog, *Hyla regilla* (Hylidae), from California. Bulletin of the Southern California Academy of Sciences 100:44-50.
- Goldberg, S.R., and C.R. Bursey. 2002a. Helminths of the Bullfrog, *Rana catesbeiana* (Ranidae), in California with revisions to the California anuran helminth list. Bulletin of the Southern California Academy of Sciences 101:118-130.
- Goldberg, S.R., and C.R. Bursey. 2002b. Helminths of the Plains Spadefoot, *Spea bombifrons*, the Western Spadefoot, *Spea hammondii*, and the Great Basin Spadefoot, *Spea intermontana* (Pelobatidae). Western North American Naturalist 62:491-495.
- Goldberg, S.R., C.R. Bursey, and I. Ramos. 1995. The component parasite community of three sympatric toad species, *Bufo cognatus*, *Bufo debilis* (Bufonidae), and *Spea multiplicata* (Pelobatidae) from New Mexico. Journal of the Helminthological Society of Washington 62:57-61.

- Goldberg, S.R., C.R. Bursey, B.K. Sullivan, and Q.A. Truong. 1996a. Helminths of the Sonoran Green Toad, *Bufo retiformis* (Bufonidae), from southern Arizona. Journal of the Helminthological Society of Washington 63:120-122.
- Goldberg, S.R., C.R. Bursey, K.B. Malmos, B.K. Sullivan, and H. Cheam. 1996b. Helminths of the Southeastern Toad, *Bufo microscaphus*, Woodhouse's toad, *Bufo woodhousii* (Bufonidae), and their hybrids from central Arizona. Great Basin Naturalist 56:369-374.
- Goldberg, S.R., C.R. Bursey, E.W.A. Gergus, B.K. Sullivan, and Q.A. Truong. 1996c. Helminths of three treefrogs *Hyla arenicolor*, *Hyla wrightorum*, and *Pseudacris triseriata* (Hylidae) from Arizona. Journal of Parasitology 82:833-835.
- Goldberg, S.R., C. R. Bursey and H. Cheam. 1998a. Helminths in two native frog species (*Rana chiricahuensis*, *Rana yavapaiensis*) and one introduced frog species (*Rana catesbeiana*) (Ranidae) from Arizona. Journal of Parasitology 84:175-177.
- Goldberg, S.R., C.R. Bursey, and H. Cheam. 1998b. Nematodes of the Great Plains Narrow-mouthed Toad, *Gastrophryne olivacea* (Microhylidae), from southern Arizona. Journal of the Helminthological Society of Washington 65:102-104.
- Goldberg, S.R., C.R. Bursey, and S. Hernandez. 1999a. Helminths of the Western Toad, *Bufo boreas* (Bufonidae) from southern California. Bulletin of the Southern California Academy of Sciences 98:39-44.
- Goldberg, S.R., C.R. Bursey, and G. Galindo. 1999b. Helminths of the Lowland Burrowing Treefrog, *Pternohyla fodiens* (Hylidae), from southern Arizona. Great Basin Naturalist 59:195-197.
- Goldberg, S.R., C.R. Bursey, and J.E. Platz. 2000. Helminths of the Plains Leopard Frog, *Rana blairi* (Ranidae). Southwestern Naturalist 45:362-366.
- Goldberg, S.R., C.R. Bursey, R.G. McKinnell, and I.S. Tan. 2001. Helminths of Northern Leopard Frogs, *Rana pipiens* (Ranidae), from North Dakota and South Dakota. Western North American Naturalist 61:248-251.
- Goldberg, S.R., C.R. Bursey, and C. Wong. 2002. Helminths of the western chorus frog from eastern Alberta, Canada. Northwest Science 76:77-79.
- Golden, D.M., and J.D. Kleopfer. 2011. *Scaphiopus holbrookii* (Eastern Spadefoot). Locomotion. Herpetological Review 42:263.
- Golden, D.R., G.R. Smith and J.E. Rettig. 2001. Effects of age and group size on habitat selection and activity level in *Rana pipiens* tadpoles. Herpetological Journal 11:69-73.
- Gomez, D.M., and R.G. Anthony. 1996. Amphibian and reptile abundance in riparian and upslope areas of five forest types in western Oregon. Northwest Science 70:109-119.
- Gomez-Mestre, I., and D.R. Buchholz. 2006. Developmental plasticity mirrors differences among taxa in spadefoot toads linking plasticity and diversity. Proceedings of the National Academy of Sciences, USA 103:19021-19026.
- Gonsolin, T.E. 2010. Ecology of Foothill Yellow-legged Frogs in Upper Coyote Creek, Santa Clara County, CA. M.S. thesis, San Jose State University, San Jose, CA.
- Gonzalez, S.M. 2004. Biological indicators of wetland health: comparing qualitative and quantitative vegetation measures with anuran measures. M.S. thesis, University of South Florida, Tampa.
- Goodman, J.D. 1989. *Langeronia brenesi* n. sp. (Trematoda: Lecithodendriidae) in the Mountain Yellow-legged Frog *Rana muscosa* from southern California. Transactions of the American Microscopical Society 108:387-393.
- Goodman, R.M., and Y.T. Ararso. 2012. Survey of ranavirus and the fungus *Batrachochytrium dendrobatidis* in frogs of central Virginia, USA. Herpetological Review 43:78-80.
- Goodsell, J.A., and L.B. Kats. 1999. Effect of introduced mosquitofish on Pacific Treefrogs and the role of alternate prey. Conservation Biology 13:921-924.
- Goraya, J., Y. Wang, Z. Li, M. O'Flaherty, F.C. Knoop, J.E. Platz, and J.M. Conlon. 2000. Peptides with antimicrobial activity from four different families isolated from the skins of the North American frogs *Rana luteiventris*, *Rana berlandieri* and *Rana pipiens*. European Journal of Biochemistry 267:894-900.
- Gordon, K. 1939. The amphibia and reptilia of Oregon. Oregon State Monographs, Studies in Zoology No. 1.
- Gordon, R.E. 1955. Additional remarks on albinism in *Microhyla carolinensis*. Herpetologica 11:240.
- Gorham, S.W. 1963. The comparative number of species of amphibians in Canada and other

- countries III. Summary of species of anurans. Canadian Field-Naturalist 77:13-48.
- Gorham, S.W. 1964. Notes on the amphibians of Browns Flat Area, New Brunswick. Canadian Field-Naturalist 78:154-160.
- Gorham, S.W. 1970. The Amphibians and Reptiles of New Brunswick. New Brunswick Museum, Monographic Series No. 6.
- Gorham, S.W. 1974. Checklist of World Amphibians/Liste des Amphibiens du Monde. The New Brunswick Museum, Saint John, New Brunswick.
- Gorman, J. 1960. Treetoad studies. 1. *Hyla californiae*, new species. Herpetologica 16:214-222.
- Gorman, T.A. 2009. Ecology of two rare amphibians of the Gulf Coastal Plain. Ph.D. diss., Virginia Polytechnic Institute and State University, Blacksburg.
- Gorman, T.A. and C.A. Haas. 2011. Seasonal microhabitat selection and use of syntopic populations of *Lithobates okaloosae* and *Lithobates clamitans clamitans*. Journal of Herpetology 45:313-318.
- Gorman, T.A., D.C. Bishop, and C.A. Haas. 2009. Spatial interactions between two species of frogs: *Rana okaloosae* and *R. clamitans clamitans*. Copeia 2009:138-141.
- Gorman, T.A., J.A. Austin, and C.A. Haas. 2012. Conservation of the Florida bog frog, one of North America's rarest amphibians. Froglog (102):24-25.
- Gorman, W.L. 1986. Patterns of color polymorphism in the cricket frog, *Acris crepitans*, in Kansas. Copeia 1986:995-999.
- Gorman, W.L. 1983. Patterns of genic variation in the cricket frog, *Acris crepitans*, in Kansas. Ph.D. diss. University of Kansas, Lawrence.
- Gorman, W.L., and M.S. Gaines. 1987. Patterns of genetic variation in the cricket frog, *Acris crepitans*, in Kansas. Copeia 1987:352-360.
- Gosner, K.L. 1956. Experimental hybridization between two North American tree frogs. Herpetologica 12:285-289.
- Gosner, K.L. 1960. A simplified table for staging anuran embryos and larvae with notes on identification. Herpetologica 16:183-190.
- Gosner, K.L., and I.H. Black. 1954. Larval development in *Bufo woodhousei fowleri* and *Scaphiopus holbrookii holbrookii*. Copeia 1954:251-255.
- Gosner, K.L., and I.H. Black. 1955. The effects of temperature and moisture on the reproductive cycle of *Scaphiopus h. holbrookii*. American Midland Naturalist 54:192-203.
- Gosner, K.L., and I.H. Black. 1956. Notes on amphibians from the upper Coastal Plain of North Carolina. Journal of the Elisha Mitchell Scientific Society 72:40-47.
- Gosner, K.L., and I.H. Black. 1957a. The effects of acidity on the development and hatching of New Jersey frogs. Ecology 38:256-262.
- Gosner, K.L., and I.H. Black. 1957b. Larval development in New Jersey Hylidae. Copeia 1957:31-36.
- Gosner, K.L., and I.H. Black. 1958. Notes on the life history of Brimley's Chorus Frog. Herpetologica 13:249-254.
- Gosner, K.L., and D.A. Rossman. 1959. Observations on the reproductive cycle of the Swamp Chorus Frog, *Pseudacris nigrita*. Copeia 1959:263-266.
- Gosner, K.L., and D.A. Rossman. 1960. Eggs and larval development of the treefrogs *Hyla crucifer* and *Hyla ocularis*. Herpetologica 16:225-232.
- Gould, W.R., D.A. Patla, R. Daley, P.S. Corn, B.R. Hossack, R. Bennetts and C.R. Peterson. 2012. Estimating occupancy in large landscapes: evaluation of amphibian monitoring in the Greater Yellowstone Ecosystem. Wetlands 32:379-389.
- Govindarajulu, P. 2004. Introduced Bullfrogs (*Rana catesbeiana*) in British Columbia: impacts on native Pacific Treefrogs (*Hyla regilla*) and Red-legged Frogs (*Rana aurora*). Ph.D. diss. University of Victoria, Victoria, British Columbia.
- Govindarajulu, P., R. Altwegg, and B.R. Anholt. 2005. Matrix model investigation of invasive species control: Bullfrogs on Vancouver Island. Ecological Applications 15:2161-2170.
- Graeter, G.J. 2005. Habitat selection and movement patterns of amphibians in altered forest habitats. M.S. thesis, University of Georgia, Athens.
- Graeter, G.J., B.B. Rothermel, and J.W. Gibbons. 2008. Habitat selection and movement of pond-breeding amphibians in experimentally fragmented pine forests. Journal of Wildlife Management 72:473-482.
- Graham, C., S.C. Richter, S. McClean, E.O'Kane, P.R. Flatt, and C. Shaw. 2006. Histamine-releasing and antimicrobial peptides from the skin secretions of the Dusky Gopher Frog, *Rana sevosa*. Peptides 27:1313-1319.
- Graham, S.P. 2010. Geographic distribution.

- Pseudacris brachyphona* (Mountain Chorus Frog). Herpetological Review 41:241.
- Graham, S.P., E.K. Timpe, and L. Giovanetto. 2007. Significant new records for Georgia herpetofauna. Herpetological Review 38:494-495.
- Graham, T.E. 1978. Massachusetts frogs and toads, part 1. Massachusetts Wildlife 29(5):12-14.
- Graham, T.E. 1978. Massachusetts frogs and toads, part 2—conclusion. Massachusetts Wildlife 29(6):12-19.
- Granatosky, M.C., and K.L. Krysko. 2011. Ontogenetic behavioral shifts in habitat utilization of treefrogs (Hylidae) in north-central Florida. IRCF Reptiles & Amphibians 18:194-201.
- Granatosky, M.C., L.M. Wagner, and K.L. Krysko. 2011. *Osteopilus septentrionalis* (Cuban Treefrog). Prey. Herpetological Review 42:90.
- Granoff, A. 1969. Viruses of amphibia. Current Topics in Microbiology and Immunology 50:107-137.
- Granoff, A., P.E. Came, and K.A. Rafferty. 1965. The isolation and properties of viruses from *Rana pipiens*: their possible relationship to the renal adenocarcinoma of the leopard frog. Annals of the New York Academy of Science 126:237-255.
- Grant, J. 1961. The tailed toad in southeastern British Columbia. Canadian Field-Naturalist 75:165.
- Grant, J.B. 2001. *Rana palustris* (Pickerel Frog). Production of odor. Herpetological Review 32:183.
- Grant, K.P., and L.E. Licht. 1993. Acid tolerance of anuran embryos and larvae from central Ontario. Journal of Herpetology 27:1-6.
- Grant, K.P., and L.E. Licht. 1995. Effects of ultraviolet radiation on life-history stages of anurans from Ontario, Canada. Canadian Journal of Zoology 73:2292-2301.
- Grasso, R.L., R.M. Coleman, and C. Davidson. 2010. Palatability and antipredator response of Yosemite Toads (*Anaxyrus canorus*) to nonnative trout (*Salvelinus fontinalis*) in the Sierra Nevada Mountains of California. Copeia 2010:457-462.
- Gratwicke, B., T.E. Lovejoy, and D.E. Wildt. 2012. Will amphibians croak under the Endangered Species Act? Bioscience 62:197-202.
- Gravel, M., M.J. Mazerolle and M.-A. Villard. 2012. Interactive effects of roads and weather on juvenile amphibian movements. Amphibia-Reptilia 33: 113-127.
- Graves, B.M., and S.H. Anderson. 1987. Habitat Suitability Index Models. Bullfrog. U.S. Fish and Wildlife Service, Biological Report 82(10.138), 22 pp.
- Graves, B.M., and J.J. Krupa. 2005. *Bufo cognatus* Say, 1823. Great Plains Toad. Pp. 401-404 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Graves, B.M., C.H. Summers, and K.L. Olmstead. 1993. Sensory mediation of aggregation among postmetamorphic *Bufo cognatus*. Journal of Herpetology 27:315-319.
- Gray, B.S., and M. Lethaby. 2010. Observations of limb abnormalities in amphibians from Erie County, Pennsylvania. Journal of Kansas Herpetology 35:14-16.
- Gray, E.P., S. Nunziata, J.W. Snodgrass, D.R. Ownby, and J.E. Havel. 2010. Predation on Green Frog eggs (*Rana clamitans*) by ostracoda. Copeia 2010:452-456.
- Gray, L.A. 1992. Larval growth and age at completion of metamorphosis of the Tailed Frog, *Ascaphus truei*. M.S. thesis. Central Washington University, Ellensburg, WA.
- Gray, M.J. 2002. Effect of anthropogenic disturbance and landscape structure on body size, demographics, and chaotic dynamics of Southern High Plains amphibians. Ph.D. diss., Texas Tech University, Lubbock.
- Gray, M.J., L.M. Smith, and R.I. Leyva. 2004a. Influence of agricultural landscape on a Southern High Plains, USA, amphibian assemblage. Landscape Ecology 19:719-729.
- Gray, M.J., L.M. Smith, and R. Brenes. 2004b. Effects of agricultural cultivation on demographics of Southern High Plains amphibians. Conservation Biology 18:1368-1377.
- Gray, M.J., D.L. Miller, A.C. Schmutz, and C.A. Baldwin. 2007a. Frog Virus 3 prevalence in tadpole populations inhabiting cattle-access and non-access wetlands in Tennessee. Diseases of Aquatic Organisms 77:97-103.
- Gray, M.J., S. Rajeev, D.L. Miller, A.C. Schmutz, E.C. Burton, E.D. Rogers, and G.J. Hickling. 2007b. Preliminary evidence that American Bullfrogs (*Rana catesbeiana*) are suitable hosts for *Escherichia coli* O157:H7. Applied and Environmental Microbiology

- 73:4066-4068.
- Gray, M.J., L.M. Smith, D.L. Miller, and C.R. Bursey. 2007c. Influences of agricultural land use on *Clinostomum attenuatum* metacercariae prevalence in Southern Great Plains amphibians, U.S.A. *Herpetological Conservation and Biology* 2:23-28.
- Gray, M.J., D.L. Miller, and J.T. Hoverman. 2009. Ecology and pathology of amphibian ranaviruses. *Diseases of Aquatic Organisms* 87:243-266.
- Gray, M.J., D.L. Miller, and J.T. Hoverman. 2012. Reliability of non-lethal surveillance methods for detecting ranavirus infection. *Diseases of Aquatic Organisms* 99:1-6.
- Gray, P., and E. Stegall. 1986. Distribution and status of Strecker's Chorus Frog (*Pseudacris streckeri streckeri*) in Kansas. *Transactions of the Kansas Academy of Science* 89:81-85.
- Gray, R.H. 1971. Fall activity and overwintering of the cricket frog, *Acris crepitans*, in central Illinois. *Copeia* 1971:748-750.
- Gray, R.H. 1972. Metachrosis of the vertebral stripe in the cricket frog, *Acris crepitans*. *American Midland Naturalist* 87:549-551.
- Gray, R.H. 1977. Lack of physiological differentiation in three color morphs of the cricket frog (*Acris crepitans*) in Illinois. *Transactions of the Illinois State Academy of Science* 70:73-79.
- Gray, R.H. 1978. Nondifferential predation susceptibility and behavioral selection in three color morphs of Illinois cricket frogs, *Acris crepitans*. *Transactions of the Illinois State Academy of Science* 71:356-360.
- Gray, R.H. 1983. Seasonal, annual and geographic variation in color morph frequencies of the cricket frog, *Acris crepitans*, in Illinois. *Copeia* 1983:300-311.
- Gray, R.H. 1984. Effective breeding size and the adaptive significance of color polymorphism in the cricket frog (*Acris crepitans*) in Illinois, U.S.A. *Amphibia-Reptilia* 5:101-107.
- Gray, R.H. 2000a. Historical occurrence of malformations in the cricket frog, *Acris crepitans*, in Illinois. *Transactions of the Illinois State Academy of Science* 93:279-284.
- Gray, R.H. 2000b. Morphological abnormalities in Illinois cricket frogs, *Acris crepitans*, 1968-1971. *Journal of the Iowa Academy of Science* 107:92-95.
- Gray, R.H., and L.E. Brown. 2005. Decline of Northern Cricket Frogs (*Acris crepitans*). Pp. 47-54 In M.J. Lannoo (ed.), *Amphibian Declines. The Conservation Status of United States Species*. University of California Press, Berkeley.
- Graybeal, A. 1993. The phylogenetic utility of cytochrome b: lessons from bufonid frogs. *Molecular and Phylogenetic Evolution* 2:256-269.
- Graybeal, A. 1997. Phylogenetic relationships of Bufonid frogs and tests of alternate macroevolutionary hypotheses characterizing their radiation. *Zoological Journal of the Linnean Society* 119:297-338.
- Green, D.E., and E. Muths. 2005. Health evaluation of amphibians in and near Rocky Mountain National Park (Colorado, USA). *Alytes* 22:109-129.
- Green, D.E., and C.K. Dodd Jr. 2007. Presence of amphibian chytrid fungus *Batrachochytrium dendrobatidis* and other amphibian pathogens at warm-water fish hatcheries in southeastern North America. *Herpetological Conservation and Biology* 2:43-47.
- Green, D.E., K.A. Converse, and A.K. Schrader. 2002. Epizootiology of sixty-four amphibian morbidity and mortality events in the USA, 1996-2001. *Annals of the New York Academy of Science* 969:232-339.
- *Green, D.M. 1981a (1982). Mating call characteristics of hybrid toads (*Bufo americanus* x *B. fowleri*) at Long Point, Ontario. *Canadian Journal of Zoology* 60:3293-3297.
- Green, D.M. 1981b. Adhesion and the toe pads of treefrogs. *Copeia* 1981:790-796.
- Green, D.M. 1981c. Theoretical analysis of hybrid zones derived from an examination of two dissimilar zones of hybridization in toads (genus *Bufo*). Ph.D. diss., University of Guelph, Guelph, Ontario.
- Green, D.M. 1983. Allozyme variation through a clinal hybrid zone between the toads *Bufo americanus* and *B. hemiophrys* in southeastern Manitoba. *Herpetologica* 39:28-40.
- Green, D.M. 1984. Sympatric hybridization and allozyme variation in the toads *Bufo americanus* and *B. fowleri* in southern Ontario. *Copeia* 1984:18-26.
- Green, D.M. 1985a. Differentiation in amount of centromeric heterochromatin between subspecies of the Red-legged Frog, *Rana aurora*. *Copeia* 1985:1071-1074.
- Green, D.M. 1985b. Biochemical identification of Red-legged Frogs, *Rana aurora draytoni* (Ranidae) at Duckwater, Nevada.

- Southwestern Naturalist 30:614-616.
- Green, D.M. 1985c. Natural hybrids between the frogs *Rana cascadae* and *Rana pretiosa* (Anura: Ranidae). *Herpetologica* 41:262-267.
- Green, D.M. 1986a. Systematics and evolution of western North American frogs allied to *Rana aurora* and *Rana boylii*: karyological evidence. *Systematic Zoology* 35:273-282.
- Green, D.M. 1986b. Systematics and evolution of western North American frogs allied to *Rana aurora* and *Rana boylii*: electrophoretic evidence. *Systematic Zoology* 35:283-296.
- Green, D.M. 1989. Fowler's Toad, *Bufo woodhousii fowleri*, in Canada: biology and population status. *Canadian Field-Naturalist* 103:486-496.
- Green, D.M. 1992. Fowler's Toad (*Bufo woodhousei fowleri*) at Long Point, Ontario: changing abundance and implications for conservation. Canadian Wildlife Service Occasional Paper No. 76:37-43.
- Green, D.M. 1996. The bounds of species: hybridization in the *Bufo americanus* group of North American toads. *Israel Journal of Zoology* 42:95-109.
- Green, D.M. 1997. Temporal variation in abundance and age structure in Fowler's Toads, *Bufo fowleri*, at Long Point, Ontario. SSAR Herpetological Conservation 1:45-56.
- Green, D.M. 2003. The ecology of extinction: population fluctuation and decline in amphibians. *Biological Conservation* 111:331-343.
- Green, D.M. 2005. *Bufo americanus* Holbrook, 1836. American Toad. Pp. 386-390 In M.J. Lannoo (ed.), *Amphibian Declines*. The Conservation Status of United States Species. University of California Press, Berkeley.
- Green, D.M. and R.W. Campbell. 1984. The amphibians of British Columbia. British Columbia Provincial Museum, Handbook No. 45.
- Green, D.M., and C. Pustowka. 1997. Correlated morphological and allozyme variation in the hybridizing toads *Bufo americanus* and *Bufo hemiophrys*. *Herpetologica* 53:218-228.
- Green, D.M., and C. Parent. 2003. Variable and asymmetric introgression in a hybrid zone in the toads, *Bufo americanus* and *Bufo fowleri*. *Copeia* 2003:34-43.
- Green, D.M., C.H. Daugherty, and J.P. Bogart. 1980. Karyology and systematic relationships of the Tailed Frog *Ascaphus truei*. *Herpetologica* 36:346-352.
- Green, D.M., H. Kaiser, T.F. Sharbel, J. Kearsley, and K.R. McAllister. 1997. Cryptic species of spotted frogs, *Rana pretiosa* complex, in western North America. *Copeia* 1997:1-8.
- Green, N.B. 1938a. The eastern spadefoot toad, *Scaphiopus holbrookii* Harlan, in West Virginia. *Proceedings of the West Virginia Academy of Science* 35:15-19.
- Green, N.B. 1938b. The breeding habits of *Pseudacris brachyphona* (Cope) with a description of the eggs and tadpole. *Copeia* 1938:79-82.
- Green, N.B. 1948. The spade-foot toad, *Scaphiopus h. holbrookii*, breeding in southern Ohio. *Copeia* 1948:65.
- Green, N.B. 1952. A study of the life history of *Pseudacris brachyphona* (Cope) in West Virginia with special reference to behavior and growth of marked individuals. Ph.D. diss., The Ohio State University, Columbus.
- Green, N.B. 1964. Postmetamorphic growth in the Mountain Chorus Frog, *Pseudacris brachyphona* Cope. *Proceedings of the West Virginia Academy of Science* 36:34-38.
- Green, N.B. 1969. The ratio of crescent and cruciform patterns in populations of the Mountain Chorus Frog, *Pseudacris brachyphona*, in West Virginia. *Proceedings of the West Virginia Academy of Science* 41:142-144.
- Green, N.B., and T.K. Pauley. 1987. *Amphibians & Reptiles in West Virginia*. University of Pittsburgh Press, Pittsburgh, PA.
- Greenberg, C.H. 2001a. Response of reptile and amphibian communities to canopy gaps created by wind disturbance in the southern Appalachians. *Forest Ecology and Management* 148:135-144.
- Greenberg, C.H. 2001b. Spatio-temporal dynamics of pond use and recruitment in Florida Gopher Frogs (*Rana capito aesopus*). *Journal of Herpetology* 35:74-85.
- Greenberg, C.H., and G.W. Tanner. 2004. Breeding pond selection and movement patterns by eastern spadefoot toads (*Scaphiopus holbrookii*) in relation to weather and edaphic conditions. *Journal of Herpetology* 38:569-577.
- Greenberg, C.H., and G.W. Tanner. 2005a. Spatial and temporal ecology of Eastern Spadefoot Toads on a Florida landscape. *Herpetologica* 61:20-28.
- Greenberg, C.H., and G.W. Tanner. 2005b. Chaos and continuity: the role of isolated

- ephemeral wetlands on amphibian populations in xeric sand hills. Pp. 79-90 In W.E. Meshaka Jr. and K.J. Babbitt (eds.), *Amphibians and Reptiles. Status and Conservation in Florida*. Krieger Publishing, Malabar, FL.
- Greene, A.E. and W.C. Funk. 2009. Sexual selection on morphology in an explosive breeding amphibian, the Columbian spotted frog (*Rana luteiventris*). *Journal of Herpetology* 43:244-251.
- Greenspan, S.E. 2011. Establishment of *Batrachochytrium dendrobatidis* in anuran epidermis and experimental transmission from bullfrogs to Wood Frogs. M.S. thesis, University of Maine, Orono.
- Greenspan, S.E., J.L. Longcore, and A.J.K. Calhoun. 2012. Host invasion by *Batrachochytrium dendrobatidis*: fungal and epidermal ultrastructure in model anurans. *Diseases of Aquatic Organisms* 100:201-210.
- Greenwell, M., V. Beasley, and L.E. Brown. 1996. The mysterious decline of the cricket frog. *Aquaticus* 26:48-54.
- Greer, A.L., M. Berrill and P.J. Wilson. 2005. Five amphibian mortality events associated with ranavirus infection in south central Ontario, Canada. *Diseases of Aquatic Organisms* 67: 9–14.
- Gregoire, D.R. 2005. Tadpoles of the southeastern United States coastal plain. U.S. Geological Survey Report, Southeast Ecological Science Center, Gainesville. http://fl.biology.usgs.gov/armi/Guide_to_Tadpoles/guide_to_tadpoles.html
- Gregoire, D.R., and M.S. Gunzburger. 2008. Effects of predatory fish on survival and behavior of larval Gopher Frogs (*Rana capito*) and Southern Leopard Frogs (*Rana sphenocephala*). *Journal of Herpetology* 42:97-103.
- Gregory, P.T. 1979. Predator avoidance behavior of the Red-legged Frog (*Rana aurora*). *Herpetologica* 35:175-184.
- Greuter, K.L. 2004. Early juvenile ecology of the endangered Houston toad, *Bufo houstonensis* (Anura: Bufonidae). M.S. thesis, Texas State University, San Marcos.
- Greuter, K.L., and M.R.J. Forstner. 2003. *Bufo houstonensis* (Houston Toad). Growth. *Herpetological Review* 34:355-356.
- Griffin, D.R. 1976. The audibility of frog choruses to migrating birds. *Animal Behaviour* 24:421-427.
- Griffin, P.C. 1999. *Bufo californicus*, Arroyo Toad movement patterns and habitat preferences. M.S. thesis, University of California, San Diego.
- Griffis-Kyle, K.L. 2005a. The effects of mineral nitrogen on embryonic and larval amphibians. Ph.D. diss., Syracuse University, Syracuse, NY.
- Griffis-Kyle, K.L. 2005b. Ontogenetic delays in effects of nitrite exposure on Tiger Salamanders (*Ambystoma tigrinum tigrinum*) and Wood Frogs (*Rana sylvatica*). *Environmental Toxicology and Chemistry* 24:1523-1527.
- Griffis-Kyle, K.L. 2007. Sublethal effects of nitrite on Tiger Salamander (*Ambystoma tigrinum tigrinum*) and Wood Frog (*Rana sylvatica*) embryos and larvae: implications for field populations. *Aquatic Ecology* 41:119-127.
- Griffis-Kyle, K.L. 2009. *Bufo debilis* (Green Toad). Breeding habitat selection. *Herpetological Review* 40:199-200.
- Griffis-Kyle, K.L., and M.E. Ritchie. 2007. Amphibian survival, growth and development in response to mineral nitrogen exposure and predator cues in the field: an experimental approach. *Oecologia* 152:633-642.
- Griffis-Kyle, K.L. and L.M. Navarrete. 2010. *Bufo debilis* (Green Toad). Mortality at a breeding site. *Herpetological Review* 41:334.
- Griffis-Kyle, K.L., S.C. Kyle and J.M. Jungels. 2011. Use of breeding sites by arid-land toads in rangelands: landscape level factors. *Southwestern Naturalist* 56: 252-255.
- Grinnell, J., and C. L. Camp. 1917. A distributional list of the amphibians and reptiles of California. University of California Publications in Zoology 17 (10):127-208.
- Grinnell, J., J. Dixon, and J.M. Linsdale. 1930. Vertebrate natural history of a section of northern California through the Lassen Park region. University of California Publications in Zoology 35:1-594.
- Grismer, L.L. 2002. *Amphibians and Reptiles of Baja California, including its Pacific islands and the islands in the Sea of Cortés*. University of California Press, Berkeley.
- Groff, L.A. 2011. A species distribution model for guiding Oregon Spotted Frog (*Rana pretiosa*) surveys near the southern extent of its geographic range M.A. thesis, Humboldt State University, Arcata, CA.
- Grogan, C.B., and W.L. Grogan Jr. 2011. *Ollotis alvaria* (Sonoran Desert Toad). Reproduction.

- Herpetological Review 42:89-90.
- Grogan, W.L. Jr. 1974. Notes on *Lampropeltis calligaster rhombomaculata* and *Rana virgatipes*. Bulletin of the Maryland Herpetological Society 10:33-34.
- Grogan, W.L. Jr., and P.G. Bystrak. 1973a. Early breeding activity of *Rana sphenocephala* and *Bufo woodhousei fowleri* in Maryland. Bulletin of the Maryland Herpetological Society 9:106.
- Grogan, W.L. Jr., and P.G. Bystrak. 1973b. The amphibians and reptiles of Kent Island, Maryland. Bulletin of the Maryland Herpetological Society 9:115-118.
- Gromko, M.H., F.S. Mason, and S.J. Smith-Gill. 1973. Analysis of the crowding effect in *Rana pipiens* tadpoles. Journal of Experimental Zoology 186:63-72.
- Groner, M. L., and R. A. Relyea. 2011. A tale of two pesticides: How common insecticides affect aquatic communities. Freshwater Biology 56:2391-2404.
- Gross, J.A., P.T.J. Johnson, L.K. Prahl, and W.H. Karasov. 2009. Critical period of sensitivity for effects of cadmium on frog growth and development. Environmental Toxicology and Chemistry 28:1227-1232.
- Groves, J.D. 1980. Mass predation on a population of the American Toad, *Bufo americanus*. American Midland Naturalist 103:202-203.
- Groves, J.D., and F. Groves. 1978. Spider predation on amphibians and reptiles. Bulletin of the Maryland Herpetological Society 14:44-46.
- Grubb, J.C. 1970. Orientation in post-reproductive Mexican Toads, *Bufo valliceps*. Copeia 1970:674-680.
- Grubb, J.C. 1972. Differential predation by *Gambusia affinis* on the eggs of seven species of anuran amphibians. American Midland Naturalist 88:103-108.
- Grubb, J.C. 1973. Olfactory orientation in *Bufo woodhousei fowleri*, *Pseudacris clarkii* and *Pseudacris streckeri*. Animal Behaviour 21:726-732.
- Gruia-Gray, J., and S. Desser. 1992. Cytopathological and epizootiology of frog erythrocytic virus in Bullfrogs (*Rana catesbeiana*). Journal of Wildlife Diseases 28:34-41.
- Gruia-Gray, J., M. Petric, and S. Desser. 1989. Ultrastructural, biochemical and biophysical properties of an erythrocytic virus of frogs from Ontario, Canada. Journal of Wildlife Diseases 25:497-506.
- Guderyahn, L., S.B. Hager, and L. Scott. 2004. Evidence to support the presence of Cope's Gray Treefrog (*Hyla chrysoscelis*) at Green Wing Environmental Laboratory in northcentral Illinois. Transactions of the Illinois State Academy of Science 97:219-225.
- Guerry, A.D., and M.L. Hunter Jr. 2002. Amphibian distributions in a landscape of forests and agriculture: an examination of landscape composition and configuration. Conservation Biology 16:745-754.
- Gunzburger, M.S. 2004. The role of tadpole predation in the habitat distribution of the Green Treefrog (*Hyla cinerea*). Ph.D. diss., Florida State University, Tallahassee.
- Gunzburger, M.S. 2006. Reproductive ecology of the Green Treefrog (*Hyla cinerea*) in northwestern Florida. American Midland Naturalist 155:321-328.
- Gunzburger, M.S. 2007. Habitat segregation in two sister taxa of hylid treefrogs. Herpetologica 63:301-310.
- Gunzburger, M.S., and J. Travis. 2004. Evaluating predation pressure on Green Treefrog larvae across a habitat gradient. Oecologia 140:422-429.
- Gunzburger, M.S., and J. Travis. 2005a. Effects of multiple predator species on Green Treefrog (*Hyla cinerea*) tadpoles. Canadian Journal of Zoology 83:996-1002.
- Gunzburger, M.S., and J. Travis. 2005b. Critical literature review of the evidence for unpalatability of amphibian eggs and larvae. Journal of Herpetology 39:547-571.
- Gunzburger, M.S., W.B. Hughes, W.J. Barichivich, and J.S. Staiger. 2010. Hurricane storm surge and amphibian communities in coastal wetlands of northwestern Florida. Wetlands Ecology and Management 18:651-663.
- Gupta, N. 2009. Effects of oil sands process-affected water and substrates on Wood Frog (*Rana sylvatica*) eggs and tadpoles. M.S. thesis, University of Saskatchewan, Saskatoon.
- Guscio, C.G., B.R. Hossack, L.A. Eby, and P.S. Corn. 2007. Post-breeding habitat use by adult Boreal Toads (*Bufo boreas*) after wildfire in Glacier National Park, USA. Herpetological Conservation and Biology 3:55-62.
- Guttmann, D., J.E. Bramble, and O.J. Sexton. 1991. Observations on the breeding immigration of Wood Frogs *Rana sylvatica* reintroduced in east-central Missouri.

- American Midland Naturalist 125:269-274.
- Guttman, S.I. 1975. Genetic variation in the genus *Bufo*. Part 2. Isozymes in northern allopatric populations of the American Toad *Bufo americanus*. Pp. 679-697 In C.L. Markert (ed.), Isozymes. 4. Genetics and Evolution, Academic Press, New York.
- Guzy, J.C., T.S. Campbell, and K.R. Campbell. 2006. Effects of hydrological alterations on frog and toad populations at Morris Bridge wellfield, Hillsborough County, Florida. Florida Scientist 69:276-287.
- Guzy, J.C., E.D. McCoy, A.C. Deyle, S.M. Gonzalez, N. Halstead and H.R. Mushinsky. 2012. Urbanization interferes with the use of amphibians as indicators of ecological integrity of wetlands. Journal of Applied Ecology 49:941-952.
- Haber, V.R. 1926. The food of the Carolina treefrog, *Hyla cinerea* Schneider. Journal of Comparative Psychology 6:189-220.
- Hadfield, S. 1966. Observations on body temperatures and activity in the toad *Bufo woodhousei fowleri*. Copeia 1966:581-582.
- Haertel, J.D., and R.M. Storm. 1970. Experimental hybridization between *Rana pretiosa* and *Rana cascadae*. Herpetologica 26:436-446.
- Haertel, J.D., A. Owczarzak, and R.M. Storm. 1974. A comparative study of the chromosomes from five species of the genus *Rana* (Amphibia: Salientia). Copeia 1974:109-114.
- Haggerty, C. 2010. Anuran and tree community structure of cypress domes in Tampa, Florida, relative to time since incorporation within the urban landscape. M.S. thesis, University of South Florida, Tampa.
- Hahn, D. 1968. A biogeographic analysis of the herpetofauna of the San Luis Valley, Colorado. M.S. thesis, Louisiana State University, Baton Rouge.
- Hailman, J.P., and R.G. Jaeger. 1974. Phototactic responses to spectrally dominant stimuli and use of colour vision by adult anuran amphibians: a comparative survey. Animal Behaviour 22:757-795.
- Hailman, J.P., and R.G. Jaeger. 1978. Phototactic responses of anuran amphibians to monochromatic stimuli of equal quantum intensity. Animal Behaviour 26:274-281.
- Haislip, N. A., J. T. Hoverman, D. L. Miller, and M. J. Gray. 2012. Natural stressors and disease risk: does the threat of predation increase amphibian susceptibility to ranavirus? Canadian Journal of Zoology 90:893-902.
- Hale, S.F., F. Retes, and T.R. Van Devender. 1977. New populations of *Rana tarahumarae* (Tarahumara Frog) in Arizona. Journal of the Arizona Academy of Sciences 11:133-134.
- Hale, S.F., C.R. Schwalbe, J.L. Jarchow, C.J. May, C.H. Lowe, and T.B. Johnson. 1995. Disappearance of the Tarahumara frog. Pp. 138-140 In E.T. LaRoe, G.S. Farris, C.E. Puckett, P.D. Doran, and M.J. Mac (eds.), Our Living Resources. A Report to the Nation on the Distribution, Abundance, and Health of U.S. Plants, Animals, and Ecosystems. National Biological Service, Washington, DC.
- Hale, S.F., P.C. Rosen, J.L. Jarchow, and G.A. Bradley. 2005. Effects of the chytrid fungus on the Tarahumara Frog (*Rana tarahumarae*) in Arizona and Sonora, Mexico. Pp. 407-411 In G.J. Gottfried, B.S. Gebow, L.G. Eskew, C.B. Edminster, and B. Carelton (compilers), Connecting Mountain Islands and Desert Seas. Biodiversity and Management of the Madrean Archipelago. 2. USDA Forest Service Proceedings RMRS-P-36, Fort Collins, CO.
- Hall, D.G. 1948. The Blowflies of North America. The Thomas Say Foundation, Baltimore.
- Hall, J.A., J.H. Larsen Jr., and R.E. Fitzner. 1997. Postembryonic ontogeny of the spadefoot toad, *Scaphiopus intermontanus* (Anura: Pelobatidae): external morphology. Herpetological Monographs 11:124-178.
- Hall, J.A., J.H. Larsen Jr., and R.E. Fitzner. 2002. Morphology of the premetamorphic larva of the spadefoot toad, *Scaphiopus intermontanus* (Anura: Pelobatidae), with an emphasis on the lateral line system and mouthparts. Journal of Morphology 252:114-130.
- Hall, J.G. 2006. Herpetofaunal sampling in the North Carolina coastal plain: a comparison between techniques across habitats. M.S. thesis, East Carolina University, Greenville, NC.
- Hall, R.J. 1990. Accumulation, metabolism and toxicity of parathion in tadpoles. Bulletin of Environmental Contamination and Toxicology 44:629-635.
- Hall, R.J. 1994. Herpetofaunal diversity of the Four Holes Swamp, South Carolina. USDI National Biological Survey, Resource Publication 198.
- Hall, R.J., and D. Swineford. 1979. Uptake of methoxychlor from food and water by the

- American Toad (*Bufo americanus*). Bulletin of Environmental Contamination and Toxicology 23:335-337.
- Hall, R.J., and D. Swineford. 1980. Toxic effects of endrin and toxaphene on the Southern Leopard Frog *Rana sphenocephala*. Environmental Pollution (Series A) 23:53-65.
- Hall, R.J., and E. Kolbe. 1980. Bioconcentration of organophosphorus pesticides to hazardous levels by amphibians. Journal of Toxicological and Environmental Health 6:853-860.
- Hall, R.J., and D. Swineford. 1981. Acute toxicities of toxaphene and endrin to larvae of seven species of amphibians. Toxicology Letters 8:331-336.
- Hall, R.J., and B.M. Mulhern. 1984. Are anuran amphibians heavy metal accumulators? Pp. 123-133 In R.A. Seigel, L.E. Hunt, J.L. Knight, L. Malaret, and N.L. Zuschlag (eds.), Vertebrate Ecology and Systematics. A Tribute to Henry S. Fitch. Museum of Natural History, University of Kansas, Lawrence, KS.
- Hallowell, E. 1857 ("1856"). Notice of a collection of reptiles from Kansas and Nebraska, presented to the Academy of Natural Sciences by Dr. Hammond. Proceedings of the Academy of Natural Sciences of Philadelphia 8:238-253.
- Hallowell, E. 1859. Explorations and surveys for a railroad route from the Mississippi River to the Pacific Ocean. Report in California for railroad routes to connect with the routes near the 35th and 32d parallels of north latitude, explored by Lieutenant R.S. Williamson, Corps of Topographical Engineers, 1853. Part 4. Zoological Report. No. 1. Report upon reptiles of the route. War Department, Washington, DC. Pp. 1-27 + 10 plates.
- Halverson, M.A., D.K. Skelly, J.M. Kiesecker, and L.K. Freidenburg. 2003. Forest mediated light regime linked to amphibian distribution and performance. Oecologia 134:360-364.
- Halverson, M. A., D. K. Skelly and A. Caccone. 2006. Kin distribution of amphibian larvae in the wild. Molecular Ecology 15:1139-1145.
- Hamer, A.J., and M.J. McDonnell. 2008. Amphibian ecology and conservation in the urbanizing world: a review. Biological Conservation 141:2432-2449.
- Hamilton, H.L. 1941. The biological action of rotenone on freshwater animals. Proceedings of the Iowa Academy of Science 48:467-479.
- Hamilton, W.J. Jr. 1930. Notes on the food of the American Toad. Copeia 1930:45.
- Hamilton, W.J. Jr. 1934. The rate of growth of the toad (*Bufo americanus americanus* Holbrook) under natural conditions. Copeia 1934:88-90.
- Hamilton, W.J. 1948. The food and feeding behavior of the Green Frog, *Rana clamitans* Latreille, in New York State. Copeia 1948:203-207.
- Hamilton, W.J. Jr. 1955. Notes on the ecology of the Oak Toad in Florida. Herpetologica 11:205-210.
- Hamilton, W.J., and J.A. Pollack. 1956. The food of some colubrid snakes from Fort Benning, Georgia. Ecology 37:519-526.
- Hammerson, G.A. 1982. Bullfrog eliminating leopard frogs in Colorado? Herpetological Review 13:115-116.
- Hammerson, G.A. 1999. Amphibians and Reptiles in Colorado. A Colorado Field Guide. 2nd ed. University Press of Colorado, Niwot.
- Hammerson, G.A., and L.J. Livo. 1999. Conservation status of the Northern Cricket Frog (*Acris crepitans*) in Colorado and adjacent areas at the northwestern extent of the range. Herpetological Review 30:78-80.
- Hammond, J. I., D. K. Jones, P. R. Stephens and R. A. Relyea. 2012. Phylogeny meets ecotoxicology: Evolutionary patterns in sensitivity to a common insecticide among North American amphibians. Evolutionary Applications 5:593-606.
- Hampton, S.H., and E.P. Volpe. 1963. Development and interpopulation variability of the mouthparts of *Scaphiopus holbrookii*. American Midland Naturalist 70:319-328.
- Han, B.A. 2008. The effects of an emerging pathogen on amphibian host behaviors and interactions. Ph.D. diss., Oregon State University, Corvallis.
- Han, B.A., P.W. Bradley, and A.R. Blaustein. 2008. Ancient behaviors of larval amphibians in response to an emerging fungal pathogen, *Batrachochytrium dendrobatis*. Behavioral Ecology and Sociobiology 63:241-250.
- Han, B.A., C.L. Searle and A.R. Blaustein. 2011. Effects of an infectious fungus, *Batrachochytrium dendrobatis*, on amphibian predator-prey interactions. PLoS One 6(2): e16675.
- Hankinson, T. L. 1917. Amphibians and reptiles of the Charleston region. Transactions of the Illinois State Academy of Science 10: 322-329.
- Hanlin, H.G., F.D. Martin, L.D. Wike, and S.H. Bennett. 2000. Terrestrial activity, abundance

- and species richness of amphibians in managed forests in South Carolina. *American Midland Naturalist* 143:70-83.
- Hannaca, W.L. 1933. The Frog Industry. Past, Present and Future. Chariton Corporation, Chicago, IL.
- Hannon, S.J., C.A. Paszkowski, S. Boutin, J. DeGroot, S.E. Macdonald, M. Wheatley, and B.R. Eaton. 2002. Abundance and species composition of amphibians, small mammals and songbirds in riparian forest buffer strips of varying widths in the boreal mixedwood of Alberta. *Canadian Journal of Forest Research* 32:1784-1800.
- Hanson, J.A., and J.L. Vial. 1956. Defensive behavior and effects of toxins in *Bufo alvarius*. *Herpetologica* 12:141-149.
- Hansen, K.L. 1957. Movements, area of activity, and growth of *Rana heckscheri*. *Copeia* 1957:274-277.
- Hansen, K.L. 1958. Breeding pattern of the Eastern Spadefoot Toad. *Herpetologica* 14:57-67.
- Harding, J.H. 1997. Amphibians and Reptiles of the Great Lakes Region. University of Michigan Press, Ann Arbor, MI.
- Harding, J.H., and J.A. Holman. 1992. Michigan Frogs, Toads, and Salamanders. A Field Guide and Pocket Reference. Cooperative Extension Service, Michigan State University, East Lansing, MI.
- Hardy, D.G. 1974. Some population dynamics of *Rana pipiens* in an area of southeastern South Dakota. M.S. thesis, University of South Dakota, Vermillion.
- Hardy, J.D. 1953. Notes on the distribution of *Mycrohyla* [sic] *carolinensis* in southern Maryland. *Herpetologica* 8:162-166.
- Hardy, J.D. Jr. 1964a. A new frog, *Rana palustris mansuetii*, subsp. nov. from the Atlantic Coastal Plain. *Chesapeake Science* 5:91-100.
- Hardy, J.D. Jr. 1964b. The spontaneous occurrence of scoliosis in tadpoles of the leopard frog, *Rana pipiens*. *Chesapeake Science* 5:101-102.
- Hardy, J.D. 2009. Eastern Narrow-mouthed Frog *Gastrophryne carolinensis*. *Bulletin of the Maryland Herpetological Society* 45:118-121.
- Hardy, J.D. Jr., and J.H. Gillespie. 1976. Hybridization between *Rana pipiens* and *Rana palustris* in a modified natural environment. *Bulletin of the Maryland Herpetological Society* 12:41-55.
- Hardy, J.D., and R.J. Burroughs. 1986. Systematic status of the spring peeper, *Hyla crucifer* (Amphibia: Hylidae). *Bulletin of the Maryland Herpetological Society* 22:68-89.
- Hardy, L.M. 1995. Checklist of the amphibians and reptiles of the Caddo Lake watershed in Texas and Louisiana. *Bulletin of the Museum of Life Sciences, Louisiana State University in Shreveport*, No. 10.
- Hardy, L.M. 2004. Genus *Syrrhophus* (Anura: Leptodactylidae) in Louisiana. *Southwestern Naturalist* 49:263-266.
- Hardy, L.M., and L.R. Raymond. 1991. Observations on the activity of the Pickerel Frog, *Rana palustris* (Anura: Ranidae), in northern Louisiana. *Journal of Herpetology* 25:220-222.
- Harestad, A.S. 1985. *Scaphiopus intermontanus* (Great Basin Spadefoot Toad). Mortality. *Herpetological Review* 16:24.
- Harfenist, A., T. Power, K.L. Clark and D.B. Peakall. 1989. A review and evaluation of the amphibian toxicological literature. *Canadian Wildlife Service Technical Report Series No. 61*.
- Hargis, S.E., M.-K. Harr, C.J. Henderson, W.J. Kim, and G.R. Smith. 2008. Factors influencing the distribution of overwintered Bullfrog tadpoles (*Rana catesbeiana*) in two small ponds. *Bulletin of the Maryland Herpetological Society* 44:39-41.
- Hargitt, C.W. 1888. Recent notes on *Scaphiopus holbrookii*. *American Naturalist* 22:535-537.
- Harima, H. 1969. A survey of the herpetofauna of northwestern Florida. M.S. thesis, University of Alabama, Tuscaloosa.
- Harkey, G.A., and R.D. Semlitsch. 1988. Effects of temperature on growth, development, and color polymorphism in the Ornate Chorus Frog *Pseudacris ornata*. *Copeia* 1988:1001-1007.
- Harlan, R. 1826. Descriptions of several new species of batrachian reptiles with observations on the larvae of frogs. *American Journal of Science and Arts* 10:53-66.
- Harlan, R. 1835. Medical and Physical Researches, Philadelphia. Lydia R. Bailey, Philadelphia.
- Harless, M.L., C.J. Huckins, J.B. Grant and T.G. Pypker. 2011. Effects of six chemical deicers on larval Wood Frogs (*Rana sylvatica*). *Environmental Toxicology and Chemistry* 30:1637-1641.
- Harner, M.J., A.J. Nelson, K. Geluso and D.M. Simon. 2011. Chytrid fungus in American Bullfrogs (*Lithobates catesbeianus*) along the

- Platte River, Nebraska, USA. Herpetological Review 42:549-551.
- Harper, E.B. 2007. The role of terrestrial habitat in the population dynamics and conservation of pond breeding amphibians. Ph.D. diss., University of Missouri, Columbia.
- Harper, E.B., and R.D. Semlitsch. 2007. Density-dependence in the terrestrial life history stage of two anurans. *Oecologia* 153: 879-889.
- Harper, E.B., T.A.G. Rittenhouse, and R.D. Semlitsch. 2008. Demographic consequences of terrestrial habitat loss for pool-breeding amphibians: predicting extinction risks associated with inadequate size of buffer zones. *Conservation Biology* 22:1205-1215.
- Harper, F. 1931a. Amphibians and reptiles of the Athabasca and Great Slave Lakes region. *Canadian Field-Naturalist* 45:68-70.
- Harper, F. 1931b. Notes on two Georgia species of *Pseudacris*. *Copeia*. 1931:159-161.
- Harper, F. 1932. A voice from the pines. *Natural History* 32:280-288.
- Harper, F. 1933. A tree-frog new to the Atlantic Coastal Plain. *Journal of the Elisha Mitchell Scientific Society* 48:228-231.
- Harper, F. 1935a. Records of amphibians in the southeastern states. *American Midland Naturalist* 16:275-310.
- Harper, F. 1935b. The name of the Gopher Frog. *Proceedings of the Biological Society of Washington* 48:79-82.
- Harper, F. 1937. A season with Holbrook's Chorus Frog (*Pseudacris ornata*). *American Midland Naturalist* 18:260-272.
- Harper, F. 1939a. A southern subspecies of the spring peeper (*Hyla crucifera*). *Notulae Naturae* 27:1-4.
- Harper, F. 1939b. Distribution, taxonomy, nomenclature, and habits of the little tree-frog (*Hyla ocularis*). *American Midland Naturalist* 22:134-149.
- Harper, F. 1947. A new cricket frog (*Acris*) from the middle western states. *Proceedings of the Biological Society of Washington* 60:39-40.
- Harper, F. 1955. A new chorus frog (*Pseudacris*) from the eastern United States. *Natural History Miscellanea* (150):1-6.
- Harper, F. 1956. Amphibians and reptiles of the Ungava Peninsula. *Proceedings of the Biological Society of Washington* 69:93-104.
- Harper, F. 1963. Amphibians and reptiles of Keewatin and northern Manitoba. *Proceedings of the Biological Society of Washington* 76:159-168.
- Harris, H.S. Jr. 1968. A survey of albinism in Maryland amphibians and reptiles. *Bulletin of the Maryland Herpetological Society* 4:57-60.
- Harris, H.S. Jr. 1969. Distributional survey: Maryland and the District of Columbia. *Bulletin of the Maryland Herpetological Society* 5:97-161.
- Harris, H.S. Jr. 1975. Distributional survey (Amphibia/Reptilia): Maryland and the District of Columbia. *Bulletin of the Maryland Herpetological Society* 11:73-167.
- Harris, H.S. Jr., and K. Crocetti. 2008. The Eastern Spadefoot Toad, *Scaphiopus holbrookii*, in Maryland. *Bulletin of the Maryland Herpetological Society* 44:107-110.
- Harris, L.D., and C.R. Vickers. 1984. Some faunal community characteristics of cypress ponds and the changes induced by perturbations. Pp. 171-185 In K.C. Ewel and H.T. Odum (eds.), *Cypress Swamps*. University Presses of Florida, Gainesville.
- Harris, M.L., C.A. Bishop, J. Struger, M.R. van den Heuvel, G.J. van der Kraak, D.G. Dixon, B. Ripley, and J.P. Bogart. 1998a. The functional integrity of Northern Leopard Frog (*Rana pipiens*) and Green Frog (*Rana clamitans*) populations in orchard wetlands. 1. Genetics, physiology, and biochemistry of breeding adults and young-of-the-year. *Environmental Toxicology and Chemistry* 17:1338-1350.
- Harris, M.L., C.A. Bishop, J. Struger, B. Ripley, and J.P. Bogart. 1998b. The functional integrity of Northern Leopard Frog (*Rana pipiens*) and Green Frog (*Rana clamitans*) populations in orchard wetlands. 2. Effects of pesticides and eutrophic conditions on early life stage development. *Environmental Toxicology and Chemistry* 17:1351-1363.
- Harris, M.L., L. Chora, C.A. Bishop, and J.P. Bogart. 2000. Species- and age-related differences in susceptibility to pesticide exposure for two amphibians, *Rana pipiens* and *Bufo americanus*. *Bulletin of Environmental Contamination and Toxicology* 64:263-270.
- Harrison, J.R., J.W. Gibbons, D.H. Nelson, and C.L. Abercrombie III. 1979. Status report: amphibians. Pp. 73-78 In D.M. Forsythe, and W.B. Ezell Jr. (eds.), *Proceedings of the First South Carolina Endangered Species Symposium*. South Carolina Wildlife and Marine Resources Department.
- Hartman, F.A. 1906. Food habits of Kansas

- lizards and batrachians. *Transactions of the Kansas Academy of Science* 20:225-229.
- Hasken, J., J.L. Newby, A.M. Grelle, J. Boling, J. Estes, L.K. Garey, T. Wilmes, R. McKee, D. Gomez, T. Jackson, N. Gibson, E. Davinroy, C.E. Montgomery, and M.I. Kelrick. 2009. Evaluation of chytrid infection level in a newly discovered population of *Anaxyrus boreas* in the Rio Grande National Forest, Colorado, USA. *Herpetological Review* 40:426-428.
- Hatch, A.C., and A.R. Blaustein. 2000. Combined effects of UV-B, nitrate, and low pH reduce the survival and activity level of larval Cascades Frogs (*Rana cascadae*). *Archives of Environmental Contamination and Toxicology* 39:494-499.
- Hatch, A.C., and A.R. Blaustein. 2003. Combined effects of UV-B radiation and nitrate fertilizer on larval amphibians. *Ecological Applications* 13:1083-1093.
- Hatch, A.C., L.K. Belden, E. Scheessele, and A.R. Blaustein. 2001. Juvenile amphibians do not avoid potentially lethal levels of urea on soil substrate. *Environmental Toxicology and Chemistry* 20:2328-2335.
- Hausfater, G., H.C. Gerhardt, and G.M. Klump. 1990. Parasites and mate choice in Gray Treefrogs, *Hyla versicolor*. *American Zoologist* 30:299-311.
- Hawkins, C.P., L.J. Gottschalk, and S.S. Brown. 1988. Densities and habitat of Tailed Frog tadpoles in small streams near Mt. St. Helens following the 1980 eruption. *Journal of the North American Benthological Society* 7:246-252.
- Hay, O.P. 1889. Notes on the life-history of *Chorophilus triseriatus*. *American Naturalist* 23:770-774.
- Hay, O.P. 1892. The batrachians and reptiles of the State of Indiana. Indiana Department of Geology and Natural Resources, Seventeenth Annual Report, Indianapolis. Pp. 409-609.
- Hay, R. 1998. Blanchard's cricket frogs in Wisconsin: a status report. Pp. 79-83 In M.J. Lannoo (ed.), *Status & Conservation of Midwestern Amphibians*. University of Iowa Press, Iowa City.
- Hayes, F.E. 1989. Antipredator behavior of recently metamorphosed toads (*Bufo americanus*) during encounters with garter snakes (*Thamnophis s. sirtalis*). *Copeia* 1989:1011-1015.
- Hayes, M.P., and F.S. Cliff. 1982. A checklist of the herpetofauna of Butte County, the Butte Sink, and Sutter Buttes, California. *Herpetological Review* 13:85-87.
- Hayes, M.P., and M.M. Miyamoto. 1984. Biochemical, behavioral and body size differences between the Red-legged Frogs, *Rana aurora aurora* and *Rana aurora draytonii*. *Copeia* 1984:1018-1022.
- Hayes, M.P., and M.R. Tennant. 1985. Diet and feeding behavior of the California Red-legged Frog, *Rana aurora draytonii* (Ranidae). *Southwestern Naturalist* 30:601-605.
- Hayes, M.P., and M.R. Jennings. 1986. Decline of ranid frog species in western North America: are Bullfrogs (*Rana catesbeiana*) responsible? *Journal of Herpetology* 20:490-509.
- Hayes, M.P., and D.M. Kremples. 1986. Vocal sac variation among frogs of the genus *Rana* from western North America. *Copeia* 1986:927-936.
- Hayes, M.P., and M.R. Jennings. 1988. Habitat correlates of distribution of the California Red-legged Frog (*Rana aurora draytonii*) and the foothill Yellow-legged Frog (*Rana boylii*): implications for management. Pp. 144-158 In R.C. Szaro, K.E. Severson, and D.R. Patton (eds.), *Management of Amphibians, Reptiles, and Small Mammals in North America*. USDA Forest Service General and Technical Report RM-166.
- Hayes, M.P., and C.B. Hayes. 2003. *Rana aurora aurora* (Northern Red-legged Frog). Juvenile growth. Male size at maturity. *Herpetological Review* 34:233-234.
- Hayes, M.P., and C.B. Hayes. 2004. *Bufo boreas boreas* (Boreal Toad). Scats and behavior. *Herpetological Review* 35:369-370.
- Hayes, M.P., C.A. Pearl, and C.J. Rombough. 2001. *Rana aurora aurora* (Northern Red-legged Frog). Movement. *Herpetological Review* 32:35-36.
- Hayes, M.P., J.D. Engler, and C.J. Rombough. 2006a. *Rana pretiosa* (Oregon Spotted Frog). Predation. *Herpetological Review* 37:209-210.
- Hayes, M.P., M.R. Jennings, and G.B. Rathbun. 2006b. *Rana draytonii* (California Red-legged Frog). Prey. *Herpetological Review* 37:449.
- Hayes, M.P., T. Quinn, D.J. Dugger, T.L. Hicks, M.A. Melchior, and D.E. Runde. 2006c. Dispersion of Coastal Tailed Frog (*Ascaphus truei*): an hypothesis relating occurrence of frogs in non-fish-bearing headwater basins to their seasonal movements. *Journal of Herpetology* 40:531-543.

- Hayes, M.P., C.J. Rombough, G.E. Padgett-Flohr, L.A. Hallock, J.E. Johnson, R.S. Wagner, and J.D. Engler. 2009. Amphibian chytridiomycosis in the Oregon spotted frog (*Rana pretiosa*) in Washington state, USA. *Northwestern Naturalist* 90:148-151.
- Hayes, T.B. 2004. There is no denying this: defusing the confusion about atrazine. *Bioscience* 54:1138-1149.
- Hayes, T.B., K. Haston, M. Tsui, A. Hoang, C. Haeffele, and A. Vonk. 2002. Feminization of male frogs in the wild. *Nature* 419:895-896.
- Hayes, T., K. Haston, M. Tsui, A. Hoang, C. Haeffele, and A. Vonk. 2003. Atrazine-induced hermaphroditism at 0.1 ppb in American leopard frogs (*Rana pipiens*): laboratory and field evidence. *Environmental Health Perspectives* 111:568-575.
- Hayes, T.B., P. Falso, S. Gallipeau, and M. Stice. 2010. The cause of global amphibian declines: a developmental endocrinologist's perspective. *Journal of Experimental Biology* 213:921-933.
- Hayes-Odum, L.A. 1990. Observations on reproduction and embryonic development in *Syrrhophus cystignathoides campi* (Anura: Leptodactylidae). *Southwestern Naturalist* 35:358-361.
- Haynes, C.M., and S.D. Aird. 1981. The distribution and habitat requirements of the Wood Frog (Ranidae: *Rana sylvatica* Le Conte) in Colorado. *Colorado Division of Wildlife, Special Report* 50, Fort Collins.
- Hays, M.R. 1955. Ultragulosity in the frog *Rana aurora draytoni*. *Herpetologica* 11:153.
- Heard, M. 1904. A California frog ranch. *Out West* 21:20-27.
- Heath, D.R., D.A. Saugey, and G.A. Heidt. 1986. Abandoned mine fauna of the Ouachita Mountains, Arkansas: vertebrate taxa. *Proceedings of the Arkansas Academy of Science* 40:33-36.
- Heatwole, H. 1961. Habitat selection and activity of the Wood Frog, *Rana sylvatica* Le Conte. *American Midland Naturalist* 66:301-313.
- Heatwole, H., N. Poran, and P. King. 1999. Ontogenetic changes in the resistance of Bullfrogs (*Rana catesbeiana*) to the venom of copperheads (*Agkistrodon contortrix contortrix*) and cottonmouths (*Agkistrodon piscivorus piscivorus*). *Copeia* 1999:808-814.
- Hebard, W.B., and R.B. Brunson. 1963. Hind limb anomalies of a western Montana population of the Pacific Tree Frog, *Hyla regilla* Baird and Girard. *Copeia* 1963:570-572.
- Hecht, M.K., and B.L. Matalas. 1946. A review of middle North American toads of the genus *Microhyla*. *American Museum Novitates* 1315:1-21.
- Hecht-Kardasz, K.A. 2012. Geographic distribution: *Eleutherodactylus planirostris* (Greenhouse Frog). *Herpetological Review* 43:613.
- Hecnar, S.J. 1995. Acute and chronic toxicity of ammonium nitrate fertilizer to amphibians from southern Ontario. *Environmental Toxicology and Chemistry* 14:2131-2137.
- Hecnar, S.J. 1997. Amphibian pond communities in southwestern Ontario. *SSAR Herpetological Conservation* 1:1-15.
- Hecnar, S.J., and R.T. M'Closkey. 1996a. Regional dynamics and the status of amphibians. *Ecology* 77:2091-2097.
- Hecnar, S.J., and R.T. M'Closkey. 1996b. Amphibian species richness and distribution in relation to pond water chemistry in southwestern Ontario, Canada. *Freshwater Biology* 36:7-15.
- Hecnar, S.J., and R.T. M'Closkey. 1997a. Patterns of nestedness and species association in a pond-dwelling amphibian fauna. *Oikos* 80:371-381.
- Hecnar, S.J., and R.T. M'Closkey. 1997b. The effects of predatory fish on amphibian species richness and distribution. *Biological Conservation* 79:123-131.
- Hecnar, S.J., and R.T. M'Closkey. 1997c. Changes in the composition of a ranid frog community following Bullfrog extinction. *American Midland Naturalist* 137:145-150.
- Hecnar, S.J., and R.T. M'Closkey. 1998. Species richness patterns of amphibians in southwestern Ontario ponds. *Journal of Biogeography* 25:763-772.
- Hecnar, S.J., G.S. Casper, R.W. Russell, D.R. Hecnar, and J.N. Robinson. 2002. Nested species assemblages of amphibians and reptiles on islands in the Laurentian Great Lakes. *Journal of Biogeography* 29:475-489.
- Hedeen, S.E. 1967. Feeding behavior of the great blue heron in Itasca State Park, Minnesota. *Loon* 39:116-120.
- Hedeen, S.E. 1971. Growth of the tadpoles of the Mink Frog, *Rana septentrionalis*. *Herpetologica* 27:160-165.
- Hedeen, S.E. 1972a. Postmetamorphic growth and reproduction of the Mink Frog, *Rana septentrionalis* Baird. *Copeia* 1972:169-175.

- Hedeen, S.E. 1972b. Escape behavior and causes of death of the Mink Frog, *Rana septentrionalis*. *Herpetologica* 28:261-262.
- Hedeen, S.E. 1972c. Food and feeding behavior of the Mink Frog, *Rana septentrionalis* Baird, in Minnesota. *American Midland Naturalist* 88:291-300.
- Hedeen, S.E. 1976. Scoliosis and hydrops in a *Rana catesbeiana* (Amphibia, Anura, Ranidae) tadpole population. *Journal of Herpetology* 10:261-262.
- Hedeen, S.E. 1986. The southern geographic limit of the Mink Frog, *Rana septentrionalis*. *Copeia* 1986:239-244.
- Hedges, S.B. 1986. An electrophoretic analysis of Holarctic hylid frog evolution. *Systematic Zoology* 35:1-21.
- Hedges, S.B. 1989. Evolution and biogeography of West Indian frogs of the genus *Eleutherodactylus*: slow-evolving loci and the major groups. Pp. 305-370 In C.A. Woods (ed.), *Biogeography of the West Indies. Past, Present, and Future*. Sandhill Crane Press, Gainesville, FL.
- Hedges, S.B., W.E. Duellman, and M.P. Heinicke. 2008. New World direct-developing frogs (Anura: Terrarana): molecular phylogeny, classification, biogeography, and conservation. *Zootaxa* 1737:1-182.
- Hedtke, S.F., and F.A. Puglisi. 1982. Short-term toxicity of five oils to four freshwater species. *Archives of Environmental Contamination and Toxicology* 11:425-430.
- Heemeyer, J.L. 2011. Breeding migrations, survivorship, and obligate crayfish burrow use by adult Crawfish Frogs (*Lithobates areolatus*). M.S. thesis, Indiana State University, Terre Haute, IN.
- Heemeyer, J.L., and M.J. Lannoo. 2011. *Lithobates areolatus circulosus* (Northern Crawfish Frog). Winterkill. *Herpetological Review* 42:261-262.
- Heemeyer, J.L., and M.J. Lannoo. 2012. Breeding migrations in Crawfish Frogs (*Lithobates areolatus*): long-distance movements, burrow philopatry, and mortality in a near-threatened species. *Copeia* 2012:440-450.
- Heemeyer, J.L., J.G. Palis, and M.J. Lannoo. 2010. *Lithobates areolatus circulosus* (Northern Crawfish Frog). Predation. *Herpetological Review* 41:475.
- Heemeyer, J.L., P.J. Williams and M.J. Lannoo. 2012. Obligate crayfish burrow use and core habitat requirements of Crawfish Frogs. *Journal of Wildlife Management* 76:1081-1091.
- Hefleck, S.K. 2001. Ecology of the exotic Cuban tree frog, *Osteopilus septentrionalis*, within Brevard County, Florida. M.S. thesis, Florida Institute of Technology, Melbourne.
- Heinen, J.T. 1993. Aggregations of newly metamorphosed *Bufo americanus*: tests of two hypotheses. *Canadian Journal of Zoology* 71:334-338.
- Heinen, J.T. 1994. Antipredator behavior of newly metamorphosed American Toads (*Bufo a. americanus*), and mechanisms of hunting by Eastern Garter Snakes (*Thamnophis s. sirtalis*). *Herpetologica* 50:137-145.
- Heinen, J.T. 1995. Predator cues and prey responses: a test using eastern garter snakes (*Thamnophis s. sirtalis*) and American Toads (*Bufo a. americanus*). *Copeia* 1995:738-741.
- Heinen, J.T., and G. Hammond. 1997. Antipredator behaviors of newly metamorphosed Green Frogs (*Rana clamitans*) and Leopard Frogs (*R. pipiens*) in encounters with eastern garter snakes (*Thamnophis s. sirtalis*). *American Midland Naturalist* 137:136-144.
- Heinicke, M.P., W.E. Duellman, and S.B. Hedges. 2007. Major Caribbean and Central American frog faunas originated by ancient oceanic dispersal. *Proceedings of the National Academy of Sciences, USA* 104:10092-10097.
- Heinrich, M.L. 1985. *Pseudacris triseriata triseriata* (Western Chorus Frog). Reproduction. *Herpetological Review* 16:24.
- Heinrich, M.L., and D.W. Kaufman. 1985. Herpetofauna of the Konza Prairie Research Natural Area. *Prairie Naturalist* 17:101-112.
- Hekkala, E.R., R.A. Saumure, J.R. Jaeger, H.-W. Herrman, M.J. Sredl, D.F. Bradford, D. Drabeck, and M.J. Blum. 2011. Resurrecting an extinct species: archival DNA, taxonomy, and conservation of the Vegas Valley Leopard Frog. *Conservation Genetics* 12:1379-1385.
- Helbing, C.C., K. Ovaska, and L. Ji. 2006. Evaluation of the effect of acetochlor on thyroid hormone receptor gene expression in the brain and behavior of *Rana catesbeiana* tadpoles. *Aquatic Toxicology* 80:42-51.
- Helgen, J. 2012. *Peril in the Ponds*. University of Massachusetts Press, Amherst.
- Helgen, J.C., R.G. McKinnell, and M.C. Gernes. 1998. Investigation of malformed Northern Leopard frogs in Minnesota. Pp. 288-297 In

- M.J. Lannoo (ed.), Status & Conservation of Midwestern Amphibians. University of Iowa Press, Iowa City.
- Helgen, J.C., M.C. Gernes, S.M. Kersten, J.W. Chirhart, J.T. Canfield, D. Bowers, J. Haferman, R.G. McKinnell, and D.M. Hoppe. 2000. Field investigations of malformed frogs in Minnesota 1993-97. Journal of the Iowa Academy of Science 107:96-112.
- Heller, J.A. 1927. Brewer's mole as food of the Bullfrog. Copeia (165):116.
- Hellman, R.E. 1953. A comparative study of the eggs and tadpoles of *Hyla phaeocrypta* and *Hyla versicolor* in Florida. Publications of the Research Division, Ross Allen's Reptile Institute 1:61-74.
- Hemesath, L.M. 1998. Iowa's frog and toad survey, 1991-1994. Pp. 206-216 In M.J. Lannoo (ed.), Status & Conservation of Midwestern Amphibians. University of Iowa Press, Iowa City.
- Hemmings, V. 2010. Phylogeography of two closely related anurans, the Relict Leopard Frog (*Rana onca*) and Lowland Leopard Frog (*Rana yavapaiensis*). M.S. thesis, University of Nevada-Las Vegas.
- Henderson, G.G. Jr. 1961. Reproductive potential of *Microhyla olivacea*. Texas Journal of Science 13:355-356.
- Hennig, B.M., and A.J. Remsburg. 2009. Lakeshore vegetation effects on avian and anuran populations. American Midland Naturalist 161:123-133.
- Henning, J.A., and G. Schirato. 2006. Amphibian use of Chehalis River floodplain wetlands. Northwestern Naturalist 87:209-214.
- Henrich, T.W. 1968. Morphological evidence of secondary intergradation between *Bufo hemiophrys* Cope and *Bufo americanus* Holbrook in eastern South Dakota. Herpetologica 24:1-13.
- Henshaw, S. 1904. Fauna of New England. 2. List of the batrachia. Occasional Papers of the Boston Society of Natural History No. 7:1-10.
- Hensley, F.R. 1993. Ontogenetic loss of phenotypic plasticity of age at metamorphosis in tadpoles. Ecology 74:2405-2412.
- Hensley, M. 1959. Albinism in North American amphibians and reptiles. Publications of the Museum, Michigan State University, Biological Series 1:133-159.
- Hernandez, J.P. 2010. Priority effects of overwintered *Rana* tadpoles of larval Southern Toad (*Bufo terrestris* Bonnaterre). M.S. thesis, East Carolina University, Greenville, NC.
- Herreid, C.F. II. 1963. Range extension for *Bufo boreas boreas*. Herpetologica 19:218.
- Herreid, C.F., and S. Kinney. 1966. Survival of Alaskan woodfrog (*Rana sylvatica*) larvae. Ecology 47:1039-1041.
- Herreid, C.F., and S. Kinney. 1967. Temperature and development of the Wood Frog, *Rana sylvatica*, in Alaska. Ecology 48:579-590.
- Herriman, M.W. 1933. Commercial Frog Raising. West Coast Frog Industries, North Hollywood, CA.
- Herrmann, H.L., K.J. Babbitt, M.J. Baber, and R.G. Congalton. 2005. Effects of landscape characteristics on amphibian distribution in a forest-dominated landscape. Biological Conservation 123:139-149.
- Hersikorn, B.D. 2010. In-situ caged Wood Frog (*Rana sylvatica*) survival and development in wetlands formed from oil sands process-affected materials. M.S. thesis, University of Saskatchewan, Saskatoon.
- Hersikorn, B.D., and J.E.G. Smits. 2011. Compromised metamorphosis and thyroid hormone changes in Wood Frogs (*Lithobates sylvaticus*) raised on reclaimed wetlands on the Athabasca oil sands. Environmental Pollution 159:596-601.
- Hersikorn, B.D., J. J.C. Ciborowski and J. E.G. Smits. 2010. The effects of oil sands wetlands on Wood Frogs (*Rana sylvatica*). Toxicology & Environmental Chemistry 92:1513-1527.
- Hewitt, H. 1950. The Bullfrog as a predator on ducklings. Journal of Wildlife Management 14:244.
- Hews, D.K. 1988. Alarm response in larval Western Toads, *Bufo boreas*: release of larval chemicals by a natural predator and its effect on predator capture efficiency. Animal Behaviour 36:125-133.
- Hews, D.K., and A.R. Blaustein. 1985. An investigation of the alarm responses in *Bufo boreas* and *Rana cascadae* tadpoles. Behavioral and Neural Biology 43:47-57.
- Heyer, W.R. 1978. Systematics of the fuscus group of the frog genus *Leptodactylus* (Amphibia, Leptodactylidae). Natural History Museum of Los Angeles County, Science Bulletin 29:1-85.
- Heyer, W.R. 2002. *Leptodactylus fragilis*, the valid name for the Middle American and northern South American White-lipped Frog (Amphibia: Leptodactylidae). Proceedings of the Biological Society of Washington 115:321-

- 322.
- Heymann, M.M. 1975. Reptiles and Amphibians of the American Southwest. Doubleshoe Publishers, Scottsdale, AZ.
- Higginbotham, A.C. 1939. Studies on amphibian activity. 1. Preliminary report on the rhythmic activity of *Bufo americanus americanus* Holbrook and *Bufo fowleri* Hinckley. *Ecology* 20:58-70.
- Higgins, C., and C. Sheard. 1926. Effects of ultraviolet radiation on the early development of *Rana pipiens*. *Journal of Experimental Zoology* 46:333-343.
- Higgins, S.A. 2011. Analysis of urea and glycerol as cryoprotectants in the Boreal Chorus Frog (*Pseudacris maculata*). M.S. thesis, University of South Dakota, Vermillion.
- Hildebrand, H. 1949. Notes on *Rana sylvatica* in the Labrador Peninsula. *Copeia* 1949:168-172.
- Hildebrand, W.G. 2009a. Barking Treefrog *Hyla gratiosa*. *Bulletin of the Maryland Herpetological Society* 45:81-84.
- Hildebrand, W.G. 2009b. Gray Treefrog. *Bulletin of the Maryland Herpetological Society* 45:85-88.
- Hildebrand, W.G. 2009c. Green Treefrog *Hyla cinerea*. *Bulletin of the Maryland Herpetological Society* 45:89-92.
- Hildebrand, W.G. 2009d. American Toad *Anaxyrus americanus*. *Bulletin of the Maryland Herpetological Society* 45:93-95.
- Hildebrand, W.G. 2009e. Fowler's Toad *Anaxyrus fowleri*. *Bulletin of the Maryland Herpetological Society* 45:96-98.
- Hildebrand, W.G. 2009f. Northern Cricket Frog *Acris crepitans*. *Bulletin of the Maryland Herpetological Society* 45:99-102.
- Hill, R.L., M.G. Levy, E.K. Tempe and J.B. Kaylock. 2011. Additional reports of the amphibian chytrid fungus *Batrachochytrium dendrobatidis* from Georgia, USA. *Herpetological Review* 42:376-378.
- Hillis, D.M. 1981. Premating isolating mechanisms among three species of the *Rana pipiens* complex in Texas and southern Oklahoma. *Copeia* 1981:312-319.
- Hillis, D.M. 1982. Morphological differentiation and adaptation of the larvae of *Rana berlandieri* and *Rana sphenocephala* (*Rana pipiens* complex) in sympatry. *Copeia* 1982:168-174.
- Hillis, D.M. 1988. Systematics of the *Rana pipiens* complex: puzzle and paradigm. *Annual Review of Ecology and Systematics* 19:39-63.
- Hillis, D.M. 2007. Constraints in naming parts of the Tree of Life. *Molecular Phylogenetics and Evolution* 42:331-338.
- Hillis, D.M., and S.K. Davis. 1986. Evolution of ribosomal DNA: fifty million years of recorded history in the frog genus *Rana*. *Evolution* 40:1275-1288.
- Hillis, D.M., and T.P. Wilcox. 2005. Phylogeny of the New World true frogs (*Rana*). *Molecular Phylogenetics and Evolution* 34:299-314.
- Hillis, D.M., J.S. Frost, and D.A. Wright. 1983. Phylogeny and biogeography of the *Rana pipiens* complex: a biochemical evaluation. *Systematic Zoology* 32:132-143.
- Hillis, D.M., A.M. Hillis, and R.F. Martin. 1984. Reproductive ecology and hybridization of the endangered Houston Toad (*Bufo houstonensis*). *Journal of Herpetology* 18:56-72.
- Hillis, D.M., J.T. Collins, and J.P. Bogart. 1987. Distribution of diploid and tetraploid species of Gray Tree Frogs (*Hyla chrysoscelis* and *Hyla versicolor*) in Kansas. *American Midland Naturalist* 117:214-217.
- Hillman, S.S., P.C. Withers, R.C. Drewes, and S.D. Hillyard. 2009. *Ecological and Environmental Physiology of Amphibians*. Oxford University Press, Oxford.
- Himes, J.G., and T.W. Bryan. 1998. Geographic distribution, *Bufo americanus charlesmithi* (Dwarf American Toad). *Herpetological Review* 29:246.
- Himmelman, J. 2006. *Discovering Amphibians. Frogs and Salamanders of the Northeast*. Down East Books, Camden, ME.
- Hinckley, M.H. 1880. Notes on eggs and tadpoles of *Hyla versicolor*. *Proceedings of the Boston Society of Natural History* 21:104-107.
- Hinckley, M.H. 1881. On some differences in the mouth structure of tadpoles of the anourous batrachians found in Milton, Mass. *Proceedings of the Boston Society of Natural History* 21:307-315.
- Hinckley, M.H. 1882. Notes on the development of *Rana sylvatica* LeConte. *Proceedings of the Boston Society of Natural History* 22:85-95.
- Hinckley, M.H. 1884. Notes on the Peeping Frog, *Hyla pickeringii*, Leconte. *Memoirs of the Boston Society of Natural History* 3:311-318.
- Hine, J.S. 1911. Beneficial habits of snakes, toads and related animals. *The Agricultural College Extension Bulletin, The Ohio State University* 6(7):3-14.

- Hine, R.L., B.L. Les, and B.F. Hellmich. 1981. Leopard frog populations and mortality in Wisconsin, 1974-1976. Wisconsin Department of Natural Resources, Technical Bulletin No. 122.
- Hinshaw, S.H., and B.K. Sullivan. 1990. Predation on *Hyla versicolor* and *Pseudacris crucifer* during reproduction. Journal of Herpetology 24:196-197.
- Hinther, A., T.M. Edwards, L.J. Guillette, and C.C. Helbing. 2012. Influence of nitrate and nitrite on thyroid hormone responsive and stress-associated gene expression in cultured *Rana catesbeiana* tadpole tail fin tissue. Frontiers in Genetics doi: 10.3389/fgene.2012.00051.
- Hird, D.W., S.L. Diesch, R.G. McKinnell, E. Gorham, F.B. Martin, S.W. Kurtz, and C. Dubrovolny. 1981. *Aeromonas hydrophila* in wild-caught frogs and tadpoles (*Rana pipiens*). Laboratory Animal Science 31:166-169.
- Hird, D.W., S.L. Dietsch, R.G. McKinnell, E. Gorham, F.B. Martin, C.A. Meadows, and M. Gasiorowski. 1983. Enterobacteriaceae and *Aeromonas hydrophila* in Minnesota frogs and tadpoles (*Rana pipiens*). Applied and Environmental Microbiology 46:1423-1425.
- Hirschfeld, C.J., and J.T. Collins. 1961. Notes on Ohio herpetology. Journal of the Ohio Herpetological Society 3:1-4.
- Hirschfield, S.E. 1969. Vertebrate fauna of Nichol's Hammock, a natural trap. Quarterly Journal of the Florida Academy of Science 31:177-189.
- Hisaka, K.K., and J.C. List. 1957. The spontaneous occurrence of scoliosis in larvae of *Rana sylvatica*. Transactions of the American Microscopical Society 76:381-387.
- Höbel, G. 2011. *Hyla cinerea* (Green Treefrog). Cannibalism and defensive posture. Herpetological Review 42:85-86.
- Höbel, G., and A. Slocum. 2010. *Hyla cinerea* (Green Treefrog). Morphology. Herpetological Review 41:335-336.
- Hoberg, T., and C. Gause. 1992. Reptiles & amphibians of North Dakota. North Dakota Outdoors 55(1):7-19.
- Hobson, C.S., and E.C. Moriarty. 2003. Geographic distribution. *Pseudacris nigrita nigrita*. Herpetological Review 34:259-260.
- Hobson, J.A. 1966. Electrographic correlates of behavior in the frog with special reference to sleep. Electroencephalography and Clinical Neurophysiology 22:113-121.
- Hobson, J.A., C.J. Goin, and O.B. Goin. 1967. Sleep behavior of frogs. Quarterly Journal of the Florida Academy of Sciences 30:184-186.
- Hock, R. 1957. Alaskan zoogeography and Alaskan amphibia. Proceedings of the Fourth Alaskan Science Conference 1953, pp. 201-206. Privately Published, Fairbanks.
- Hocking, D.J., and R.D. Semlitsch. 2007. Effects of timber harvest on breeding-site selection by Gray Treefrogs (*Hyla versicolor*). Biological Conservation 138:506-513.
- Hocking, D.J., and R.D. Semlitsch. 2008. Effects of forest management treatments on Gray Treefrog (*Hyla versicolor*) tadpole performance. Journal of Herpetology 42:689-698.
- Hocking, D.J., T.A.G. Rittenhouse, B.B. Rothermel, J.R. Johnson, C.A. Conner, E.B. Harper, and R.D. Semlitsch. 2008. Breeding and recruitment phenology of amphibians in Missouri oak-hickory woodlands. American Midland Naturalist 160:41-60.
- Hodge, R.P. 1976. Amphibians & Reptiles in Alaska, the Yukon & Northwest Territories. Alaska Northwest Publishing Co., Anchorage.
- Hoff, J.G., and S.A. Moss. 1974. A distress call in the bullfrog, *Rana catesbeiana*. Copeia 1974:533-534.
- Hoffman, A.S., J.L. Heemeyer, P.J. Williams, J.R. Robb, D.R. Karns, V.C. Kinney, N.J. Engbrecht, and M.J. Lannoo. 2010. Strong site fidelity and a variety of imaging techniques reveal around-the-clock and extended activity patterns in Crawfish Frogs (*Lithobates areolatus*). Bioscience 60:829-834.
- Hoffman, E.A., and M.S. Blouin. 2004. Evolutionary history of the Northern Leopard Frog: reconstruction of phylogeny, phylogeography, and historical changes in population demography from mitochondrial DNA. Evolution 58:145-159.
- Hoffman, E.A., F.W. Schueler, and M.S. Blouin. 2004. Effective population sizes and temporal stability of genetic structure in *Rana pipiens*, the Northern Leopard Frog. Evolution 58:2536-2545.
- Hoffman, K.E. 2007. Testing the influence of Cuban Treefrogs (*Osteopilus septentrionalis*) on native treefrog detection and abundance. M.S. thesis, University of Florida, Gainesville.
- Hoffman, K.E., S.A. Johnson, and M.E. McGarrity. 2009. Interspecific variation in use of polyvinyl chloride (PVC) pipe refuges by hylid treefrogs: a potential source of capture

- bias. *Herpetological Review* 40:423-426.
- Hoffman, N. 2003. Frog fence along Vermont Rt. 2 in Sandbar Wildlife Management Area. Collaboration between Vermont Agency of Transportation and Vermont Agency of Natural Resources. International Conference on Ecology and Transportation 2003 Proceedings, pp. 431-432.
- Hoffman, R.L. 1946. The voice of *Hyla versicolor* in Virginia. *Herpetologica* 3:141-142.
- Hoffman, R.L. 1955. On the occurrence of two species of hylid frogs in Virginia. *Herpetologica* 11:30-32.
- Hoffman, R.L. 1981. On the occurrence of *Pseudacris brachyphona* (Cope) in Virginia. *Catesbeiana* 1:9-13.
- Hoffman, R.L. 1996. *Hyla chrysoscelis* also crosses the Blue Ridge: sic juvat transcendere montes. *Catesbeiana* 16:3-8.
- Hokit, D.G., and A.R. Blaustein. 1994. The effects of kinship on growth and development in tadpoles of *Rana cascadae*. *Evolution* 48:1383-1388.
- Hokit, D.G., and A.R. Blaustein. 1997. The effects of kinship on interactions between tadpoles of *Rana cascadae*. *Ecology* 78:1722-1735.
- Hokit, D.G., and A. Brown. 2006. Distribution patterns of Wood Frogs (*Rana sylvatica*) in Denali National Park. *Northwestern Naturalist* 87:128-137.
- Holbrook, J.E. 1836. North American Herpetology. 1st ed. Vol. 1. J. Dobson and Son, Philadelphia, PA.
- Holbrook, J.E. 1840. North American Herpetology. 1st ed. Vol. 4. J. Dobson and Son, Philadelphia, PA.
- Holbrook, J.E. 1842. North American Herpetology, or a Description of the Reptiles Inhabiting the United States. 2nd ed., Vol. 4. J. Dobson and Son, Philadelphia, PA.
- Holland, A.A. 2002. Evaluating Boreal Toad (*Bufo boreas*) breeding habitat suitability. M.S. thesis, Colorado State University, Fort Collins.
- Holland, A.A., K.R. Wilson, and M.S. Jones. 2006. Characteristics of Boreal Toad (*Bufo boreas*) breeding habitat in Colorado. *Herpetological Review* 37:157-159.
- Holland, M. P., D. K. Skelly, M. Kashgarian, S. R. Bolden, L. M. Harrison and M. Cappello. 2007. Echinostome infection in Green Frogs (*Rana clamitans*) is stage and age dependent. *Journal of Zoology* 271:455-462.
- Hollenbeck, R.R. 1974. Growth rates and movements within a population of *Rana pretiosa pretiosa* Baird and Girard in south central Montana. Ph.D. diss., Montana State University, Bozeman, MT.
- Hollis, D.M. 1998. Acoustic Relationships of the Western Toad, *Bufo boreas*, and the Yosemite Toad, *Bufo canorus*: vocalization and Its role in natural hybridization. M.S. thesis, Fresno State University, Fresno, CA.
- Hollis, P. 1972. A survey of the parasites of the Bullfrog, *Rana catesbeiana* Shaw, in central east Texas. *Southwestern Naturalist* 17:198-200.
- Holloway, A.K., D.C. Canatella, H.C. Gerhardt, and D.M. Hillis. 2006. Polyploids with different origins and ancestors form a single sexual polyploid species. *American Naturalist* 167:E88-E101.
- Holman, J.A. 1957. Bullfrog predation on the Eastern Spadefoot, *Scaphiopus holbrookii*. *Copeia* 1957:229.
- Holman, J.A. 1967. Additional Miocene anurans from Florida. *Quarterly Journal of the Florida Academy of Science* 30:121-140.
- Holman, J.A. 1969. The Pleistocene amphibians and reptiles of Texas. *Publications of the Museum, Michigan State University, Biological Series* 4:161-192.
- Holman, J.A. 2003. Fossil Frogs and Toads of North America. Indiana University Press, Bloomington.
- Holman, J.A. 2012. The Amphibians and Reptiles of Michigan. Wayne State University Press, Detroit.
- Holman, J.A., H.O. Jackson, and W.H. Hill. 1964. *Pseudacris streckeri illinoensis* Smith from extreme southern Illinois. *Herpetologica* 20:205.
- Holomuzki, J.R. 1995. Oviposition sites and fish-deterrant mechanisms of two stream anurans. *Copeia* 1995:607-613.
- Holomuzki, J.R., and N. Hemphill. 1996. Snail-tadpole interactions in streamside pools. *American Midland Naturalist* 136:315-327.
- Holzapfel, R.A. 1935. The cyclic character of hibernation of frogs. Ph.D. diss., University of Oklahoma, Norman.
- Holzapfel, R.A. 1937. Cyclic character of hibernation of frogs. *Quarterly Review of Biology* 12:65-84.
- Holzman, N., and J.J. McManus. 1973. Effects of acclimation on metabolic rate and thermal tolerance in the carpenter frog, *Rana*

- vergatipes* [sic]. Comparative Biochemistry and Physiology 45A:833-842.
- Holzwart, J., and K.D. Hall. 1984. The absence of glycerol in the hibernating American Toad (*Bufo americanus*). Bios 55:31-36.
- Homan, R.N., B.S. Windmiller, and J.M. Reid. 2004. Critical thresholds associated with habitat loss for two vernal pool-breeding amphibians. Ecological Applications 14:1547-1553.
- Hoopes, I. 1930. *Bufo* in New England. Bulletin of the Boston Society of Natural History 57:13-20.
- Hoopes, I. 1938. Do you know the Mink Frog? New England Naturalist 1:4-6.
- Hopey, M.E., and J.W. Petranka. 1994. Restriction of Wood Frogs to fish-free habitats: how important is adult choice versus direct predation? Copeia 1994:1023-1025.
- Hopkins, W.A., M.T. Mendonca, and J.D. Congdon. 1997. Increased circulating levels of testosterone and corticosterone in Southern toads, *Bufo terrestris*, exposed to coal combustion waste. General and Comparative Endocrinology 108:237-246.
- Hopkins, W.A., M.T. Mendonca, C.L. Rowe, and J.D. Congdon. 1998. Elevated trace element concentrations in Southern toads, *Bufo terrestris*, exposed to coal combustion waste. Archives of Environmental Contamination and Toxicology 35:325-329.
- Hopkins, W.A., J.K. Ray, and J.D. Congdon. 2000. Incidence and impact of axial malformations in Bullfrog larvae (*Rana catesbeiana*) developing in sites polluted by a coal burning power plant. Environmental Toxicology and Contamination 19:862-868.
- Hopkins, W.A., S.E. DuRant, B.P. Staub, C.L. Rowe and B.P. Jackson. 2006. Reproduction, embryonic development, and maternal transfer of contaminants in the amphibian *Gastrophryne carolinensis*. Environmental Health Perspectives 114:661-666.
- Hoppe, D.M. 1975. Selection pressures affecting color polymorphism in montane populations of the Boreal Chorus Frog, *Pseudacris triseriata*. Ph.D. diss., Colorado State University, Ft. Collins.
- Hoppe, D.M. 1978. Thermal tolerance in tadpoles of the Chorus Frog *Pseudacris triseriata*. Herpetologica 34:318-321.
- Hoppe, D.M. 1981. Chorus frogs and their colors. Pp. 7-8 In L. Ewell, K. Cram, and C. Johnson (eds.), Ecology of Reptiles and Amphibians in Minnesota. Proceedings of a Symposium. Bald Eagle Outdoor Learning Center, Cass Lake, MN.
- Hoppe, D.M. 2000. History of Minnesota frog abnormalities: do recent findings represent a new phenomenon? Journal of the Iowa Academy of Science 107:86-89.
- Hoppe, D.M. 2005. Malformed frogs in Minnesota: history and interspecific differences. Pp. 103-108 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Hoppe, D.M., and D. Pettus. 1984. Developmental features influencing color polymorphism in chorus frogs. Journal of Herpetology 18:113-120.
- Hoppe, D.M., and R.G. McKinnell. 1997. Observations on the status of Minnesota leopard frog populations. Pp. 38-42 In J.J. Moriarty and D. Jones (eds.), Minnesota's Amphibians and Reptiles. Their Conservation and Status. Minnesota Herpetological Society, Serpent's Tale Natural History Book Distributors, Lanesboro, MN.
- Horn, S., J.L. Hanula, M.D. Ulyshen, and J.C. Kilgo. 2005. Abundance of Green Tree Frogs and insects in artificial canopy gaps in a bottomland hardwood forest. American Midland Naturalist 153:321-326.
- Horne, M.T., and W.A. Dunson. 1995a. Effects of low pH, metals, and water hardness on larval amphibians. Archives of Environmental Contamination and Toxicology 29:500-505.
- Horne, M.T., and W.A. Dunson. 1995b. The interactive effects of low pH, toxic metals, and DOC on a simulated temporary pond community. Environmental Pollution 89:155-161.
- Hossack, B.R. 2006. *Rana luteiventris* (Columbia Spotted Frog). Reproduction. Herpetological Review 37:208-209.
- Hossack, B.R. 2011. Interactive effects of wildfire and disturbance history on amphibians and their parasites. Ph.D. diss., University of Montana, Missoula.
- Hossack, B.R., and P.S. Corn. 2007a. Wildfire effects on water temperature and selection of breeding sites by the Boreal Toad (*Bufo boreas*) in seasonal wetlands. Herpetological Conservation and Biology 3:46-54.
- Hossack, B.R., and P.S. Corn. 2007b. Responses of pond-breeding amphibians to wildfire: short-term patterns in occupancy and

- colonization. *Ecological Applications* 17:1403-1410.
- Hossack, B.R., P.S. Corn, and D.S. Pilliod. 2005. Lack of significant changes in the herpetofauna of Theodore Roosevelt National Park, North Dakota, since the 1920s. *American Midland Naturalist* 154:423-432.
- Hossack, B.R., S.A. Diamond, and P.S. Corn. 2006a. Distribution of boreal toad populations in relation to estimated UV-B dose in Glacier National Park, Montana, USA. *Canadian Journal of Zoology* 84:98-107.
- Hossack, B.R., P.S. Corn, and D.B. Fagre. 2006b. Divergent patterns of abundance and age-class structure of headwater stream tadpoles in burned and unburned watersheds. *Canadian Journal of Zoology* 84:1482-1488.
- Hossack, B.R., W.H. Lowe and P.S. Corn. 2013. Rapid increases and time-lagged declines in amphibian occupancy after wildfire. *Conservation Biology* 27:219 - 228.
- Hothem, R.L., M.R. Jennings, and J.J. Crayon. 2010. Mercury contamination in three species of anuran amphibians from the Cache Creek watershed, California, USA. *Environmental Monitoring Assessment* 163:433-448.
- Houck, W.J., and C. Henderson. 1953. A multiple appendage anomaly in the tadpole of *Rana catesbeiana*. *Herpetologica* 9:76-77.
- Houser, H.L. Jr., and D.A. Sutton. 1969. Morphologic and karyotypic differentiation of the California frogs *Rana muscosa* and *R. boylii*. *Copeia* 1969:184-188.
- Hoverman, J. T., and R. A. Relyea. 2008. Temporal variation in predation risk: A mechanism underlying priority effects. *Oikos* 117:23-32.
- Hoverman, J.T., M.J. Gray, and D.L. Miller. 2010. Anuran susceptibilities to ranaviruses: role of species identity, exposure route, and a novel virus isolate. *Diseases of Aquatic Organisms* 89:97-107.
- Hoverman, J. T., M. J. Gray, N. A. Haislip, and D. L. Miller. 2011. Phylogeny, life history, and ecology contribute to differences in amphibian susceptibility to ranaviruses. *EcoHealth* 8:301-319.
- Hoverman, J. T., M. J. Gray, D. L. Miller and N. A. Haislip. 2012. Widespread occurrence of ranavirus in pond-breeding amphibian populations. *EcoHealth* 9:36-48.
- Hovey, T.E., and E.L. Ervin. 2005. *Pseudacris cadaverina* (California Treefrog). Predation. *Herpetological Review* 36:304-305.
- Hovingh, P. 1993a. Zoogeography and paleozoology of leeches, mollusks, and amphibians in Western Bonneville Basin, Utah, USA. *Journal of Paleolimnology* 9:41-54.
- Hovingh, P. 1993b. Aquatic habitats, life history observations, and zoogeographic considerations of the Spotted Frog (*Rana pretiosa*) in Tule Valley, Utah. *Great Basin Naturalist* 53:168-179.
- Hovingh, P. 1997. Amphibians in the eastern Great Basin (Nevada and Utah, USA): a geographical study with paleozoological models and conservation implications. *Herpetological Natural History* 5:97-134.
- Hovingh, P., B. Benton, and D. Bornholdt. 1985. Aquatic parameters and life history observations of the Great Basin Spadefoot Toad in Utah. *Great Basin Naturalist* 45:22-30.
- Howard, R.D. 1978a. The influence of male-defended oviposition sites on early embryo mortality in Bullfrogs. *Ecology* 59:789-798.
- Howard, R.D. 1978b. The evolution of mating strategies in bullfrogs, *Rana catesbeiana*. *Evolution* 32:850-871.
- Howard, R.D. 1980. Mating behaviour and mating success in Woodfrogs, *Rana sylvatica*. *Animal Behaviour* 28:705-716.
- Howard, R.D. 1981. Sexual dimorphism in bullfrogs. *Ecology* 62:303-310.
- Howard, R.D. 1988a. Sexual selection on male body size and mating behaviour in American toads, *Bufo americanus*. *Animal Behaviour* 36:1796-1808.
- Howard, R.D. 1988b. Reproductive success in two species of anurans. Pp. 99-113 In T.H. Clutton-Brock (ed.), *Reproductive Success. Studies of Individual Variation in Controlling Breeding Systems*. University of Chicago Press, Chicago, IL.
- Howard, R.D., and A.G. Kluge. 1985. Proximate mechanisms of sexual selection in Wood Frogs. *Evolution* 39:260-277.
- Howard, R.D., and J.G. Palmer. 1995. Female choice in *Bufo americanus*: effects of dominant frequency and call order. *Copeia* 1995:212-217.
- Howard, R.D., and J.R. Young. 1998. Individual variation in male vocal traits and female mating preferences in *Bufo americanus*. *Animal Behaviour* 55:1165-1179.
- Howard, R.D., H.H. Whiteman, and T.I. Schueller. 1994. Sexual selection in American Toads: a test of a good-genes hypothesis.

- Evolution 48:1286-1300.
- Howard, W.E. 1950. Birds as Bullfrog food. Copeia 1950:152.
- Howe, C.M., M. Berrill, B.D. Pauli, C.C. Helbring, K. Werry, and N. Veldhoen. 2004. Toxicity of glyphosate-based pesticides to four North American frog species. Environmental Toxicology and Chemistry 23:1928-1938.
- Howe, G.E., R. Gillis, and R.C. Mowbray. 1998. Effect of chemical synergy and larval stage on the toxicity of atrazine and alachlor to amphibian larvae. Environmental Toxicology and Chemistry 17:519-525.
- Howe, R.H. Jr. 1899. North American Wood Frogs. Proceedings of the Boston Society of Natural History 28:369-374.
- Hoyt, D.L. 1960. Mating behavior and eggs of the Plains Spadefoot. Herpetologica 14:57-67.
- Hranitz, J.M. 1989. Ecological and genetic variation between demes of *Bufo woodhousei fowleri* (Hinckley) (Chordata: Amphibia) on Assateague Island and the adjacent Del-mar-va peninsula. M.S. thesis, Bloomsburg University, Bloomsburg, PA.
- Hranitz, J.M. 1993. Ontogenetic changes in the expression of isozymes, population genetic structure and heterozygosity-growth relationships in *Bufo woodhousii fowleri* (Anura: Bufonidae). Ph.D. diss., Mississippi State University, Mississippi State, MS.
- Hranitz, J.M., T.S. Klinger, F.C. Hill, R.G. Sagar, T. Mencken, and J. Carr. 1993. Morphometric variation between *Bufo woodhousii fowleri* Hinckley (Anura: Bufonidae) on Assateague Island, Virginia, and the adjacent mainland. Brimleyana 19:65-75.
- Hua, J., and R. A. Relyea. 2012. East Coast versus West Coast: Effects of an insecticide in communities containing different amphibian assemblages. Freshwater Science 21:787-799.
- Huang, Q. 2011. Deterministic and stochastic structured population models with application to Green Tree Frogs. Ph.D. diss., University of Louisiana-Lafayette.
- Huang, R. 2011. Detecting the presence of *Batrachochytrium dendrobatidis* in amphibians in Piedmont vs Blue Ridge habitats in northern Georgia. M.S. thesis, Emory University, Atlanta, GA.
- Huang, Y.-W., W.H. Karasov, K.A. Patnode, and C.R. Jefcoate. 1999. Exposure of Northern Leopard frogs in the Green Bay ecosystem to polychlorinated biphenyls, polychlorinated dibenzo-p-dioxins, and polychlorinated bibenzofurans is measured by direct chemistry but not hepatic ethoxyresorufin-o-deethylase activity. Environmental Toxicology and Chemistry 18:2123-2130.
- Hubbs, C.L. 1918. *Bufo fowleri* in Michigan, Indiana and Illinois. Copeia (55):40-43.
- Hubbs, C., and N.E. Armstrong. 1961. Minimum developmental temperature tolerance of two anurans, *Scaphiopus couchi* and *Microhyla olivacea*. Texas Journal of Science 13:358-362.
- Hubbs, C., and F.D. Martin. 1967. *Bufo valliceps* breeding in artificial pools. Southwestern Naturalist 12:105-106.
- Hubbs, C., T. Wright, and O. Cuellar. 1963. Developmental temperature tolerance of central Texas populations of two anuran amphibians *Bufo valliceps* and *Pseudacris streckeri*. Southwestern Naturalist 8:142-149.
- Hudson, G.E. 1942. The amphibians and reptiles of Nebraska. University of Nebraska, Nebraska Conservation Bulletin 24. [reprinted 1972]
- Huheey, J.E. 1965a. Unusual behavior in juvenile toads, *Bufo americanus*. Journal of the Ohio Herpetological Society 5:33.
- Huheey, J.E. 1965b. A toad in the diet of a frog. Journal of the Ohio Herpetological Society 5:33.
- Huheey, J.E., and A. Stupka. 1967. Amphibians and Reptiles of Great Smoky Mountains National Park. University of Tennessee Press, Knoxville.
- Hulse, A.C., C.J. McCoy, and E.J. Censky. 2001. Amphibians and Reptiles of Pennsylvania and the Northeast. Cornell University Press, Ithaca, NY.
- Humfeld, S.C., V.T. Marshall, and M.A. Bee. 2009. Context-dependent plasticity of aggressive signalling in a dynamic social environment. Animal Behaviour 78:915-924.
- Humphries, W.J., and M.A. Sisson. 2012. Long distance migrations, landscape use, and vulnerability to prescribed fire of the Gopher Frog (*Lithobates capito*). Journal of Herpetology 46:665-670.
- Hunka, D.L. 1974. Physiological aspects of overwintering in the Boreal Chorus Frog, *Pseudacris triseriata maculata*. M.S. thesis, University of Manitoba, Winnipeg.
- Hunt, R.H. 1980. Toad sanctuary in a tarantula burrow. Natural History 89(3):49-53.
- Hunsaker, D. II, and P. Breese. 1967. Herpetofauna of the Hawaiian Islands. Pacific Science 21:423-428.

- Hunter, M.L., Jr., J. Albright and J. Arbuckle. 1992. The Amphibians and Reptiles of Maine. Maine Agricultural Experiment Station, Bulletin 838.
- Hunter, M.L. Jr., A.J.K. Calhoun, and M. McCollough. 1999. Maine Amphibians and Reptiles. University of Maine Press, Orono.
- Hurst, B. 1944. The amphibians of Prince Edward Island. *Acadian Naturalist* 1(3):111-117.
- Hurter, J. 1911. Herpetology of Missouri. *Transactions of the Academy of Science of St. Louis* 20(5):59-274.
- Hutchison, V.H., and L.G. Hill. 1978. Thermal selection of Bullfrog tadpoles (*Rana catesbeiana*) at different stages of development and acclimation temperatures. *Journal of Thermal Biology* 3:57-60.
- Ideker, J. 1968. Secondary intergradation between *Bufo americanus americanus* Holbrook and *Bufo woodhousei woodhousei* Girard in southeastern South Dakota. M.A. thesis, University of South Dakota, Vermillion.
- Ideker, J. 1976. Tadpole thermoregulatory behavior facilitates grackle predation. *Texas Journal of Science* 27:244-245.
- Ideker, J. 1979. Adult *Cybister fimbriolatus* are predaceous (Coleoptera: Dytiscidae). *Coleopterists Bulletin* 33:41-44.
- Illingworth, J.F. 1941. Feeding habits of *Bufo marinus*. *Proceedings of the Hawaiian Entomological Society* 11:51.
- Ingles, L.G. 1932a. *Cephalogonimus brevicirrus*, a new species of trematode from the intestine of *Rana aurora* from California. *University of California Publications in Zoology* 37:203-210.
- Ingles, L.G. 1932b. Four new species of *Haematoloechus* (Trematoda) from *Rana aurora draytoni* from California. *University of California Publications in Zoology* 37:189-201.
- Ingles, L.G. 1936. Worm parasites of California amphibia. *Transactions of the American Microscopical Society* 55:73-92.
- Ingles, L.G., and M.P. Langston. 1933. A new species of bladder fluke from California frogs. *Transactions of the American Microscopical Society* 52:243-245.
- Ingram, W.M., and E.C. Raney. 1943. Additional studies on the movement of tagged Bullfrogs, *Rana catesbeiana* Shaw. *American Midland Naturalist* 29:239-241.
- Irwin, J.T. 2005. Overwintering in Northern Cricket Frogs (*Acris crepitans*). Pp. 55-58 In M.J. Lannoo (ed.), *Amphibian Declines. The Conservation Status of United States Species*. University of California Press, Berkeley.
- Irwin, J.T., J.P. Costanzo, and R.E. Lee Jr. 1999. Terrestrial hibernation in the Northern Cricket Frog, *Acris crepitans*. *Canadian Journal of Zoology* 77:1240-1246.
- Irwin, J. T., J. P. Costanzo and R. E. Lee. 2003. Postfreeze reduction of locomotor endurance in the freeze-tolerant Wood Frog, *Rana sylvatica*. *Physiological and Biochemical Zoology* 76: 331-338.
- Irwin, K.J., C.K. Dodd Jr., and M.L. Griffey. 1999. Geographic distribution. *Scaphiopus holbrookii* (Eastern Spadefoot Toad). *Herpetological Review* 30:232.
- Irwin, K.J., L. Irwin, T.W. Taggart, J.T. Collins, and S.L. Collins. 2001. An herpetofaunal survey of the Apalachicola barrier islands, Florida: the 2000-2001 season. *Kansas Herpetological Society Newsletter* (123):12-15.
- Irwin, M.S. 1929. A new lung fluke from *Rana clamitans* Latreille. *Transactions of the American Microscopical Society* 48:74-79.
- Isaacs, J.S. 1971. Temporal stability of vertebral stripe color in a cricket frog population. *Copeia* 1971:551-552.
- Isola, M. 2011. Does the matrix matter? A comparison on phenology and habitat utilization of two treefrog species in the Big Cypress National Preserve. M.S. thesis, Florida International University, Miami.
- Iverson, J.B. 1973. *Hyla cinerea* (Green Treefrog). *HISS News Journal* 1:153.
- Jackman, R., S. Nowicki, D.J. Aneshansley, and T. Eisner. 1983. Predatory capture of toads by fly larvae. *Science* 222:515-516.
- Jackson, A.W. 1952. The effect of temperature, humidity, and barometric pressure on the rate of call in *Acris crepitans* Baird in Brazos County, Texas. *Herpetologica* 8:18-20.
- Jackson, C.G. Jr., and M.M. Jackson. 1970. Herpetofauna of Dauphin Island, Alabama. *Quarterly Journal of the Florida Academy of Sciences* 33:281-287.
- Jackson, J.T., F.W. Weckerly, T.M. Swannack, and M.R.J. Forstner. 2006. Inferring absence of Houston Toads given imperfect detection probabilities. *Journal of Wildlife Management* 70:1461-1463.
- Jacobs, L., and J.E. Houlahan. 2011. Adjacent land-use affects amphibian community

- composition and species richness in managed forests in New Brunswick, Canada. Canadian Journal of Forest Research 41:1687-1697.
- Jacobson, N.L. 1989. Breeding dynamics of the Houston Toad. Southwestern Naturalist 34:374-380.
- Jaeger, J.R., B.R. Riddle, R.D. Jennings, and D.F. Bradford. 2001. Rediscovering *Rana onca*: evidence for phylogenetically distinct leopard frogs from the border region of Nevada, Utah, and Arizona. Copeia 2001:339-354.
- Jaeger, R.G., and J.P. Hailman. 1971. Two types of phototactic behaviour in anuran amphibians. Nature 230:189-190.
- Jaeger, R.G., and J.P. Hailman. 1973. Effects of intensity on the phototactic responses of adult anuran amphibians: a comparative survey. Zeitschrift für Tierpsychologie 33:352-407.
- Jaeger, R.G., and J.P. Hailman. 1976. Ontogenetic shift of spectral phototactic preferences in anuran tadpoles. Journal of Comparative Physiology and Psychology 90:930-945.
- James, M.T., and T.P. Maslin. 1947. Notes on myiasis of the toad, *Bufo boreas boreas* Baird and Girard. Journal of the Washington Academy of Sciences 37:366-368.
- James, P. 1966. The Mexican Burrowing Toad, *Rhinophryne dorsalis*, an addition to the vertebrate fauna of the United States. Texas Journal of Science 18:272-276.
- James, S.M. 2005. Amphibian metamorphosis and juvenile terrestrial performance following chronic cadmium exposure in the aquatic environment. Ph.D. diss., University of Missouri, Columbia.
- James, S.M. and R.D. Semlitsch. 2011. Terrestrial performance of juvenile frogs in two habitat types after chronic exposure to a contaminant. Journal of Herpetology 45:186-194.
- James, S.M., E.E. Little, and R.D. Semlitsch. 2004a. Effects of multiple routes of cadmium exposure on the hibernation success of the American Toad (*Bufo americanus*). Archives of Environmental Contamination and Toxicology 46:518-527.
- James, S.M., E.E. Little, and R.D. Semlitsch. 2004b. The effect of soil composition and hydration on the bioavailability and toxicity of cadmium to hibernating juvenile American Toads (*Bufo americanus*). Environmental Pollution 132:523-532.
- James, S.M., E.E. Little, and R.D. Semlitsch. 2005. Metamorphosis of two amphibian species after chronic cadmium exposure in outdoor aquatic mesocosms. Environmental Toxicology and Chemistry 24:1994-2001.
- Jameson, D.L. 1950. The development of *Eleutherodactylus latrans*. Copeia 1950:44-46.
- Jameson, D.L. 1954. Social patterns in the leptodactylid frogs *Syrrhophus* and *Eleutherodactylus*. Copeia 1954:36-38.
- Jameson, D.L. 1955. The population dynamics of the Cliff Frog, *Syrrhophus marnocki*. American Midland Naturalist 54:342-381.
- Jameson, D.L. 1956. Growth, dispersal and survival of the Pacific Tree Frog. Copeia 1956:25-29.
- Jameson, D.L. 1957. Population structure and homing responses in the Pacific Tree Frog. Copeia 1957:221-228.
- Jameson, D.L., and A.G. Flury. 1949. The reptiles and amphibians of the Sierra Vieja range of southwestern Texas. Texas Journal of Science 1:54-79.
- Jameson, D.L., and R.M.E. Myers. 1957. Albino Pacific Tree Frogs. Herpetologica 13:74.
- Jameson, D.L., and S. Pequegnat. 1971. Estimation of relative viability and fecundity of color polymorphism in anurans. Evolution 25:180-194.
- Jameson, D.L., and R.C. Richmond. 1971. Parallelism and convergence in the evolution of size and shape in Holarctic *Hyla*. Evolution 25:497-508.
- Jameson, D.L., J.P. Mackey, and R.C. Richmond. 1966. The systematics of the Pacific Tree Frog, *Hyla regilla*. Proceedings of the California Academy of Sciences 33(19):551-620.
- Jameson, D.L., W. Taylor, and J. Mountjoy. 1970. Metabolic and morphological adaptation to heterogenous environments by the Pacific Tree Toad, *Hyla regilla*. Evolution 24:75-89.
- Jameson, D.L., J.P. Mackey, and M. Anderson. 1973. Weather, climate, and the external morphology of Pacific Tree Toads. Evolution 27:285-302.
- Jameson, E.W. Jr. 1947. The food of the Western Cricket Frog. Copeia 1947:212.
- Jamieson, D.H., and S.E. Trauth. 1996. Dietary diversity and overlap between two subspecies of spadefoot toads (*Scaphiopus holbrookii holbrookii* and *S. h. hurterii*) in Arkansas. Proceedings of the Arkansas Academy of Science 50:75-78.
- Jamieson, D.H., S.E. Trauth, and C.T.

- McAllister. 1993. Food habits of male Bird-voiced Treefrogs, *Hyla avivoca* (Anura: Hylidae), in Arkansas. Texas Journal of Science 45:45-49.
- Jansen, K.P., A.P. Summers, and P.R. Delis. 2001. Spadefoot toads (*Scaphiopus holbrookii holbrookii*) in an urban landscape: effects of nonnatural substrates on burrowing in adults and juveniles. Journal of Herpetology 35:141-145.
- Jasienski, M. 1992. Kinship effects and plasticity of growth in amphibian larvae. Ph.D. diss., Harvard University, Cambridge, MA.
- Jaslow, A.P., and R.C. Vogt. 1977. Identification and distribution of *Hyla versicolor* and *Hyla chrysoscelis* in Wisconsin. Herpetologica 33:201-205.
- Jay, J.M., and W.J. Pohley. 1981. *Dermosporidium penneri* sp. n. from the skin of the American toad, *Bufo americanus* (Amphibia: Bufonidae). Journal of Parasitology 67:108-110.
- Jefferson, D.M., and R.W. Russell. 2008. Ontogenetic and fertilizer effects on stable isotopes in the Green Frog (*Rana clamitans*). Applied Herpetology 5:189-196.
- Jenkins, J.R. 2000. Bioenergetics of freeze-thaw cycles in the chorus frog (*Pseudacris triseriata*). M.S. thesis, University of South Dakota, Vermillion.
- Jennette, M.A. 2010. *Lithobates sylvaticus* (Wood Frog). Egg predation. Herpetological Review 41:476-477.
- Jenni, D.A. 1969. A study of the ecology of four species of herons during the breeding season at Lake Alice, Alachua County, Florida. Ecological Monographs 39:245-270.
- Jennings, M.R. 1988. Natural history and decline of native ranids in California. Pp. 61-72 In H.P. De Lisle, P.R. Brown, B. Kaufman, and B.M. McGurty (eds.), Proceedings of the Conference on California Herpetology. Southwestern Herpetologists Society, Special Publication No. 4, Van Nuys, CA.
- Jennings, M.R. 2005. *Rana fisheri* Stejneger, 1893. Vegas Valley Leopard Frog. Pp. 554-555 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Jennings, M.R., and M.P. Hayes. 1985. Pre-1900 overharvest of California Red-legged Frogs (*Rana aurora draytonii*): the inducement for Bullfrog (*Rana catesbeiana*) introduction. Herpetologica 41:94-103.
- Jennings, M.R., and M.P. Hayes. 1994a. Decline of native ranid frogs in the desert Southwest. Pp. 183-211 In P.R. Brown and J.W. Wright (eds.), Herpetology of the North American Deserts. Proceedings of a Symposium. Southwestern Herpetologists Society, Special Publication No. 5.
- Jennings, M.R., and M.P. Hayes. 1994b. Amphibian and reptile species of special concern in California. California Department of Fish and Game, Inland Fisheries Division, Rancho Cordova, CA.
- Jennings, M.R., D.F. Bradford, and D.F. Johnson. 1992. Dependence of the garter snake *Thamnophis elegans* on amphibians in the Sierra Nevada of California. Journal of Herpetology 26:503-505.
- Jennings, R.D., and N.J. Scott Jr. 1993. Ecologically correlated morphological variation in tadpoles of the leopard frog, *Rana chiricahuensis*. Journal of Herpetology 27:285-293.
- Jense, G.K., and R.L. Linder. 1970. Food habits of badgers in eastern South Dakota. Proceedings of the South Dakota Academy of Science 49:37-41.
- Jensen, J.B. 2004. Little Grass Frog *Pseudacris ocularis* (Bosc and Daudin). Pp. 27 In R.E. Mirarchi, M.A. Bailey, T.M. Haggerty, and T.L. Best (eds.), Alabama Wildlife. Vol. 3. Imperiled Amphibians, Reptiles, Birds, and Mammals. University of Alabama Press, Tuscaloosa.
- Jensen, J.B., J.G. Palis, and M.A. Bailey. 1995. *Rana capito sevosa* (Dusky Gopher Frog). Submerged vocalization. Herpetological Review 26:98.
- Jensen, J.B., M.A. Bailey, E.L. Blankenship, and C.D. Camp. 2003. The relationship between breeding by the Gopher Frog, *Rana capito* (Amphibia: Ranidae) and rainfall. American Midland Naturalist 150:185-190.
- Jensen, J.B., C.D. Camp, W. Gibbons, and M.J. Elliott (eds.). 2008. Amphibians and Reptiles of Georgia. University of Georgia Press, Athens.
- Jenssen, T.A. 1967. Food habits of the Green Frog, *Rana clamitans*, before and during metamorphosis. Copeia 1967:214-218.
- Jenssen, T.A., and W.D. Klimstra. 1966. Food habits of the Green Frog, *Rana clamitans*, in southern Illinois. American Midland Naturalist 76:169-182.

- Jenssen, T.A., and W.B. Preston. 1968. Behavioral responses of the male Green Frog, *Rana clamitans*, to its recorded call. *Herpetologica* 24:181-182.
- Jilek, R., and R. Wolff. 1978. Occurrence of *Spinitectus gracilis* (Nematoda, Spiuroidea) in the toad *Bufo woodhousei fowleri*. *Journal of Parasitology* 64:619.
- Jirků, M., M.G. Bolek, C.M. Whipps, J. Janový Jr., M.L. Kent, and D. Modrý. 2006. A new species of *Myxidium* (Myxosporea: Myxidiidae), from the Western Chorus Frog, *Pseudacris triseriata triseriata*, and Blanchard's Cricket Frog, *Acris crepitans blanchardi* (Hylidae), from eastern Nebraska: morphology, phylogeny, and critical comments on amphibian *Myxidium* taxonomy. *Journal of Parasitology* 92:611-619.
- Jofré, M.B., and W.H. Karasov. 1999. Direct effect of ammonia on three species of North American anuran amphibians. *Environmental Toxicology and Chemistry* 18:1806-1812.
- Jofré, M.B., M.L. Rosenshield, and W.H. Karasov. 2000. Effects of PCB 126 and ammonia, alone and in combination, on Green Frog (*Rana clamitans*) and Leopard Frog (*R. pipiens*) hatching success, development, and metamorphosis. *Journal of the Iowa Academy of Science* 107:113-122.
- Johansen, F. 1926. Occurrences of frogs on Anticosti Island and Newfoundland. *Canadian Field-Naturalist* 40:16.
- Johansen, K. 1962. Observations on the Wood Frog *Rana sylvatica* in Alaska. *Ecology* 43:146-147.
- John, K.R., and D. Fenster. 1975. The effects of partitions on the growth rates of crowded *Rana pipiens* tadpoles. *American Midland Naturalist* 93:123-130.
- John-Alder, H.B., P.J. Morin, and S.P. Lawler. 1988. Thermal physiology, phenology, and distribution of tree frogs. *American Naturalist* 132:506-520.
- John-Alder, H.B., M.C. Barnhart, and A.F. Bennett. 1989. Thermal sensitivity of swimming performance and muscle contraction in northern and southern populations of tree frogs (*Hyla crucifer*). *Journal of Experimental Biology* 142:357-372.
- Johnson, B. 1989. Familiar Amphibians and Reptiles of Ontario. Natural Heritage/Natural History, Inc., Toronto, Ontario.
- Johnson, B.K., and J.L. Christiansen. 1976. The food and food habits of Blanchard's Cricket Frog, *Acris crepitans blanchardi* (Amphibia, Anura, Hylidae), in Iowa. *Journal of Herpetology* 10:63-74.
- Johnson, C. 1959. Genetic incompatibility in the call races of *Hyla versicolor* Le Conte in Texas. *Copeia* 1959:327-335.
- Johnson, C. 1963. Additional evidence of sterility between the call-types in the *Hyla versicolor* complex. *Copeia* 1963:139-143.
- Johnson, C. 1966. Species recognition in the *Hyla versicolor* complex. *Texas Journal of Science* 18:361-364.
- Johnson, C.R. 1980. The effects of five organophosphorus insecticides on thermal stress in tadpoles of the Pacific Treefrog, *Hyla regilla*. *Zoological Journal of the Linnaean Society* 69:143-147.
- Johnson, C.R., and R.B. Bury. 1965. Food of the Pacific treefrog, *Hyla regilla* Baird and Girard, in northern California. *Herpetologica* 21:56-58.
- Johnson, C.R., and J.E. Prine. 1976. The effects of sublethal concentrations of organophosphorus insecticides and an insect growth regulator on temperature tolerance in hydrated and dehydrated juvenile Western toads, *Bufo boreas*. *Comparative Biochemistry and Physiology* 53A:147-149.
- Johnson, D.H., M.D. Bryant, and A.H. Miller. 1948. Vertebrate animals of the Providence Mountains area of California. *University of California Publications in Zoology* 48:221-376.
- Johnson, D.H., S.C. Fowle, and J.A. Jundt. 2000. The North American reporting center for amphibian malformations. *Journal of the Iowa Academy of Science* 107:123-127.
- Johnson, J.R. 2005. Multi-scale investigations of Gray Treefrog movements: patterns of migration, dispersal, and gene flow. Ph.D. diss., University of Missouri, Columbia.
- Johnson, J.R., and R.D. Semlitsch. 2003. Defining core habitat of local populations of the Gray Treefrog (*Hyla versicolor*) based on choice of oviposition site. *Oecologia* 137:205-210.
- Johnson, J.R., J.H. Knouft and R.D. Semlitsch. 2007. Sex and seasonal differences in the spatial terrestrial distribution of Gray Treefrog (*Hyla versicolor*) populations. *Biological Conservation* 140:250-258.
- Johnson, J.R., R.D. Mahan and R.D. Semlitsch. 2008. Seasonal terrestrial microhabitat use by Gray Treefrogs (*Hyla versicolor*) in Missouri

- oak-hickory forests. *Herpetologica* 64:259-269.
- Johnson, K.A. 2003. Abiotic factors influencing the breeding, movement, and foraging of the Eastern Spadefoot (*Scaphiopus holbrookii*) in West Virginia. M.S. thesis, Marshall University, Huntington, WV.
- Johnson, L.M. 1988. Habitat selection in relation to food and feeding strategies of larval Northern Cricket Frogs (*Acris crepitans*). M.S. thesis, Illinois State University, Normal.
- Johnson, O.W. 1965. Early development, embryonic temperature tolerance and rate of development in *Rana pretiosa luteiventris* Thompson. Ph.D. diss., Oregon State University, Corvallis.
- Johnson, P.T.R., and D.R. Sutherland. 2003. Amphibian deformities and *Ribeiroia* infection: an emerging helminthiasis. *Trends in Parasitology* 19:332-335.
- Johnson, P.T.R., K.B. Lunde, E.G. Ritchie, and A.E. Launer. 1999. The effect of trematode infection on amphibian limb development and survivorship. *Science* 284:802-804.
- Johnson, P.T.R., K.B. Lunde, R.W. Haight, J. Bowerman, and A.R. Blaustein. 2001a. *Rebeiroia ondatrae* (Trematoda: Digenea) infection induces severe limb malformations in Western Toads (*Bufo boreas*). *Canadian Journal of Zoology* 79:370-379.
- Johnson, P.T.R., K.B. Lunde, E.G. Ritchie, J.K. Reaser, and A.E. Launer. 2001b. Morphological abnormality patterns in a California amphibian community. *Herpetologica* 57:336-352.
- Johnson, P.T.R., K.B. Lunde, E.M. Thurman, E.G. Ritchie, S.N. Wray, D.R. Sutherland, J.M. Kapfer, T.J. Frest, J. Bowerman, and A.R. Blaustein. 2002. Parasite (*Riberoia ondatrae*) infection linked to amphibian malformations in the western United States. *Ecological Monographs* 72:151-168.
- Johnson, P.T.J., E.R. Preu, D.R. Sutherland, J.M. Romansic, B. Han, and A.R. Blaustein. 2006. Adding infection to injury: synergistic effects of predation and parasitism on amphibian malformations. *Ecology* 87:2227-2235.
- Johnson, P.T.R., V.J. McKenzie, A.C. Peterson, J.L. Kerby, J. Brown, A.R. Blaustein, and T. Jackson. 2011. Regional decline of an iconic amphibian associated with elevation, land-use change, and invasive species. *Conservation Biology* 25:556-566.
- Johnson, S.A., and M. McGarrity. 2010. Identification Guide to the Frogs of Florida. University of Florida Extension Service, Gainesville.
- Johnson, S.A., M.E. McGarrity, and C.L. Staudhammer. 2010. An effective chemical deterrent for invasive Cuban treefrogs. *Human-Wildlife Interactions* 4:112-117.
- Johnson, T.R. 1977. The amphibians of Missouri. University of Kansas Museum of Natural History, Public Education Series No. 6.
- Johnson, T.R. 2000. The Amphibians and Reptiles of Missouri. Missouri Department of Conservation, Jefferson City.
- Johnston, G.R., and J.C. Johnston. 2006. *Scaphiopus holbrookii holbrookii* (Eastern Spadefoot). Albinism. *Herpetological Review* 37:211-212.
- Jolley, D.B., S.S. Ditchkoff, B.D. Sparklin, L.B. Hanson, M.S. Mitchell, and J.B. Grand. 2010. Estimate of herpetofauna depredation by a population of wild pigs. *Journal of Mammalogy* 91:519-524.
- Jones, D. 2004. Aquatic and terrestrial use of habitat by the Amargosa Toad (*Bufo nelsoni*). M.S. thesis, University of Nevada, Reno.
- Jones, D., E.T. Simandle, C.R. Tracy, and B. Hobbs. 2003. *Bufo nelsoni* (Amargosa Toad). Predation. *Herpetological Review* 34:229.
- Jones, D. K., J. I. Hammond and R. A. Relyea. 2009. Very highly toxic effects of endosulfan across nine species of tadpoles: Lag effects and family-level sensitivity. *Environmental Toxicology and Chemistry* 28:1939-1945.
- Jones, D. K., J. R. Hammond and R. A. Relyea. 2011. Competitive stress can make the herbicide Roundup® more deadly to larval amphibians. *Environmental Toxicology and Chemistry* 2:446-454.
- Jones, H.N. 2011. *Bufo terrestris* (Southern Toad). Diet. *Herpetological Review* 42:409.
- Jones, J., and B.H. Brattstrom. 1962. The call of the spring peeper, *Hyla crucifer*, in response to a recording of its own voice. *Herpetologica* 17: 246-250.
- Jones, J.M. 1973. Effects of thirty years hybridization on the toads *Bufo americanus* and *Bufo woodhousei fowleri* at Bloomington, Indiana. *Evolution* 27:435-448.
- Jones, K., B. Rincon, and D.A. Steen. 2010. *Bufo terrestris* (Southern Toad). Predation. *Herpetological Review* 41:334-335.
- Jones, K.B. 1981. Distribution, ecology, and habitat management of the reptiles and

- amphibians of the Hualapai-Aquarius Planning Area, Mohave and Yavapai counties, Arizona. U.S. Department of the Interior, Bureau of Land Management, Technical Note 353.
- Jones, K.B. 1990. Habitat use and predatory behavior of *Thamnophis cyrtopsis* (Serpentes: Colubridae) in a seasonally variable aquatic environment. *Southwestern Naturalist* 35:115-122.
- Jones, L., D.R. Gossett, S.W. Banks, and M.L. McCallum. 2010. Antioxidant defense system in tadpoles of the American Bullfrog (*Lithobates catesbeianus*) exposed to paraquat. *Journal of Herpetology* 44:222-228.
- Jones, L.L.C., and M.J. Sredl. 2005. Chiricahua leopard frog status in the Galiuro Mountains, Arizona, with a monitoring framework for the species' entire range. Pp. 88-91 *In* G.J. Gottfried, B.S. Gebow, L.G. Eskew, C.B. Edminster, and B. Carelton (compilers), Connecting Mountain Islands and Desert Seas: Biodiversity and Management of the Madrean Archipelago. 2. USDA Forest Service Proceedings RMRS-P-36, Fort Collins, CO.
- Jones, L.L.C., W.P. Leonard, and D.H. Olson (eds.). 2005. Amphibians of the Pacific Northwest. Seattle Audubon Society, Seattle, WA.
- Jones, M.C., J.R. Dixon and M.R.J. Forstner. 2011. Is bigger always better? Mate selection in the Houston Toad (*Bufo houstonensis*). *Journal of Herpetology* 45:455-456.
- Jones, M.E.B., A.G. Armien, B.B. Rothermel and A.P. Pessier. 2012. Granulomatous myositis associated with a novel alveolate pathogen in an adult Southern Leopard Frog (*Lithobates sphenocephalus*). *Diseases of Aquatic Organisms* 102:163-167.
- Jones, M.S., J.P. Goettl, and L.J. Livo. 1999. *Bufo boreas* (Boreal Toad). Predation. *Herpetological Review* 30:91.
- Jones, R.M. 1980. Nitrogen excretion by *Scaphiopus* tadpoles in ephemeral ponds. *Physiological Zoology* 53:26-31.
- Jones, T.R., and R.J. Timmons. 2010. *Hyla wrightorum* (Arizona Treefrog). Predation. *Herpetological Review* 41:473-474.
- Jordan, O.R. Jr., W.W. Byrd, and D.E. Ferguson. 1968a. Sun-compass orientation in *Rana pipiens*. *Herpetologica* 24:335-336.
- Jordan, O.R., J.S. Garton, and R.F. Ellis. 1968b. The amphibians and reptiles of a middle Tennessee cedar glade. *Journal of the Tennessee Academy of Science* 43:72-78.
- Jørgensen, M.B., and H.C. Gerhardt. 1991. Directional hearing in the Gray Tree Frog *Hyla versicolor*: eardrum vibrations and phonotaxis. *Journal of Comparative Physiology* 169A:177-183.
- Joy, J.E., and B.T. Dowell. 1994. *Glypthelmins pensylvaniensis* (Trematode: Digenea) in the Spring Peeper, *Pseudacris c. crucifer* (Anura: Hylidae), from southwestern West Virginia. *Journal of the Helminthological Society of Washington* 61:227-229.
- Joy, J.E., and C.A. Bunten. 1997. *Cosmocercoides variabilis* (Nematoda, Cosmocercoidea) populations in the Eastern American Toad, *Bufo a. americanus* (Salientia, Bufonidae), from western West Virginia. *Journal of the Helminthological Society of Washington* 64:102-105.
- Joy, J.E., E.M. Walker, S.G. Koh, J.M. Bentley, and A.G. Crank. 1996. Intrahepatic larval nematode infection in the Northern Spring Peeper, *Pseudacris crucifer crucifer* (Anura: Hylidae), in West Virginia. *Journal of Wildlife Diseases* 32:340-343.
- Judd, F.W., and K.J. Irwin. 2005. *Hypopachus variolosus* (Cope, 1866). Sheep Frog. Pp. 506-508 *In* M.J. Lannoo (ed.), *Amphibian Declines*. The Conservation Status of United States Species. University of California Press, Berkeley.
- Judge, K.A., and R.J. Brooks. 2001. Chorus participation by male Bullfrogs, *Rana catesbeiana*: a test of the energetic constraint hypothesis. *Animal Behaviour* 62:849-861.
- Jung, R.E. 1993. Blanchard's Cricket Frogs (*Acris crepitans blanchardi*) in southwest Wisconsin. *Transactions of the Wisconsin Academy of Sciences, Arts and Letters* 81:79-87.
- Jung, R.E., and C.H. Jagoe. 1995. Effects of low pH and aluminum on body size, swimming performance, and susceptibility to predation of Green Tree Frog (*Hyla cinerea*) tadpoles. *Canadian Journal of Zoology* 73:2171-2183.
- Jung, R.E., S. Claeson, J.E. Wallace, and W.C. Welbourn Jr. 2001. *Eleutherodactylus guttulatus* (Spotted Chirping Frog), *Bufo punctatus* (Red-spotted Toad), *Hyla arenicolor* (Canyon Tree Frog), and *Rana berlandieri* (Rio Grande Leopard Frog). Mite infestation. *Herpetological Review* 32:33-34.
- Jung, R.E., K.E. Bonine, M.L. Rosenshield, A. de la Rieza, S. Raimondo, and S. Droege. 2002. Evaluation of canoe surveys for anurans

- along the Rio Grande in Big Bend National Park, Texas. *Journal of Herpetology* 36:390-397.
- Jungels, J.M., K.L. Griffis-Kyle, and W.J. Boeing. 2010. Low genetic differentiation among populations of the Great Plains Toad (*Bufo cognatus*) in southern New Mexico. *Copeia* 2010:388-396.
- Justis, C.S., and D.H. Taylor. 1976. Extraocular photoreception and compass orientation in Bullfrogs, *Rana catesbeiana*. *Copeia* 1976:98-105.
- Justus, J.T., M. Sandomir, T. Urquhart, and B.O. Ewan. 1977. Developmental rates of two species of toads from the desert Southwest. *Copeia* 1977:592-594.
- Kaess, W., and F. Kaess. 1960. Perception of apparent motion in the common toad. *Science* 132:953.
- Kagarise Sherman, C. 1980. A comparison of the natural history and mating system of two anurans: Yosemite Toads (*Bufo canorus*) and Black Toads (*Bufo exsul*). Ph.D. diss., University of Michigan, Ann Arbor.
- Kagarise Sherman, C., and M.L. Morton. 1984. The toad that stays on its toes. *Natural History* 93(3):73-78.
- Kagarise Sherman, C., and M.L. Morton. 1993. Population declines of Yosemite Toads in the eastern Sierra Nevada of California. *Journal of Herpetology* 27:186-198.
- Kalb, H.J., and G.R. Zug. 1990. Age estimates for a population of American Toads, *Bufo americanus* (Salientia: Bufonidae), in northern Virginia. *Brimleyana* 16:79-86.
- Kaminsky, S. 1997. *Bufo americanus* (American Toad). Reproduction. *Herpetological Review* 28:84.
- Kapfer, J.M., and T.C. Muehlfeld. 2006. *Rana sylvatica* (Wood Frog) and *Ambystoma maculatum* (Spotted Salamander). *Behavior. Herpetological Review* 37:210-211.
- Kaplan, H.M., and L. Yoh. 1961. Toxicity of copper for frogs. *Herpetologica* 17:131-135.
- Kaplan, H.M., and J.G. Overpeck. 1964. Toxicity of halogenated hydrocarbon insecticides for the frog, *Rana pipiens*. *Herpetologica* 20:163-169.
- Kaplan, H.M., and S.S. Glaczenski. 1965. Hematological effects of organophosphate insecticides in the frog (*Rana pipiens*). *Life Sciences* 4:1213-1219.
- Karlstrom, E.L. 1954. On robins and tadpoles. *Yosemite Nature Notes* 33:185-188.
- Karlstrom, E.L. 1958. Sympatry of the Yosemite and Western toads in California. *Copeia* 1958:152-153.
- Karlstrom, E.L. 1962. The toad genus *Bufo* in the Sierra Nevada of California: ecological and systematic relationships. *University of California Publications in Zoology* 62:1-104.
- Karlstrom, E.L. 1986. Amphibian recovery in the North Fork Toutle River debris avalanche area of Mount St. Helens. Pp. 334-344 *In* S.A.C. Keller (ed.), Mount St. Helens. Five Years Later. Eastern Washington University Press, Cheney.
- Karlstrom, E.L., and R.L. Livezey. 1955. The eggs and larvae of the Yosemite Toad *Bufo canorus* Camp. *Herpetologica* 11:221-227.
- Karns, D.R. 1983. Toxic bog water in northern Minnesota peatlands: ecological and evolutionary consequences for breeding amphibians. Ph.D. diss., University of Minnesota, Minneapolis.
- Karns, D.R. 1992. Effects of acidic bog habitats on amphibian reproduction in a northern Minnesota peatland. *Journal of Herpetology* 26:401-412.
- Karraker, N.E. 2007. Are embryonic and larval Green Frogs (*Rana clamitans*) insensitive to road deicing salt? *Herpetological Conservation and Biology* 2:35-41.
- Karraker, N.E. 2008. Impacts of road deicing salts on amphibians and their habitats. Pp. 211-223 *In* J.C. Mitchell, R.E. Jung Brown, and B. Bartholomew (eds.), Urban Herpetology. *Herpetological Conservation 3*. Society for the Study of Amphibians and Reptiles, Salt Lake City, UT.
- Karraker, N.E., and G.S. Beyersdorf. 1997. A Tailed Frog (*Ascaphus truei*) nest site in northwestern California. *Northwestern Naturalist* 78:110-111.
- Karraker, N.E., and J.P. Gibbs. 2009. Amphibian production in forested landscapes in relation to wetland hydroperiod: a case study of vernal pools and beaver ponds. *Biological Conservation* 142:2293-2302.
- Karraker, N.E., and G.R. Ruthig. 2009. Effect of road deicing salt on the susceptibility of amphibian embryos to infection by water molds. *Environmental Research* 109:40-45.
- Karraker, N.E., and J.P. Gibbs. 2011. Contrasting road effect signals in reproduction of long-versus short-lived amphibians. *Hydrobiologia* 664:213-218.
- Karraker, N.E., D.S. Pilliod, M.J. Adams, E.L.

- Bull, P.S. Corn, L.V. Diller, L.A. Dupuis, M.P. Hayes, B.R. Hossack, G.R. Hodgson, E.J. Hyde, K. Lohman, B.R. Norman, L.M. Ollivier, C.A. Pearl, and C.R. Peterson. 2006. Taxonomic variation in oviposition by tailed frogs (*Ascaphus* spp.). *Northwestern Naturalist* 87:87-97.
- Kats, L.B., and R.G. Van Dragt. 1986. Background color-matching in the Spring Peeper, *Hyla crucifer*. *Copeia* 1986:109-115.
- Kats, L.B., J.W. Petraska, and A. Sih. 1988. Antipredator defenses and the persistence of amphibian larvae with fishes. *Ecology* 69:1865-1870.
- Kats, L.B., J.M. Kiesecker, D.P. Chivers and A.R. Blaustein. 2000. Effects of UV-B radiation on anti-predator behavior in three species of amphibians. *Ethology* 106: 921-931.
- Kapust, H.Q.W., K.R. McAllister and M.P. Hayes. 2012. Oregon Spotted Frog (*Rana pretiosa*) response to enhancement of oviposition habitat degraded by invasive reed grass (*Phalaris arundinacea*). *Herpetological Conservation and Biology* 7:358-366.
- Kay, D.W. 1989. Movements and homing in the Canyon Tree Frog (*Hyla cadaverina*). *Southwestern Naturalist* 34:293-295.
- Kay, F.R. 1969. An albino Pacific tree frog, *Hyla regilla*, from Death Valley, California. *Great Basin Naturalist* 29:111.
- Keel, M.K., A.M. Ruiz, A.T. Fisk, W. Rumbeiha, A.K. Davis, and J.C. Maerz. 2010. Soft-tissue mineralization of Bullfrog larvae (*Rana catesbeiana*) at a wastewater treatment facility. *Journal of Veterinary Diagnostic Investigation* 22:655-689.
- Keeton, D., and C.C. Carpenter. 1955. A study of the variations of dorsal markings of *B. w. woodhousei*. *Proceedings of the Oklahoma Academy of Science* 36:81-83.
- Kehr, A.I. 1997. Stage-frequency and habitat selection of a cohort of *Pseudacris ocularis* tadpoles (Hylidae: Anura) in a Florida temporary pond. *Herpetological Journal* 7:103-109.
- Keinath, D., and J. Bennett. 2000. Distribution and status of the Boreal Toad (*Bufo boreas boreas*) in Wyoming. *Wyoming Natural Diversity Database*, University of Wyoming, Laramie.
- Keiser, E.D., Jr., and L.D. Wilson. 1979. Checklist and key to the amphibians and reptiles of Louisiana. Second edition. *Lafayette Natural History Museum Bulletin* 1.
- Kelleher, K.E., and J.R. Tester. 1969. Homing and survival in the Manitoba toad, *Bufo hemiophrys*, in Minnesota. *Ecology* 50:1040-1048.
- Keller, M.J., and H.C. Gerhardt. 2001. Polyploidy alters advertisement call structure in Gray Treefrogs. *Proceedings of the Royal Society of London B* 268:341-345.
- Kellogg, R. 1932. Notes on the spadefoot of the western plains (*Scaphiopus hammondii*). *Copeia* 1932:36.
- Kelsey, K.A. 1995. Responses of headwater stream amphibians to forest practices in western Washington. Ph.D. diss., University of Washington, Seattle, WA.
- Kennedy, J.P. 1962. Spawning season and experimental hybridization of the Houston Toad, *Bufo houstonensis*. *Herpetologica* 17:239-245.
- Kenney, G., K. McKean, J. Martin and C. Stearns. 2012. Identification of terrestrial wintering habitat of *Acrits crepitans* (Northern Cricket Frog). *Northeastern Naturalist* 19:698-700.
- Kent, D.M., M.A. Langston, and D.W. Hanf. 1997. Observations of vertebrates associated with gopher tortoise burrows in Orange County, Florida. *Florida Scientist* 60:197-201.
- Kerby, J.L., A. Wehrmann and A. Sih. 2012. Impacts of the insecticide diazinon on the behavior of predatory fish and amphibian prey. *Journal of Herpetology* 46:171-176.
- Kessel, B. 1965. Breeding dates of *Rana sylvatica* at College, Alaska. *Ecology* 46:206-208.
- Khaner, M. 1935. Some entozoan found in certain amphibia in Quebec Province. M.A. thesis, McGill University, Montreal.
- Kiesecker, J.M. 1996. pH-mediated predator-prey interactions between *Ambystoma tigrinum* and *Pseudacris triseriata*. *Ecological Applications* 6:1325-1331.
- Kiesecker, J.M. 2002. Synergism between trematode infection and pesticide exposure: a link to amphibian limb deformities in nature? *Proceedings of the National Academy of Sciences, USA* 99:9900-9904.
- Kiesecker, J.M., and A.R. Blaustein. 1997a. Population differences in responses of Red-legged Frogs (*Rana aurora*) to introduced Bullfrogs. *Ecology* 78:1752-1760.
- Kiesecker, J.M., and A.R. Blaustein. 1997b. Influences of egg laying behavior on pathogenic infection of amphibian eggs.

- Conservation Biology 11:214-220.
- Kiesecker, J.M., and A.R. Blaustein. 1998. Effects of introduced Bullfrogs and Smallmouth Bass on microhabitat use, growth, and survival of native Red-legged Frogs (*Rana aurora*). Conservation Biology 12:776-787.
- Kiesecker, J.M., and D.K. Skelly. 2000. Choice of oviposition site by Gray Treefrogs: the role of potential parasitic infection. Ecology 81:2939-2943.
- Kiesecker, J.M., D.P. Chivers, and A.R. Blaustein. 1996. The use of chemical cues in predator recognition by Western Toad tadpoles. Animal Behaviour 32:1237-1245.
- Kiesecker, J.M., D.P. Chivers, A. Marco, C. Quilchano, M.T. Anderson, and A.R. Blaustein. 1999. Identification of a disturbance signal in larval Red-legged Frogs, *Rana aurora*. Animal Behaviour 57:1295-1300.
- Kiesecker, J.M., A.R. Blaustein, and C.L. Miller. 2001a. Potential mechanisms underlying the displacement of native Red-legged Frogs by introduced Bullfrogs. Ecology 82:1964-1970.
- Kiesecker, J.M., A.R. Blaustein, and L.K. Belden. 2001b. Complex causes of amphibian population declines. Nature 410:681-684.
- Kiesow, A.M. 2006. Field Guide to Amphibians and Reptiles of South Dakota. South Dakota Department of Game, Fish and Parks, Pierre, SD.
- Kiffney, P.M., and J.S. Richardson. 2001. Interactions among nutrients, periphyton, and invertebrate and vertebrate (*Ascaphus truei*) grazers in experimental channels. Copeia 2001:422-429.
- Kilby, J.D. 1936. A biological analysis of the food and feeding habits of *Rana sphenocephala* (Cope) and *Hyla cinerea* (Schneider). M.S. thesis, University of Florida, Gainesville.
- Kilby, J.D. 1945. A biological analysis of the food and feeding habits of two frogs. Quarterly Journal of the Florida Academy of Sciences 8:71-104.
- Kim, B., T.G. Smith, and S.S. Dresser. 1998. Life history and host specificity of *Hepatozoon clamitae* (Apicomplexia: Adeleorina) and ITS-1 nucleotide sequence variation of *Hepatozoon* species of frogs and mosquitoes from Ontario. Journal of Parasitology 84:789-797.
- Kim, J.B., T. Halverson, Y.J. Basir, J. Dulka, F.C. Knoop, P.W. Abel, and J.M. Conlon. 2000. Purification and characterization of antimicrobial and vasorelaxant peptides from skin extracts and skin secretions of the North American Pig Frog *Rana grylio*. Regulatory Peptides 90:53-60.
- Kime, N.M. 2001. Female mate choice for socially-variable advertisement calls in the cricket frog, *Acris crepitans*. Ph.D. diss., University of Texas, Austin.
- Kime, N.M., S.S. Burmeister, and M.J. Ryan. 2004. Female preferences for socially variable call characters in the cricket frog, *Acris crepitans*. Animal Behaviour 68:1391-1399.
- King, F.W. 1932. Herpetological records and notes from the vicinity of Tuscon, Arizona, July and August, 1930. Copeia 1932:175-177.
- King, F.W., and T. Krakauer. 1966. The exotic herpetofauna of Florida. Quarterly Journal of the Florida Academy of Sciences 29:144-154.
- King, J.J., and R.S. Wagner. 2010. Toxic effects of the herbicide Roundup® Regular on Pacific Northwest amphibians. Northwestern Naturalist 91:318-324.
- King, K.C., J.D. McLaughlin, A.D. Gendron, B.D. Pauli, I. Giroux, B. Rondeau, M. Boily, P. Juneau, and D.J. Marcogliese. 2007. Impacts of agriculture on the parasite communities of Northern Leopard Frogs (*Rana pipiens*) in southern Quebec, Canada. Parasitology 134:2063-2080.
- King, K.C., A.D. Gendron, J.D. McLaughlin, I. Giroux, P. Brousseau, D. Cyr, S.M. Ruby, M. Fournier, and D.J. Marcogliese. 2008. Short-term seasonal changes in parasite community structure in Northern Leopard froglets (*Rana pipiens*) inhabiting agricultural wetlands. Journal of Parasitology 94:13-22.
- King, K.C., J.D. McLaughlin, M. Boily, and D.J. Marcogliese. 2010. Effects of agricultural landscape and pesticides on parasitism in native Bullfrogs. Biological Conservation 143:302-310.
- King, O.M. 1960. Observations on Oklahoma toads. Southwestern Naturalist 5:103.
- King, R.B., and B. King. 1991. Sexual differences in color and color change in Wood frogs. Canadian Journal of Zoology 69:1963-1968.
- King, R.B., M.J. Oldham, W.F. Weller, and D. Wynn. 1997. Historic and current amphibian and reptile distributions in the island region of western Lake Erie. American Midland Naturalist 138:153-173.
- King, W. 1939. A survey of the herpetology of Great Smoky Mountains National Park. American Midland Naturalist 21:531-582.

- Kingsbury, B., and J. Gibson (eds.). 2002. Habitat Management Guidelines for Amphibians and Reptiles of the Midwest. Partners in Amphibian and Reptile Conservation, Technical Publication HMG-1, Montgomery, AL.
- Kingsbury, B., and J. Gibson (eds.). 2012. Habitat Management Guidelines for Amphibians and Reptiles of the Midwest. Partners in Amphibian and Reptile Conservation, Technical Publication HMG-1, 2nd Edition, Montgomery, AL.
- Kinney, V. C. 2011. Adult survivorship and juvenile recruitment in populations of Crawfish Frogs (*Lithobates areolatus*) with additional consideration of the population sizes of associated pond breeding species. M.S. thesis, Indiana State University, Terre Haute, IN.
- Kinney, V.C., J.L. Heemeyer, A.P. Pessier, and M.J. Lannoo. 2011. Seasonal pattern of *Batrachochytrium dendrobatidis* infection and mortality in *Lithobates areolatus*: affirmation of Vredenburg's "10,000 zoospore rule." PLoS One 6:e16708.
- Kirkland, A.H. 1897. The habits, food and economic value of the American Toad, *Bufo lentiginosus americanus* (LeC.). Hatch Experiment Station of the Massachusetts Agricultural College, Bulletin No. 46.
- Kirkland, A.H. 1904. Usefulness of the American Toad. U.S. Department of Agriculture Farmer's Bulletin No. 196.
- Kirkland, G.L. Jr., H.W. Snoddy, and T.L. Amsler. 1996. Impact of fire on small mammals and amphibians in a central Appalachian deciduous forest. American Midland Naturalist 135:253-260.
- Kirkman, K.L., L.L. Smith, P.F. Quintana-Ascencio, M.J. Kaesner, S.W. Golladay and A.L. Farmer. 2012. Is species richness congruent among taxa? Surrogacy, complementarity, and environmental correlates among three disparate taxa in geographically isolated wetlands. Ecological Indicators 18:131-139.
- Kiviat, E. 1982. Geographic distribution. *Scaphiopus holbrookii holbrookii* (Eastern Spadefoot). Herpetological Review 13:51-52.
- Kiviat, E., and J. Stapleton. 1983. *Bufo americanus* (American Toad). Estuarine habitat. Herpetological Review 14:46.
- Klaus, S.P. 2012. Correlates and temporal variation in call phenology of eastern Ontario frogs. M.S. thesis, Queen's University, Kingston, Ontario.
- Kleinhenz, P., M.D. Boone and G. Fellers. 2012. Effects of the amphibian chytrid fungus and four insecticides on Pacific Treefrogs (*Pseudacris regilla*). Journal of Herpetology 46:625-631.
- Klemens, M.W. 1993. Amphibians and Reptiles of Connecticut and Adjacent Regions. State Geological and Natural History Survey of Connecticut, Bulletin 112.
- Klemens, M.W., E. Kiviat, and R.E. Schmidt. 1987. Distribution of the Northern Leopard Frog, *Rana pipiens*, in the lower Hudson and Housatonic River valleys. Northeastern Environmental Science 6:99-101.
- Klemish, J.L., B.L. Johnson, E.R. Siddons and E.R. Wild. 2012. Occurrence of *Batrachochytrium dendrobatidis* among populations of *Lithobates clamitans* and *L. pipiens* in Wisconsin, USA. Herpetological Review 43:282-288.
- Klimstra, W.D., and C.W. Myers. 1965. Foods of the toad, *Bufo woodhousei fowleri* Hinckley. Transactions of the Illinois State Academy of Science 58:11-26.
- Kline, J. 1998. Monitoring amphibians in created and restored wetlands. Pp. 360-368 In M.J. Lannoo (ed.), Status & Distribution of Midwestern Amphibians. University of Iowa Press, Iowa City.
- Klomberg, K.F., and C.A. Marler. 2000. The neuropeptide arginine vasotocin alters male call characteristics involved in social interactions in the Grey Treefrog, *Hyla versicolor*. Animal Behaviour 59:807-812.
- Klugh, A.B. 1922. The economic value of the leopard frog. Copeia 1922:14-15.
- Klump, G.M., and H.C. Gerhardt. 1987. Use of non-arbitrary acoustic criteria in mate choice by female Gray Tree Frogs. Nature 326:286-288.
- Klymus, K.E., S.C. Humfeld, V.T. Marshall, D. Cannatella, and H.C. Gerhardt. 2010. Molecular patterns of differentiation in Canyon treefrogs (*Hyla arenicolor*): evidence for introgressive hybridization with the Arizona Treefrog (*H. wrightorum*) and correlations with advertisement call differences. Journal of Evolutionary Biology 23:1425-1435.
- Knapp, R.A. 2005. Effects of nonnative fish and habitat characteristics on lentic herpetofauna in Yosemite National Park, USA. Biological Conservation 121:265-279.

- Knapp, R.A., and K.R. Matthews. 2000. Non-native fish introductions and the decline of the mountain Yellow-legged Frog from within protected areas. *Conservation Biology* 14:428-438.
- Knapp, R.A., K.R. Matthews, and O. Sarnelle. 2001. Resistance and resilience of alpine lake fauna to fish introductions. *Ecological Monographs* 71:401-421.
- Knapp, R.A., K.R. Matthews, H.K. Preisler, and R. Jellison. 2003. Developing probabilistic models to predict amphibian site occupancy in a patchy landscape. *Ecological Applications* 13:1069-1082.
- Knight, E.L. 1972. Notes on cave-dwelling *Rana palustris* in Mississippi. *Bulletin of the Maryland Herpetological Society* 8:88.
- Knight, M.T., G.J. Barbay and E.O. Morrison. 1965. Incidence of infection by lung-fluke (*Haematolechus*) of the Bullfrog, *Rana catesbeiana*, in Jefferson County, Texas. *Southwestern Naturalist* 10:141-142.
- Knowlton, G.F. 1944. Some insect food of *Rana pipiens*. *Copeia* 1944:119.
- Knutson, M.G., J.R. Sauer, D.A. Olsen, M.J. Mossman, L.M. Hemesath, and M.J. Lannoo. 2000. Landscape associations of frogs and toad species in Iowa and Wisconsin, U.S.A. *Journal of the Iowa Academy of Science* 107:134-145.
- Knutson, M.G., W.B. Richardson, D.M. Reineke, B.R. Gray, J.R. Parmelee, and S.E. Weick. 2004. Agricultural ponds support amphibian populations. *Ecological Applications* 14:669-684.
- Koch, E.D., and C.R. Peterson. 1995. *Amphibians & Reptiles of Yellowstone and Grand Teton National Parks*. University of Utah Press, Salt Lake City.
- Kocher, T.D., and R.D. Sage. 1986. Further genetic analyses of a hybrid zone between leopard frogs (*Rana pipiens* complex) in central Texas. *Evolution* 40:21-33.
- Koller, R.L., and A.J. Gaudin. 1977. An analysis of helminth infections in *Bufo boreas* (Amphibia: Bufonidae) and *Hyla regilla* (Amphibia: Hylidae) in southern California. *Southwestern Naturalist* 21:503-509.
- Kolozsvary, M.B. 2003. Hydroperiod of wetlands and reproduction in Wood Frogs (*Rana sylvatica*) and Spotted Salamanders (*Ambystoma maculatum*). Ph.D. diss., University of Maine, Orono.
- Kolozsvary, M.B., and R.K. Swihart. 1999. Habitat fragmentation and the distribution of amphibians: patch and landscape correlates in farmland. *Canadian Journal of Zoology* 77:1288-1299.
- Koprivnikar, J., R.L. Baker, and M.R. Forbes. 2006. Environmental factors influencing trematode prevalence in grey tree frog (*Hyla versicolor*) tadpoles in southern Ontario. *Journal of Parasitology* 92:997-1001.
- Korb, R.M. 2001. Wisconsin frogs. Places to hear frogs and toads near our urban areas. Northeastern Wisconsin Audubon, Inc., Green Bay.
- Korfel, C.A. 2012. Distribution and environmental correlates between amphibians and the fungal pathogen, *Batrachochytrium dendrobatidis*. Ph.D. diss., Ohio State University, Columbus.
- Korfel, C.A., W.J. Mitsch, T.E. Hetherington and J.J. Mack. 2010. Hydrology, physiochemistry, and amphibians in natural and created vernal pool wetlands. *Restoration Ecology* 18:843-854.
- Korky, J.D. 1978. Differentiation of the larvae of members of the *Rana pipiens* complex in Nebraska. *Copeia* 1978:455-459.
- Korky, J.K., and J.A. Smallwood. 2011. Geographic variation in Northern Green Frog larvae, *Lithobates clamitans melanotus*, in northwestern New Jersey. *Bulletin of the Maryland Herpetological Society* 47:1-10.
- Korschgen, L.J. 1970. Soil-food-chain-pesticide wildlife relationships in aldrin-treated fields. *Journal of Wildlife Management* 34:186-199.
- Korschgen, L.J., and D.L. Moyle. 1955. Food habits of the Bullfrog in central Missouri farm ponds. *American Midland Naturalist* 54:332-341.
- Korschgen, L.J., and T.S. Baskett. 1963. Foods of impoundment- and stream-dwelling bullfrogs in Missouri. *Herpetologica* 19:89-99.
- Koster, W.J. 1946. The Robber Frog in New Mexico. *Copeia* 1946:173.
- Krakauer, T. 1968. The ecology of the Neotropical toad, *Bufo marinus*, in south Florida. *Herpetologica* 24:214-221.
- Krakauer, T. 1970a. The invasion of the toads. *Florida Naturalist* 43(1):12-14.
- Krakauer, T. 1970b. Tolerance limits of the toad, *Bufo marinus*, in south Florida. *Comparative Biochemistry and Physiology* 33:15-26.
- Kramek, W.C. 1972. Food of the frog *Rana septentrionalis* in New York. *Copeia* 1972:390-392.
- Kramek, W.C. 1976. Feeding behavior of *Rana*

- septentrionalis* (Amphibia, Anura, Ranidae). Journal of Herpetology 10:251-252.
- Kramek, W.C., and M.M. Stewart. 1980. Ontogenetic and sexual differences in the pattern of *Rana septentrionalis*. Journal of Herpetology 14:369-375.
- Kramer, A.B. 2011. Effects of the aquatic to terrestrial habitat ratio on an amphibian predator and its prey. Ph.D. diss., Washington University, St. Louis, MO.
- Kramer, D.C. 1971. Seasonal movements of Western Chorus Frogs (*Pseudacris triseriata triseriata*) tagged with radioactive cobalt. Ph.D. diss., Ball State University, Muncie, IN.
- Kramer, D.C. 1973. Movements of Western Chorus Frogs *Pseudacris triseriata triseriata* tagged with Co⁶⁰. Journal of Herpetology 7:231-235.
- Kramer, D.C. 1974. Home range of the Western Chorus Frog *Pseudacris triseriata triseriata*. Journal of Herpetology 8:245-246.
- Kraus, F. 2009. Alien Reptiles and Amphibians. A Scientific Compendium and Analysis. Springer, Dordrecht, The Netherlands.
- Kraus, F., and E.W. Campbell III. 2002. Human-mediated escalation of a formerly eradicable problem: the invasion of Caribbean frogs in the Hawaiian Islands. Biological Invasions 4:327-332.
- Kraus, F., and F. Duvall. 2004. New records of alien reptiles and amphibians in Hawai'i. Bishop Museum Occasional Papers 79:62-64.
- Kraus, F., E.W. Campbell, A. Allison, and T. Pratt. 1999. *Eleutherodactylus* frog introductions to Hawaii. Herpetological Review 30:21-25.
- Kretzer, J.E., and J.F. Cully Jr. 2001. Effects of Black-tailed Prairie Dogs on reptiles and amphibians in Kansas shortgrass prairie. Southwestern Naturalist 46:171-177.
- Krupa, J.J. 1986a. Multiple egg clutch production in the Great Plains Toad. Prairie Naturalist 18:151-152.
- Krupa, J.J. 1986b. Distribution in Oklahoma of the Bird-voiced Treefrog (*Hyla avivoca*). Proceedings of the Oklahoma Academy of Science 66:37-38.
- Krupa, J.J. 1987. Mate choice and mate location tactics in the Great Plains Toad (*Bufo cognatus*). Ph.D. diss., University of Oklahoma, Norman.
- Krupa, J.J. 1988. Fertilization efficiency of the Great Plains Toad (*Bufo cognatus*). Copeia 1988:800-802.
- Krupa, J.J. 1989. Alternative mating tactics in the Great Plains Toad. Animal Behaviour 37:1035-1043.
- Krupa, J.J. 1990. Advertisement call variation in the Great Plains Toad. Copeia 1990:884-886.
- Krupa, J.J. 1994. Breeding biology of the Great Plains Toad in Oklahoma. Journal of Herpetology 28:217-224.
- Krupa, J.J. 1995. *Bufo woodhousii* (Woodhouse's Toad). Fecundity. Herpetological Review 26: 142, 144.
- Krupa, J.J. 2002. Temporal shift in diet in a population of American Bullfrog (*Rana catesbeiana*) in Carlsbad Caverns National Park. Southwestern Naturalist 47:461-467.
- Kruse, K.C. 1973. Two morphotypes of the *Rana pipiens* complex in the central Plains states. M.S. thesis, Wayne State College, Detroit, MI.
- Kruse, K.C. 1981a. Mating success, fertilization potential, and male body size in the American Toad (*Bufo americanus*). Herpetologica 37:228-233.
- Kruse, K.C. 1981b. Phonotactic responses of female Northern Leopard Frogs (*Rana pipiens*) to *Rana blairi*, a presumed hybrid, and conspecific mating trills. Journal of Herpetology 15:145-150.
- Kruse, K.C., and D.G. Dunlap. 1976. Serum albumins and hybridization in two species of the *Rana pipiens* complex in the north central United States. Copeia 1976:394-396.
- Kruse, K.C., and M.G. Francis. 1977. A predation deterrent in larvae of the Bullfrog, *Rana catesbeiana*. Transactions of the American Fisheries Society 106:248-252.
- Kruse, K.C., and M. Mounce. 1982. The effects of multiple matings on fertilization capability in male American Toads (*Bufo americanus*). Journal of Herpetology 16:410-412.
- Kruse, K.C., and B.M. Stone. 1984. Largemouth bass (*Micropterus salmoides*) learn to avoid feeding on toad (*Bufo*) tadpoles. Animal Behaviour 32:1035-1039.
- Krynak, T.J., T.L. Robison and J.J. Scott. 2012. Detection of *Batrachochytrium dendrobatidis* in amphibian populations of northeast Ohio. Herpetological Review 43:87-89.
- Krysko, K.L., and C.M. Sheehy III. 2005. Ecological status of the Ocellated Gecko, *Sphaerodactylus argus argus* Gosse 1850, in Florida, with additional herpetological notes from the Florida Keys. Caribbean Journal of Science 41:169-172.
- Krysko, K.L., J.P. Burgess, M.R. Rochford, C.R.

- Gillette, D. Cueva, K.M. Enge, L.A. Somma, J.L. Stabile, D.C. Smith, J.A. Wasilewski, G.N. Kieckhefer III, M.C. Granatosky and S.V. Nielsen. 2011. Verified non-indigenous amphibians and reptiles in Florida from 1863 through 2010: outlining the invasion process and identifying invasion pathways and stages. *Zootaxa* 3028:1-64.
- Kuczynski, M., A. Vélez, J.J. Schwartz and M.A. Bee. 2010. Sound transmission and the recognition of temporally degraded call structure in Cope's Gray Treefrog (*Hyla chrysoscelis*). *Journal of Experimental Biology* 213:2840-2850.
- Kuntz, R.E. 1940. A study of anuran parasites of Commanche County, Oklahoma. M.S. thesis, University of Oklahoma, Norman.
- Kuntz, R.E. 1941. The metazoan parasites of some Oklahoma anura. *Proceedings of the Oklahoma Academy of Science* 21:33-34.
- Kuntz, R.E., and J.T. Self. 1943. An ecological study of the metazoan parasites of the Salientia of Commanche County, Oklahoma. *Proceedings of the Oklahoma Academy of Science* 24:35-38.
- Kuperman, B.I., V.E. Matey, R.N. Fisher, E.L. Ervin, M.L. Warburton, L. Bakhireva, and C.A. Lehman. 2004. Parasites of the African Clawed Frog, *Xenopus laevis*, in Southern California, U.S.A. *Comparative Parasitology* 71:229-232.
- Kupferberg, S. J. 1996a. The ecology of native tadpoles (*Rana boylii* and *Hyla regilla*) and the impact of invading bullfrogs (*Rana catesbeiana*) in a northern California river. Ph.D. diss., University of California, Berkeley.
- Kupferberg, S.J. 1996b. Hydrologic and geomorphic factors affecting conservation of a river-breeding frog (*Rana boylii*). *Ecological Applications* 6:1332-1344.
- Kupferberg, S.J. 1997a. Bullfrog (*Rana catesbeiana*) invasion of a California river: the role of larval competition. *Ecology* 78:1736-1751.
- Kupferberg, S.J. 1997b. The role of larval diet in anuran metamorphosis. *American Zoologist* 37:146-159.
- Kupferberg, S.J. 1997c. Facilitation of periphyton production by tadpole grazing: functional differences between species. *Freshwater Biology* 37:427-439.
- Kupferberg, S.J., J.C. Marks, and M.E. Power. 1994. Effects of variation in natural algal and detrital diets on larval anuran (*Hyla regilla*) life-history traits. *Copeia* 1994:446-457.
- Kupferberg, S.J., A. Catenazzi, K. Lunde, A.J. Lind, and W.J. Palen. 2009. Parasitic copepod (*Lernaea cyprinacea*) outbreaks in Foothill Yellow-legged Frogs (*Rana boylii*) linked to unusually warm summers and amphibian malformations in northern California. *Copeia* 2009:529-537.
- Kupferberg, S.J., A.J. Lind, V. Thill, and S.M. Yarnell. 2011. Water velocity tolerance in tadpoles of the Foothill Yellow-legged Frog (*Rana boylii*): swimming performance, growth, and survival. *Copeia* 2011:141-152.
- Kurzava, L.M., and P.J. Morin. 1998. Tests of functional equivalence: complementary roles of salamanders and fish in community organization. *Ecology* 79:477-489.
- Kuyt, E. 1991. A communal overwintering site for the Canadian toad, *Bufo americanus hemiophrys*, in the Northwest Territories. *Canadian Field-Naturalist* 105:119-121.
- Labanick, G.M. 1976. Prey availability, consumption and selection in the cricket frog, *Acrida crepitans* (Amphibia, Anura, Hylidae). *Journal of Herpetology* 10:293-298.
- Labanick, G.M., and R.A. Schlueter. 1976. Growth rates of recently transformed *Bufo woodhousei fowleri*. *Copeia* 1976:824-826.
- Lacan, I., K. Matthews, and K. Feldman. 2008. Interaction of an introduced predator with future effects of climate change in the recruitment dynamics of the imperiled Sierra Nevada Yellow-legged Frog (*Rana sierrae*). *Herpetological Conservation and Biology* 3:211-223.
- Lacki, M.J., J.W. Hummer, and H.J. Webster. 1992. Mine-drainage treatment wetland as habitat for herpetofaunal wildlife. *Environmental Management* 16:513-520.
- Lacoul, P., B. Freedman and T. Clair. 2011. Effects of acidification on aquatic biota in Atlantic Canada. *Environmental Reviews* 19: 429-460.
- Laerm, J., N.K. Castleberry, M.A. Menzel, R.A. Moulis, G.K. Williamson, J.B. Jensen, B. Winn, and M.J. Harris. 2000. Biogeography of amphibians and reptiles of the Sea Islands of Georgia. *Florida Scientist* 63:193-231.
- Lafferty, K.D., and C.J. Page. 1997. Predation on the endangered Tidewater Goby, *Eucyclogobius newberryi*, by the introduced African Clawed Frog, *Xenopus laevis*, with notes on the frog's parasites. *Copeia* 1997:589-592.

- LaFiandra, E.M., and K.J. Babbitt. 2004. Predator induced phenotypic plasticity in the Pinewoods Tree Frog, *Hyla femoralis*: necessary cues and the cost of development. *Oecologia* 138:350-359.
- Lamb, A.C. III. 1980. Observations on the life history of the Pig Frog, *Rana grylio* Stejneger, in southwest Georgia. M.S. thesis. Auburn University, Auburn, AL.
- Lamb, A.C. III. 1986. Hybridization and introgression between two species of treefrogs: mitochondrial DNA analysis. Ph.D. diss., University of Georgia, Athens.
- Lamb, T. 1984a. Amplexus displacement in the Southern Toad, *Bufo terrestris*. *Copeia* 1984:1023-1025.
- Lamb, T. 1984b. The influence of sex and breeding condition on microhabitat selection and diet in the Pig Frog *Rana grylio*. *American Midland Naturalist* 111:311-318.
- Lamb, T. 1987. Call site selection in a hybrid population of treefrogs. *Animal Behaviour* 35:1140-1144.
- Lamb, T., and J.C. Avise. 1986. Directional introgression of mitochondrial DNA in a hybrid population of tree frogs: the influence of mating behavior. *Proceedings of the National Academy of Sciences, USA* 83:2526-2530.
- Lamb, T., and J.C. Avise. 1987. Morphological variability in genetically defined categories of anuran hybrids. *Evolution* 41:157-163.
- Lamb, T., J.M. Novak, and D.L. Mahoney. 1990. Morphological asymmetry and interspecific hybridization: a case study using hylid frogs. *Journal of Evolutionary Biology* 3:295-309.
- Lamb, T., R.W. Gaul, Jr., M.L. Tripp, J.M. Horton and B.W. Grant. 1998. A herpetofaunal inventory of the lower Roanoke River floodplain. *Journal of the Elisha Mitchell Scientific Society* 114:43-55.
- Lamb, T., B.K. Sullivan, and K. Malmos. 2000. Mitochondrial gene markers for the hybridizing toads *Bufo microscaphus* and *Bufo woodhousii* in Arizona. *Copeia* 2000:234-237.
- Lamoureux, V.S., and D.M. Madison. 1999. Overwintering habitats of radio-implanted Green Frogs, *Rana clamitans*. *Journal of Herpetology* 33:430-435.
- Lamoureux, V.S., J.C. Maerz, and D.M. Madison. 2002. Premigratory autumn foraging forays in the Green Frog, *Rana clamitans*. *Journal of Herpetology* 36:245-254.
- Lampman, B.H. 1946. The Coming of the Pond Fishes. Binfords & Mort Publishers, Portland, OR.
- Lance, S.L., and K.D. Wells. 1993. Are Spring Peeper satellite males physiologically inferior to calling males? *Copeia* 1993:1162-1166.
- Lance, S.L., M. R. Erickson, R. W. Flynn, G. L. Mills, T. D. Tuberville, and D. E. Scott. 2012. Effects of chronic copper exposure on development and survival in the Southern Leopard Frog (*Lithobates* [*Rana*] *sphenocephalus*). *Environmental Toxicology and Chemistry* 31:1587-1594.
- Lanctot, C. 2012. The effects of glyphosate-based herbicides on the development of Wood Frogs, *Lithobates sylvaticus*. M.S. thesis, University of Ottawa, Ottawa, Ontario.
- Landé, S.P., and S.I. Guttman. 1973. The effects of copper sulfate on the growth and mortality rate of *Rana pipiens* tadpoles. *Herpetologica* 29:22-27.
- Landreth, H.F., and D.E. Ferguson. 1966a. Behavioral adaptations in the chorus frog, *Pseudacris triseriata*. *Journal of the Mississippi Academy of Sciences* 12:197-202.
- Landreth, H.F., and D.E. Ferguson. 1966b. Celestial orientation of Fowler's Toad, *Bufo fowleri*. *Behaviour* 26:105-123.
- Landreth, H.F., and D.E. Ferguson. 1967. Movements and orientation of the tailed frog, *Ascaphus truei*. *Herpetologica* 23:81-93.
- Landreth, H.F., and D.E. Ferguson. 1968. The sun compass of Fowler's Toad, *Bufo woodhousei fowleri*. *Behaviour* 30:27-43.
- Landreth, H.F., and M.T. Christensen. 1971. Orientation of the Plains Spadefoot Toad, *Scaphiopus bombifrons*, to solar cues. *Herpetologica* 27:454-461.
- Lang, E., C. Gerhardt, and C. Davidson. 2009. The Frogs and Toads of North America. A Comprehensive Guide to their Identification, Behavior, and Calls. Houghton Mifflin Harcourt, Boston.
- Langford, G.J., J.A. Borden, C.S. Major, and D.H. Nelson. 2007. Effects of prescribed fire on the herpetofauna of a southern Mississippi pine savanna. *Herpetological Conservation and Biology* 2:135-143.
- Langlois, T.H. 1964. Amphibians and reptiles of the Erie islands. *Ohio Journal of Science* 64:11-25.
- Langlois, V.S., A.C. Carew, B.D. Pauli, M.G. Wade, G.M. Cooke, and V.L. Trudeau. 2010. Low levels of the herbicide atrazine alters sex ratios and reduces metamorphic success in

- Rana pipiens* tadpoles raised in outdoor mesocosms. Environmental Health Perspectives 118:552-557.
- Lannoo, M. 1996. Okoboji Wetlands. A Lesson in Natural History. University of Iowa Press, Iowa City.
- Lannoo, M. J. 1998. Amphibian conservation and wetland management in the upper Midwest: a catch-22 for the cricket frog? Pp. 330-339 In M.J. Lannoo (ed.), Status & Distribution of Midwestern Amphibians. University of Iowa Press, Iowa City.
- Lannoo, M. J. (ed.). 2005. Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Lannoo, M.J. 2008. Malformed Frogs. The Collapse of Aquatic Ecosystems. University of California Press, Berkeley.
- Lannoo, M.J., K. Lang, T. Waltz, and G.S. Phillips. 1994. An altered amphibian assemblage: Dickinson County, Iowa, 70 years after Frank Blanchard's survey. American Midland Naturalist 131:311-319.
- Lannoo, M.J., J.A. Holman, G.S. Casper, and E. Johnson. 1998. Mummification following winterkill of adult Green Frogs (Ranidae: *Rana clamitans*). Herpetological Review 29:82-84.
- Lannoo, M.J., C. Petersen, R.E. Lovich, P. Nanjappa, C. Phillips, J.C. Mitchell, and I. Macallister. 2011. Do frogs get their kicks from Route 66? Continental U.S. transect reveals spatial and temporal patterns of *Batrachochytrium dendrobatidis* infection. PLoS One 6(7):e22211.
- Laposata, M.M., and W.A. Dunson. 1998. Effects of boron and nitrate on hatching success of amphibian eggs. Archives of Environmental Contamination and Toxicology 35:615-619.
- La Rivers, I. 1948. Some Hawaiian ecological notes. Wasmann Collector 7:85-110.
- Larsen, K.W., and P.T. Gregory. 1988. Amphibians and reptiles in the Northwest Territories. Occasional Papers of the Prince of Wales Northern Heritage Centre No. 3:31-51.
- Latham, R. 1968a. Notes on the eating of May beetles by a Fowler's toad. Engelhardtia 1:29.
- Latham, R. 1968b. Notes on some hibernating Fowler's toads. Engelhardtia 1:17.
- Laurin, M. 2010. How Vertebrates Left the Water. University of California Press, Berkeley.
- Lawler, J.J., S.L. Shafer, B.A. Bancroft and A.R. Blaustein. 2009. Projected climate impacts for the amphibians of the western hemisphere. Conservation Biology 24: 38-50.
- Lawler, S.P. 1989. Behavioural responses to predators and predation risk in four species of larval anurans. Animal Behaviour 38:1039-1047.
- Lawler, S.P., and P.J. Morin. 1993. Temporal overlap, competition, and priority effects in larval anurans. Ecology 74:174-182.
- Lawler, S.P., D. Dritz, T. Strange, and M. Holyoak. 1999. Effects of introduced Mosquitofish and Bullfrogs on the threatened California Red-legged Frog. Conservation Biology 13:613-622.
- Layne, J.R. Jr. 1995. Seasonal variation in the cryobiology of *Rana sylvatica* from Pennsylvania. Journal of Thermal Biology 20:349-353.
- Layne, J.R. Jr., and M.A. Romano. 1985. Critical thermal minima of *Hyla chrysoscelis*, *H. cinerea*, *H. gratiosa* and natural hybrids (*H. cinerea* x *H. gratiosa*). Journal of Experimental Zoology 41:216-221.
- Layne, J.R. Jr., and R.E. Lee Jr. 1987. Freeze tolerance and the dynamics of ice formation in Wood Frogs (*Rana sylvatica*) from southern Ohio. Canadian Journal of Zoology 65:2062-2065.
- Layne, J.R. Jr., and R.E. Lee Jr. 1989. Seasonal variation in freeze tolerance and ice content of the tree frog *Hyla versicolor*. Journal of Experimental Biology 249:133-137.
- Layne, J.R. Jr., and M.C. First. 1991. Resumption of physiological functions in the Wood Frog (*Rana sylvatica*) following freezing. American Journal of Physiology 261:R134-R137.
- Layne, J.R. Jr., and R.E. Lee Jr. 1995. Adaptations of frogs to survive freezing. Climate Research 5:53-59.
- Layne, J.R., and M.G. Stapleton. 2009. Annual variation in glycerol mobilization and effect of freeze rigor on post-thaw locomotion in the freeze-tolerant frog *Hyla versicolor*. Journal of Comparative Physiology 179B:215-221.
- Layne, J.R. Jr., R.E. Lee Jr., and J.L. Huang. 1990. Inoculation triggers freezing at high subzero temperatures in a freeze-tolerant frog (*Rana sylvatica*) and insect (*Eurosta solidaginis*). Canadian Journal of Zoology 68:506-510.
- Lazaroff, D.W., P.C. Rosen, and C.H. Lowe Jr. 2006. Amphibians, Reptiles, and their Habitats

- at Sabino Canyon. University of Arizona Press, Tucson.
- Lazell, J.D. Jr. 1968. Mr. Fowler's toad. Massachusetts Audubon 52(2):4 pp.
- Lazell, J.D. Jr. 1974. Reptiles & amphibians in Massachusetts. Rev. ed. Massachusetts Audubon Society, Lincoln.
- Lazell, J.D. Jr. 1976. This Broken Archipelago. Cape Cod and the Islands, Amphibians and Reptiles. Quadrangle/New York Times Book Company, NY.
- Lazell, J.D. Jr. 1989. Wildlife of the Florida Keys. Island Press, Washington, DC.
- Lazell, J.D., and T. Mann. 1991. Geographic distribution: *Bufo americanus charlesmithi* (Dwarf American Toad). Herpetological Review 22:62, 64.
- Leach, D.J. 2011. Efficacy of small diameter pipe-trap refugia for capturing metamorph treefrogs. Herpetological Review 42:47-49.
- Leary, C.J. 1999. Comparison between release vocalizations emitted during artificial and conspecific amplexus in *Bufo americanus*. Copeia 1999:506-508.
- Leary, C.J. 2001. Evidence of convergent character displacement in release vocalizations of *Bufo fowleri* and *Bufo terrestris* (Anura: Bufonidae). Animal Behaviour 61:431-438.
- Leary, C.J., A.M. Garcia, and R. Knapp. 2006. Stress hormone is implicated in satellite-caller associations and sexual selection in the Great Plains Toad. American Naturalist 168:431-440.
- Leavitt, D.J., and L.A. Fitzgerald. 2009. Diet of nonnative *Hyla cinerea* in a Chihuahuan Desert wetland. Journal of Herpetology 43:541-545.
- Leclair, R. Jr., and L. Vallières. 1981. Régimes alimentaires de *Bufo americanus* (Holbrook) et *Rana sylvatica* LeConte (Amphibia: Anura) nouvellement métamorphosées. Le naturaliste canadien 108:325-329.
- Leclair, R. Jr., and J. Castanet. 1987. A skeletochronological assessment of age and growth in the frog *Rana pipiens* Schreber (Amphibia, Anura) from southwestern Quebec. Copeia 1987:361-369.
- Leclair, R. Jr., and G. Laurin. 1996. Growth and body size in populations of Mink Frogs *Rana septentrionalis* from two latitudes. Ecography 19:296-304.
- Leclair, R., M.H. Leclair, J. Dubois, and J. Daoust. 2000. Age and size of Wood Frogs, *Rana sylvatica*, from Kuujjuarapik, northern Quebec. Canadian Field-Naturalist 114:381-387.
- LeConte, J. 1825. Remarks on the American species of the genera *Hyla* and *Rana*. Annals of the Lyceum of Natural History of New York 1:278-282.
- LeConte, J. 1855. Descriptive catalogue of the Ranina of the United States. Proceedings of the Academy of Natural Sciences of Philadelphia 7:423-431.
- LeConte, J. 1856 (1857). Description of a new species of *Hyla* from Georgia. Proceedings of the Academy of Natural Sciences of Philadelphia 8:146.
- Ledón-Rettig, C.C., D.W. Pfennig, and N. Nascone-Yoder. 2008. Ancestral variation and the potential for genetic accommodation in larval amphibians: implications for the evolution of novel feeding strategies. Evolution & Development 10:316-325.
- Ledón-Rettig, C.C., D.W. Pfennig, and E.J. Crespi. 2009. Stress hormones and the fitness consequences associated with the transition to a novel diet in larval amphibians. Journal of Experimental Biology 212:3743-3750.
- Ledón-Rettig, C.C., D.W. Pfennig, and E.J. Crespi. 2010. Diet and hormonal manipulation reveal cryptic genetic variation: implications for the evolution of novel feeding strategies. Proceedings of the Royal Society B 277:3569-3578.
- Leduc, J.C., K.J. Kozlowicz, J.D. Litzgus and D. Lesbarères. 2012. Ecology of herpetofaunal populations in smelting tailings wetlands. Herpetology Notes 5:115-125.
- Lee, D.S. 1969a. Notes on the feeding behavior of cave-dwelling bullfrogs. Herpetologica 25:211-212.
- Lee, D.S. 1969b. The treefrogs of Florida. Florida Naturalist (July):117-120.
- Lee, D.S. 1972. List of amphibians and reptiles of Assateague Island. Bulletin of the Maryland Herpetological Society 8:90-95.
- Lee, D.S. 1973a. Seasonal breeding distributions for selected Maryland and Delaware amphibians. Bulletin of the Maryland Herpetological Society 9:101-104.
- Lee, D.S. 1973b. Additional reptiles and amphibians from Assateague Island. Bulletin of the Maryland Herpetological Society 9:110-111.
- Lee, J.R. 2009. The herpetofauna of the Camp Shelby Joint Forces Training Center in the Gulf Coastal Plain of Mississippi. Southeastern Naturalist 8:639-652.

- Lee, J.R., and C. Sabette. 2009. *Scaphiopus holbrookii holbrookii* (Eastern Spadefoot). Maximum size. *Herpetological Review* 40:211.
- Lee, R.E. Jr., and J.P. Costanzo. 1993. Integrated physiological responses promoting anuran freeze tolerance. Pp. 501-510 In C. Carey, G.L. Florant, B.A. Wunder, and B. Horwitz (eds.), *Life in the Cold. 3. Ecological, Physiological, and Molecular Mechanisms*. Westview Press, Boulder, CO.
- Lefcort, H., and S.M. Eiger. 1993. Antipredatory behaviour of feverish tadpoles: implications for pathogen transmission. *Behaviour* 126:13-27.
- Lefcort, H., and A.R. Blaustein. 1995. Disease, predator avoidance, and vulnerability to predation in tadpoles. *Oikos* 74:469-474.
- Lefcort, H., R.A. Meguire, L.H. Wilson, and W.F. Ettinger. 1998. Heavy metals alter the survival, growth, metamorphosis, and antipredatory behavior of Columbia Spotted Frog (*Rana luteiventris*) tadpoles. *Archives of Environmental Contamination and Toxicology* 35:447-456.
- Leftwich, K.N., and P.D. Lilly. 1992. The effects of duration of exposure to acidic conditions on survival of *Bufo americanus* embryos. *Journal of Herpetology* 26:70-71.
- Lehmann, D.L. 1960. Some parasites of central California amphibians. *Journal of Parasitology* 46:10.
- Lehtinen, R.M. 2002. A historical study of the distribution of Blanchard's Cricket Frog (*Acris crepitans blanchardi*) in southeastern Michigan. *Herpetological Review* 33:194-197.
- Lehtinen, R.M., and S.M. Galatowitsch. 2001. Colonization of restored wetlands by amphibians in Minnesota. *American Midland Naturalist* 145:388-396.
- Lehtinen, R.M., and A.A. Skinner. 2006. The enigmatic decline of Blanchard's Cricket Frog (*Acris crepitans blanchardi*): a test of the habitat acidification hypothesis. *Copeia* 2006:159-167.
- Lehtinen, R.M., and M.C. MacDonald. 2011. Live fast, die young? A six-year field study of longevity and survivorship in Blanchard's Cricket Frog (*Acris crepitans blanchardi*). *Herpetological Review* 42:504-507.
- Lehtinen, R.M., S.M. Galatowitsch, and J.R. Tester. 1999. Consequences of habitat loss and fragmentation for wetland amphibian assemblages. *Wetlands* 19:1-12.
- Leiden, Y.A., M.E. Dorcas, and J.W. Gibbons. 1999. Herpetofaunal diversity in coastal plain communities of South Carolina. *Journal of the Elisha Mitchell Scientific Society* 115:270-280.
- Leips, J., M.G. McManus, and J. Travis. 2000. Response of treefrog larvae to drying ponds: comparing temporary and permanent pond breeders. *Ecology* 81:2997-3008.
- Lemm, J.M. 2006. *Field Guide to Amphibians and Reptiles of the San Diego Region*. University of California Press, Berkeley.
- Lemmon, A.R., and E.M. Lemmon. 2008. A likelihood framework for estimating phylogeographic history on a continuous landscape. *Systematic Biology* 57:544-561.
- Lemmon, E.M. 2007. Patterns and processes of speciation in North American chorus frogs. Ph.D. diss., University of Texas, Austin.
- Lemmon, E.M. 2009. Diversification of conspecific signals in sympatry: geographic overlap drives multidimensional reproductive character displacement in frogs. *Evolution* 63:1155-1170.
- Lemmon, E.M., and A. R. Lemmon. 2010. Reinforcement in chorus frogs: lifetime fitness estimates including intrinsic natural selection and sexual selection against hybrids. *Evolution* 64:1748-1761.
- Lemmon, E.M., A.R. Lemmon, and D.C. Cannatella. 2007a. Geological and climatic forces driving speciation in the continentally distributed trilling chorus frogs (*Pseudacris*). *Evolution* 61:2086-2103.
- Lemmon, E.M., A.R. Lemmon, J.T. Collins, J.A. Lee-Yaw, and D.C. Cannatella. 2007b. Phylogeny-based delimitation of species boundaries and contact zones in the trilling chorus frogs (*Pseudacris*). *Molecular Phylogenetics and Evolution* 44:1068-1082.
- Lemmon, E.M., A.R. Lemmon, J.T. Collins, and D.C. Cannatella. 2008. A new North American chorus frog species (Amphibia: Hylidae: *Pseudacris*) from the south-central United States. *Zootaxa* 1675:1-30.
- Lemmon, E.M., M. Murphy, and T. E. Juenger. 2011. Identification and characterization of nuclear microsatellite loci for multiple species of chorus frogs (*Pseudacris*) for population genetic analyses. *Conservation Genetics Resources* 3:233-237.
- Lemos Espinal, J.A., and H.M. Smith. 2007a. Anfibios y reptiles del estado de Chihuahua, México. Universidad Nacional Autónoma de

- México and Comisión Nacional para el Conocimiento y Uso de la Biodiversidad, México.
- Lemos Espinal, J.A., and H.M. Smith. 2007b. Anfibios y reptiles del estado de Coahuila, México. Universidad Nacional Autónoma de México and Comisión Nacional para el Conocimiento y Uso de la Biodiversidad, México.
- Lenaker, R.P. Jr. 1972. *Xenopus* in Orange County. Senior thesis, California State Polytechnic University, Kellogg-Voorhis Campus, Pomona, CA.
- Leney, J.L., K.G. Drouillard, and G.D. Haffner. 2006. Does metamorphosis increase the susceptibility of frogs to highly hydrophobic contaminants? Environmental Science and Technology 40:1491-1496.
- Leonard, W.P., H.A. Brown, L.L.C. Jones, K.R. McAllister, and R.M. Storm. 1993. Amphibians of Washington and Oregon. Seattle Audubon Society, Seattle.
- Leonard, W.P., N.P. Leonard, R.M. Storm, and P.E. Petzel. 1996. *Rana pretiosa* (Spotted Frog). Behavior and reproduction. Herpetological Review 27:195.
- Leonard, W.P., L. Hallock, and K.R. McAllister. 1997a. *Rana pretiosa* (Oregon Spotted Frog). Behavior and reproduction. Herpetological Review 28:28.
- Leonard, W.P., K.R. McAllister, and L.A. Hallock. 1997b. Autumn vocalizations by the Red-legged Frog (*Rana aurora*) and the Oregon Spotted Frog (*Rana pretiosa*). Northwestern Naturalist 78:73-74.
- Leonard, W.P., K.R. McAllister, and R.C. Friesz. 1999. Survey and assessment of Northern Leopard Frog (*Rana pipiens*) populations in Washington state. Northwestern Naturalist 80:51-60.
- Lepage, M., R. Courtois, C. Daigle, and S. Matte. 1997. Surveying calling anurans in Québec using volunteers. SSAR Herpetological Conservation 1:128-140.
- Letnic, M., J.K. Webb, and R. Shine. 2008. Invasive Cane Toads (*Bufo marinus*) cause mass mortality of freshwater crocodiles (*Crocodylus johnstoni*) in tropical Australia. Biological Conservation 141:1773-1782.
- Lever, C. 2001. The Cane Toad. The History and Ecology of a Successful Colonist. Westbury Academic and Scientific Publishing, Otley, England.
- Lever, C. 2003. Naturalized Reptiles and Amphibians of the World. Oxford University Press, Oxford.
- Levine, N.D., and R.R. Nye. 1977. A survey of blood and other tissue parasites of leopard frogs *Rana pipiens* in the United States. Journal of Wildlife Diseases 13:17-23.
- Lewis, D. 2011. A Field Guide to the Amphibians and Reptiles of Wyoming. The Wyoming Naturalist, Douglas, Wyoming.
- Lewis, D.L., G.T. Baxter, K.M. Johnson, and M.D. Stone. 1985. Possible extinction of the Wyoming toad, *Bufo hemiophrys baxteri*. Journal of Herpetology 19:166-168.
- Lewis, R.J. 1962. Food habits of the leopard frog (*Rana pipiens sphenocephala*) in a minnow hatchery. Transactions of the Illinois State Academy of Science 55:78-79.
- Lewis, T.H. 1946. Reptiles and amphibians of Smith Island, N.C. American Midland Naturalist 36:682-684.
- Lewis, T.H. 1950. The herpetofauna of the Tularosa Basin and Organ Mountains of New Mexico with notes on some ecological features of the Chihuahuan Desert. Herpetologica 6:1-10.
- Lewis, W.M. Jr. 1962. Stomach contents of Bullfrogs (*Rana catesbeiana*) taken from a minnow hatchery. Transactions of the Illinois State Academy of Science 55:80-83.
- Licht, L.E. 1967. Growth inhibition in crowded tadpoles: intraspecific and interspecific effects. Ecology 48:736-745.
- Licht, L.E. 1968. Unpalatability and toxicity of toad eggs. Herpetologica 24:93-98.
- Licht, L.E. 1969a. Palatability of *Rana* and *Hyla* eggs. American Midland Naturalist 82:296-298.
- Licht, L.E. 1969b. Unusual aspects of anuran sexual behavior as seen in the Red-legged Frog, *Rana aurora aurora*. Canadian Journal of Zoology 47:505-509.
- Licht, L.E. 1969c. Comparative breeding behavior of the Red-legged Frog (*Rana aurora aurora*) and the Western Spotted Frog (*Rana pretiosa pretiosa*) in southwestern British Columbia. Canadian Journal of Zoology 47:1287-1299.
- Licht, L.E. 1971a. Breeding habits and embryonic thermal requirements of the frogs, *Rana aurora aurora* and *Rana pretiosa pretiosa*, in the Pacific Northwest. Ecology 52:116-124.
- Licht, L.E. 1971b. The ecology of coexistence in two closely related species of frogs (*Rana*).

- Ph.D. diss., University of British Columbia, Vancouver.
- Licht, L.E. 1974. Survival of embryos, tadpoles, and adults of the frogs *Rana aurora aurora* and *Rana pretiosa pretiosa* sympatric in southwestern British Columbia. Canadian Journal of Zoology 52:613-627.
- Licht, L.E. 1975. Comparative life history features of the Western Spotted Frog, *Rana pretiosa*, from low- and high-elevation populations. Canadian Journal of Zoology 53:1254-1257.
- Licht, L.E. 1976. Sexual selection in toads (*Bufo americanus*). Canadian Journal of Zoology 54:1277-1284.
- Licht, L.E. 1986a. Comparative escape behavior of sympatric *Rana aurora* and *Rana pretiosa*. American Midland Naturalist 115:239-247.
- Licht, L.E. 1986b. Food and feeding behavior of sympatric Red-legged Frogs, *Rana aurora*, and Spotted Frogs, *Rana pretiosa*, in southwestern British Columbia. Canadian Field-Naturalist 100:22-31.
- Licht, L.E. 1991. Habitat selection of *Rana pipiens* and *Rana sylvatica* during exposure to warm and cold temperatures. American Midland Naturalist 125:259-268.
- Licht, L.E. 2003. Shedding light on ultraviolet radiation and amphibian embryos. Bioscience 53:551-561.
- Licht, L.E., and K.P. Grant. 1997. The effects of ultraviolet radiation on the biology of amphibians. American Zoologist 37:137-145.
- Lichtenberg, J.S., S.L. King, J.B. Grace, and S.C. Walls. 2006. Habitat associations of chorusing anurans in the lower Mississippi River Alluvial Valley. Wetlands 26:736-744.
- Ligas, F.J. 1960. The Everglades Bullfrog life history and management. Proceedings of the 14th Annual Conference, Southeastern Association of Game and Fish Commissioners, pp. 9-14. [slightly modified version entitled "The Everglades Bullfrog" published in Florida Wildlife, 1963, 16(12):14-19]
- Ligon, D.B., and P.A. Stone. 2003. *Kinosternon sonoriense* (Sonoran Mud Turtle) and *Bufo punctatus* (Red-spotted Toad). Predator-prey. Herpetological Review 34:141-142.
- Ligon, N. F., and D. K. Skelly. 2009. Cryptic divergence: countergradient variation in the Wood Frog. Evolutionary Ecology Research 11:1099-1109.
- Lillywhite, H.B. 1970. Behavioral temperature regulation in the Bullfrog, *Rana catesbeiana*. Copeia 1970:158-168.
- Lillywhite, H.B. 1971a. Temperature selection by the Bullfrog, *Rana catesbeiana*. Comparative Biochemistry and Physiology 40A:213-227.
- Lillywhite, H.B. 1971b. Thermal modulation of cutaneous mucus discharge as a determinant of evaporative water loss in the frog, *Rana catesbeiana*. Zeitschrift für vergleichende Physiologie 73:84-104.
- Lillywhite, H.B. 1975. Physiological correlates of basking in amphibians. Comparative Biochemistry and Physiology 52A:323-330.
- Lillywhite, H.B., and R.J. Wassersug. 1974. Comments on a postmetamorphic aggregation of *Bufo boreas*. Copeia 1974:984-986.
- Limbaugh, B.A., and E.P. Volpe. 1957. Early development of the Gulf Coast Toad, *Bufo valliceps* Wiegmann. American Museum Novitates 1842:1-32.
- Linck, M.H. 2000. Reduction in road mortality in a Northern Leopard Frog population. Journal of the Iowa Academy of Science 107:209-211.
- Lind, A.J. 2005. Reintroduction of a declining amphibian: determining an ecologically feasible approach for the Foothill Yellow-legged Frog (*Rana boylii*) through analysis of decline factors, genetic structure, and habitat associations. Ph.D. diss., University of California, Davis.
- Lind, A.J., H.H. Welsh Jr., and R.A. Wilson. 1996. The effects of a dam on breeding habitat and egg survival of the Foothill Yellow-legged Frog (*Rana boylii*) in northwestern California. Herpetological Review 27:62-67.
- Lind, A.J., J.B. Bettaso, and S.M. Yarnell. 2003. *Rana boylii* (Foothill Yellow-legged Frog) and *Rana catesbeiana* (Bullfrog). Reproductive behavior. Herpetological Review 34:234-235.
- Lind, A.J., P.Q. Spinks, G.M. Fellers, and H.B. Shaffer. 2011. Rangewide phylogeography and landscape genetics of the western U.S. endemic frog *Rana boylii* (Ranidae): implications for the conservation of frogs and rivers. Conservation Genetics 12:269-284.
- Linder, A.D., and E. Fichter. 1977. The Amphibians and Reptiles of Idaho. Idaho State University Press, Pocatello.
- Lindsay, H.L. Jr. 1958. Analysis of variation and factors affecting gene exchange in *Pseudacris clarkii* and *Pseudacris nigrita* in Texas. Ph.D. diss., University of Texas, Austin.
- Liner, A.E. 2006. Wetland predictors of

- amphibian distributions and diversity within the southeastern U.S. coastal plain. M.S. thesis, University of Georgia, Athens.
- Liner, A.E., L.L. Smith, S.W. Golladay, S.B. Castleberry, and J.W. Gibbons. 2008. Amphibian distributions within three types of isolated wetlands in southwest Georgia. *American Midland Naturalist* 160:69-81.
- Liner, E.A. 1954. The herpetofauna of Lafayette, Terrebonne and Vermilion parishes, Louisiana. *Proceedings of the Louisiana Academy of Sciences* 17:65-85.
- Liner, E.A. 2007. Geographic distribution. *Euhyas planirostris*. *Herpetological Review* 38:214.
- Ling, R.W., J.P. Van Amberg, and J.K. Werner. 1986. Pond acidity and its relationship to larval development of *Ambystoma maculatum* and *Rana sylvatica* in upper Michigan. *Journal of Herpetology* 20:230-236.
- Link, E.E. 2012. A modeling and geospatial approach to predicting effects on biodiversity due to vineyard expansion in Napa county. M.S. thesis, Sacramento State University, Sacramento, CA.
- Linnaeus, C. 1758. *Systema Naturae per Regna Tria Naturae, Secundum Classes, Ordines, Genera, Species cum Characteribus, Differentiis, Synonymis, Locis*. 10th ed., Vol. 1, L. Salvius, Stockholm, Sweden.
- Linsdale, J.M. 1927. Amphibians and reptiles of Doniphan County, Kansas. *Copeia* (164):75-81.
- Linsdale, J.M. 1933a. A specimen of *Rana tarahumarae* from New Mexico. *Copeia* 1933:222.
- Linsdale, J.M. 1933b. Records of *Ascaphus truei* in Idaho. *Copeia* 1933:223.
- Linsdale, J.M. 1938. Environmental responses of vertebrates in the Great Basin. *American Midland Naturalist* 19:1-206.
- Linsdale, J.M. 1940. Amphibians and reptiles in Nevada. *Proceedings of the American Academy of Arts and Sciences* 73:197-257.
- Linzey, D.W. 1967. Food of the leopard frog, *Rana p. pipiens*, in central New York. *Herpetologica* 23:11-17.
- Lipps, K.R. 1991. Vertebrates associated with tortoise (*Gopherus polyphemus*) burrows in four habitats in south-central Florida. *Journal of Herpetology* 25:477-481.
- Little, E.E., R. Calfee, L. Cleveland, R. Skinker, A. Zaga-Parkhurst, and M.G. Barron. 2000. Photo-enhanced toxicity in amphibians: synergistic interactions of solar ultraviolet radiation and aquatic contaminants. *Journal of the Iowa Academy of Science* 107:67-71.
- Little, E.L. 1940. Amphibians and reptiles of the Roosevelt Reservoir area, Arizona. *Copeia* 1940:260-265.
- Little, E.L., and J. Keller. 1937. Amphibians and reptiles of the Jornada Experimental Range, New Mexico. *Copeia* 1937:215-222.
- Little, M.L. 1983. The zoogeography of the *Hyla versicolor* complex in the central Appalachians, including physiological and morphological analyses. Ph.D. diss., University of Louisville, Louisville, KY.
- Little, M.L., and T.K. Pauley. 1986. A new record of the diploid species of Gray Treefrog, *Hyla chrysoscelis*, in West Virginia. *Proceedings of the West Virginia Academy of Science* 58:57-58.
- Little, M.L., B.L. Monroe Jr., and J.E. Wiley. 1989. The distribution of the *Hyla versicolor* complex in the northern Appalachian highlands. *Journal of Herpetology* 23:299-303.
- Littlejohn, M.J. 1958. Mating behavior in the treefrog *Hyla versicolor*. *Copeia* 1958:222-223.
- Littlejohn, M.J. 1959. Artificial hybridization within the Pelobatidae and Microhylidae. *Texas Journal of Science* 9:57-59.
- Littlejohn, M.J. 1960. Call discrimination and potential reproductive isolation in *Pseudacris triseriata* females from Oklahoma. *Copeia* 1960:370-371.
- Littlejohn, M.J. 1961a. Artificial hybridization between some hylid frogs of the United States. *Texas Journal of Science* 13:176-184.
- Littlejohn, M.J. 1961b. Mating call discrimination by females of the Spotted Chorus Frog (*Pseudacris clarkii*). *Texas Journal of Science* 13:49-50.
- Littlejohn, M.J. 1971. A reappraisal of mating call differentiation in *Hyla cadaverina* (= *Hyla californiae*) and *Hyla regilla*. *Evolution* 25:98-102.
- Littlejohn, M.J., and T.C. Michaud. 1959. Mating call discrimination by females of Strecker's Chorus Frog (*Pseudacris streckeri*). *Texas Journal of Science* 11:86-92.
- Littlejohn, M.J., and M.J. Fouquette Jr. 1960. Call discrimination by female frogs of the *Hyla versicolor* complex. *Copeia* 1960:47-49.
- Littlejohn, M.J., and R.S. Oldham. 1968. *Rana pipiens* complex: mating call structure and taxonomy. *Science* 162:1003-1005.

- Livezey, R.L. 1950. The eggs of *Acris gryllus crepitans* Baird. *Herpetologica* 6:139-140.
- Livezey, R.L. 1952. Some observations on *Pseudacris nigrita triseriata* (Wied) in Texas. *American Midland Naturalist* 47:372-381.
- Livezey, R.L. 1960. Description of the eggs of *Bufo boreas exsul*. *Herpetologica* 16:48.
- Livezey, R.L. 1962. Food of adult and juvenile *Bufo exsul*. *Herpetologica* 17:267-268.
- Livezey, R.L., and A.H. Wright. 1947. A synoptic key to the salientian eggs of the United States. *American Midland Naturalist* 37:179-222.
- Livezey, R.L., and H.M. Johnson. 1948. *Rana grylio* in Texas. *Herpetologica* 4:164.
- Livo, L. 1981a. Leopard frog (*Rana pipiens*) reproduction in Boulder County, Colorado. M.A. thesis, University of Colorado, Denver.
- Livo, L. 1984. Dry years along with Bullfrogs are creating problems for Colorado's two species of leopard frogs. *Colorado Outdoors* 33(4):16-18.
- Livo, L. 1998. Identification guide to montane amphibians of the southern Rocky Mountains. Colorado Division of Wildlife, Denver.
- Livo, L. 1999. The role of predation in the early life history of *Bufo boreas* in Colorado. Ph.D. diss., University of Colorado, Boulder.
- Livo, L., and D. Yeakley. 1997. Comparison of current with historical elevational range in the Boreal Toad, *Bufo boreas*. *Herpetological Review* 28:143-144.
- Livo, L.J., D. Chiszar, and H.M. Smith. 1997. *Spea multiplicata* (New Mexico Spadefoot). Defensive posture. *Herpetological Review* 28:148.
- Livo, L.J., G.A. Hammerson, and H.M. Smith. 1998. Summary of amphibians and reptiles introduced into Colorado. *Northwestern Naturalist* 79:1-11.
- Livo, L.J., L. Harvey and F. Bunch. 2012. Geographic distribution: *Anaxyrus* (=*Bufo*) *woodhousii* (Woodhouse's Toad). *Herpetological Review* 43:612-613.
- Loda, J.L., and D.L. Otis. 2009. Low prevalence of amphibian chytrid fungus (*Batrachochytrium dendrobatidis*) in Northern Leopard Frog (*Rana pipiens*) populations on north-central Iowa, USA. *Herpetological Review* 40:428-431.
- Loding, H.P. 1922. A preliminary catalogue of the Alabama amphibians and reptiles. *Geological Survey of Alabama, Museum Paper No. 5.*
- Loftin, C.S., A.J.K. Calhoun, S.J. Nelson, A.A. Elskus and K. Simon. 2012. Mercury bioaccumulation in wood frogs developing in seasonal pools. *Northeastern Naturalist* 19:579-600.
- Loftus-Hills, J.J. 1975. The evidence for reproductive character displacement between the toads *Bufo americanus* and *B. woodhousii fowleri*. *Evolution* 29:368-369.
- Loftus-Hills, J.J., and M.J. Littlejohn. 1992. Reinforcement and reproductive character displacement in *Gastrophryne carolinensis* and *G. olivacea* (Anura: Microhylidae): a reexamination. *Evolution* 46:896-906.
- Logier, E.B.S. 1928. The amphibians and reptiles of the Lake Nipigon region. *Transactions of the Royal Canadian Institute* 16:279-291.
- Logier, E.B.S. 1930. A faunal investigation of King Township, York County, Ontario. IV. The amphibians and reptiles of King Township. *Transactions of the Royal Canadian Institute* 17:203-208.
- Logier, E.B.S. 1931. The amphibians and reptiles of Long Point. *Transactions of the Royal Canadian Institute* 18:229-236.
- Logier, E.B.S. 1932. Some account of the amphibians and reptiles of British Columbia. *Transactions of the Royal Canadian Institute* 18:311-336.
- Logier, E.B.S. 1937. Amphibians of Ontario. Royal Ontario Museum, Zoology Handbook No. 3.
- Logier, E.B.S. 1941. The amphibians and reptiles of Prince Edward County, Ontario. University of Toronto Studies, Biological Sciences No. 48:93-106.
- Logier, E.B.S. 1942. Reptiles and amphibians of the Sault Ste. Marie region, Ontario. *Transactions of the Royal Canadian Institute* 24:154-163.
- Logier, E.B.S. 1952. The Frogs, Toads and Salamanders of Eastern Canada. Clarke, Irwin & Co., Toronto.
- Logier, E.B.S., and G.C. Toner. 1961. Check list of the amphibians & reptiles of Canada & Alaska. Royal Ontario Museum, Toronto, Ontario.
- Lohofener, R., and R. Altig. 1983. Mississippi Herpetology. Mississippi State University Research Center at National Space Technology Laboratories Bulletin No. 1.
- Lomolino, M.A., and G.A. Smith. 2003. Terrestrial vertebrate communities at Black-Tailed Prairie Dog (*Cynomys ludovicianus*)

- towns. *Biological Conservation* 115:89-100.
- Long, C.A. 1964. The Badger as a natural enemy of *Ambystoma tigrinum* and *Bufo boreas*. *Herpetologica* 20:144.
- Long, C.A. 1998. Notes on development and mortality in giant toads from Washington Island, Door County, Wisconsin. *Bulletin of the Chicago Herpetological Society* 33:161-164.
- Long, L.E., L.S. Saylor, and M.E. Soulé. 1995. A pH/UV-B synergism in amphibians. *Conservation Biology* 9:1301-1303.
- Long, M.C. 1970. Food habits of *Rana muscosa* (Anura: Ranidae). *Herpeton, Journal of the Southwestern Herpetologists Society* 5(1):1-8.
- Long, Z. 2010. *Anaxyrus boreas* (Western Toad). Advertisement vocalization. *Herpetological Review* 41:332-333.
- Long, Z.L., and E.E. Prepas. 2012. Scale and landscape perception: the case of refuge use by Boreal Toads (*Anaxyrus boreas boreas*). *Canadian Journal of Zoology* 90:1015-1022.
- Longcore, J.R., J.E. Longcore, A.P. Pessier, and W.A. Halteman. 2007. Chytridiomycosis widespread in anurans of northeastern United States. *Journal of Wildlife Management* 71:435-444.
- Loomis, R.B., and J.K. Jones Jr. 1953. Records of the Wood Frog, *Rana sylvatica*, from western Canada and Alaska. *Herpetologica* 9:149-151.
- López, L.O., G.A. Woolrich Piña, and J.A. Lemos Espinal. 2009. La familia Bufonidae en México. Universidad Nacional Autónoma de México, México.
- Lopez, T.J., and L.R. Maxon. 1990. *Rana catesbeiana* (Bullfrog). Polymely. *Herpetological Review* 21:90.
- Lord, R.D. Jr., and W.B. Davis. 1956. A taxonomic study of the relationship between *Pseudacris nigrita triseriata* Wied and *Pseudacris clarkii* Baird. *Herpetologica* 12:115-120.
- Lorraine, R.K. 1984. *Hyla crucifer crucifer* (Northern Spring Peeper). Reproduction. *Herpetological Review* 15:16-17.
- Lotshaw, D.P. 1977. Temperature adaptation and effects of thermal acclimation in *Rana sylvatica* and *Rana catesbeiana*. *Comparative Biochemistry and Physiology* 56B:287-294.
- Lotz, A., and C.R. Allen. 2007. Observer bias in anuran call surveys. *Journal of Wildlife Management* 71:675-679.
- Louisiana Department of Conservation. 1931. Frog industry in Louisiana. Division of Fisheries, Educational Pamphlet No. 2.
- Love, E.K., and M.A. Bee. 2010. An experimental test of noise-dependent voice amplitude regulation in Cope's Grey Treefrog, *Hyla chrysoscelis*. *Animal Behaviour* 80:509-515.
- Lovich, J.E., and T.R. Jaworski. 1988. Annotated list of amphibians and reptiles reported from Cedar Bog, Ohio. *Ohio Journal of Science* 88:139-143.
- Lowcock, L.A., T.F. Sharbel, J. Bonin, M. Ouellet, J. Rodrigue, and J.-L. DesGranges. 1997. Flow cytometric assay for in vivo genotoxic effects of pesticides in Green Frogs (*Rana clamitans*). *Aquatic Toxicology* 38:241-255.
- Lucas, E.A., and W.A. Reynolds. 1967. Temperature selection by amphibian larvae. *Physiological Zoology* 40:159-171.
- Luce, D., and J.J. Moriarty. 1999. *Rana sylvatica* (Wood Frog). Coloration. *Herpetological Review* 30:94.
- Lucke, B. 1952. Kidney carcinoma in the leopard frog: a virus tumor. *Annals of the New York Academy of Science* 54:1093-1109.
- Lucker, J.T. 1931. A new genus and a new species of trematode worms of the family Plagiorchiidae. *Proceedings of the United States National Museum* 79:1-8.
- Luepschen, L.K. 1981. *Bufo punctatus* (Red-spotted Toad). Larval coloration. *Herpetological Review* 12:79.
- Luhring, T.M. 2008. "Problem species" of the Savannah River Site, such as Brimley's Chorus Frog (*Pseudacris brimleyi*), demonstrate the hidden biodiversity concept on an intensively studied government reserve. *Southeastern Naturalist* 7:371-373.
- Luhring, T.M., and Z.D. Ross. 2012. *Gastrophryne carolinensis* (Eastern Narrow-mouthed Toad). Predation. *Herpetological Review* 43:118.
- Luja, V.H., and R. Rodríguez-Estrella. 2010. The invasive Bullfrog *Lithobates catesbeianus* in oases of Baja California Sur, Mexico: potential effects in a fragile ecosystem. *Biological Invasions* 12:2979-2983.
- Lunde, K.B. 2011. Investigations of altered aquatic ecosystems: biomonitoring, disease, and conservation. Ph.D. diss., University of California-Berkeley.
- Lutterschmidt, W.I., G.A. Marvin, and V.H. Hutchison. 1996. *Rana catesbeiana* (Bullfrog).

- Record size. *Herpetological Review* 27:74-75.
- Lyerla, T.A., and D.J. Jameson. 1968. Development of color in chimeras of Pacific tree frogs. *Copeia* 1968: 113-128.
- Lykens, D.V., and D.C. Forester. 1987. Age structure in the Spring Peeper: do males advertise longevity? *Herpetologica* 43:216-223.
- Lynch, J.D. 1964a. The toad *Bufo americanus charlesmithi* in Indiana, with remarks on the range of the subspecies. *Journal of the Ohio Herpetological Society* 4:103-104.
- Lynch, J.D. 1964b. Two additional predators of the spadefoot toad, *Scaphiopus holbrookii* (Harlan). *Journal of the Ohio Herpetological Society* 4:79.
- Lynch, J.D. 1970. A taxonomic revision of the leptodactylid frog genus *Syrrhophus* Cope. University of Kansas Publications, Museum of Natural History 20:1-45.
- Lynch, J.D. 1978. The distribution of leopard frogs (*Rana blairi* and *Rana pipiens*) (Amphibia, Anura, Ranidae) in Nebraska. *Journal of Herpetology* 12:157-162.
- Lynch, J.D. 1985. Annotated checklist of the amphibians and reptiles of Nebraska. *Transactions of the Nebraska Academy of Sciences* 13:33-57.
- Lynn, W.G., and A. Edelman. 1936. Crowding and metamorphosis in the tadpole. *Ecology* 17:104-109.
- Mabry, C.M., and J.L. Christiansen. 1991. The activity and breeding cycle of *Scaphiopus bombifrons* in Iowa. *Journal of Herpetology* 25:116-119.
- MacArthur, D.L., and J.W.T. Dandy. 1982. Physiological aspects of overwintering in the Boreal Chorus Frog (*Pseudacris triseriata maculata*). *Comparative Biochemistry and Physiology* 72A:137-141.
- MacCracken, J.G. and J.L. Stebbings. 2012. Test of a body condition index with amphibians. *Journal of Herpetology* 46:346-350.
- MacCulloch, R.D. 2002. The ROM Field Guide to Amphibians and Reptiles of Ontario. Royal Ontario Museum, Toronto.
- MacCulloch, R.D., and J.R. Bider. 1975. New records of amphibians and garter snakes in the James Bay Area of Quebec. *Canadian Field-Naturalist* 89:80-82.
- Macey, J.R., J.L. Strasburg, J.A. Brisson, V.T. Vredenburg, M. Jennings, and A. Larson. 2001. Molecular phylogenetics of western North American frogs of the *Rana boylii* species group. *Molecular Phylogenetics and Evolution* 19:131-143.
- Maciel, N.M., R.G. Collevatti, G.R. Colli, and E.F. Schwartz. 2010. Late Miocene diversification and phylogenetic relationships of the huge toads in the *Rhinella marina* (Linnaeus, 1758) species group (Anura: Bufonidae). *Molecular Phylogenetics and Evolution* 57:787-797.
- MacKay, W.P., S.J. Loring, T.M. Frost, and W.G. Whitford. 1990. Population dynamics of a playa community in the Chihuahuan Desert. *Southwest Naturalist* 35:393-402.
- MacKenzie, D.I., J.D. Nichols, G.B. Lachman, S. Droege, J.A. Royle, and C.A. Langtimm. 2002. Estimating site occupancy rates when detection probabilities are less than one. *Ecology* 83:2248-2255.
- Mackey, M.J., and M.D. Boone. 2009. Single and interactive effects of malathion, overwintered Green Frog tadpoles, and cyanobacteria on Gray Treefrog tadpoles. *Environmental Toxicology and Chemistry* 28:637-643.
- MacTague, L., and P.T. Northen. 1993. Underwater vocalization by the Foothill Yellow-legged Frog (*Rana boylii*). *Transactions of the Western Section of the Wildlife Society* 29:1-7.
- Maerz, J.C., B. Blossey, and V. Nuzzo. 2005a. Green Frogs show reduced foraging success in habitats invaded by Japanese Knotweed. *Biodiversity and Conservation* 14:2901-2911.
- Maerz, J.C., C.J. Brown, C.T. Chapin, and B. Blossey. 2005b. Can secondary compounds of an invasive plant affect larval amphibians? *Functional Ecology* 19:970-975.
- Mahan, J.T., and C.J. Biggers. 1977. Electrophoretic investigation of blood and parotoid venom proteins in *Bufo americanus* and *Bufo woodhousei fowleri*. *Comparative Biochemistry and Physiology* 57C:121-126.
- Mahan, R.D., and J.R. Johnson. 2007. Diet of the Gray Treefrog (*Hyla versicolor*) in relation to foraging site location. *Journal of Herpetology* 41:16-23.
- Mahaney, P.A. 1994. Effects of freshwater petroleum contamination on amphibian hatching and metamorphosis. *Environmental Toxicology and Chemistry* 13:259-265.
- Mahoney, J.J., and V.H. Hutchison. 1969. Photoperiod acclimation and 24-hour variations in the Critical Thermal Maxima of a tropical and a temperate frog. *Oecologia*

- 2:143-161.
- Mahrdt, C.R., and F.T. Knefler. 1972. Pet or pest? The African Clawed Frog. Environment Southwest (446):2-5.
- Mahrdt, C.R., and F.T. Knefler. 1973. The Clawed Frog—again. Environment Southwest (450):1-3.
- Maisonneuve, C., and S. Rioux. 2001. Importance of riparian habitats for small mammal and herpetofaunal communities in agricultural landscapes of southern Québec. Agriculture, Ecosystems and Environment 83:165-175.
- Majji, S., S. LaPatra, S.M. Long, R. Sample, L. Bryan, A. Sinning, and V.G. Chinchar. 2006. *Rana catesbeiana* virus Z (RCV-Z): a novel pathogenic ranavirus. Diseases of Aquatic Organisms 73:1-11.
- Malaret, L. 1978. Herpetofauna of Lacreek National Wildlife Refuge. Transactions of the Kansas Academy of Science 80:145-150.
- Malmos, K.B., R. Reed, and B. Starret. 1995. Hybridization between *Bufo woodhousii* and *Bufo punctatus* from the Grand Canyon region of Arizona. Great Basin Naturalist 55:368-371.
- Malmos, K.B., B.K. Sullivan, and T. Lamb. 2001. Calling behavior and directional hybridization between two toads (*Bufo microscaphus* x *B. woodhousii*) in Arizona. Evolution 55:626-630.
- Maniero, G.D., and C. Carey. 1997. Changes in selected aspects of immune function in the leopard frog, *Rana pipiens*, associated with exposure to cold. Journal of Comparative Physiology 167B:256-263.
- Manion, J.J. 1952. Comparative ecological studies on the amphibians of Cass County, Michigan, and vicinity. Ph.D. diss., University of Notre Dame, South Bend, IN.
- Manion, J.J., and L. Cory. 1952. Winter kill of *Rana pipiens* in shallow ponds. Herpetologica 8:32.
- Manis, M.L., and D.L. Claussen. 1986. Environmental and genetic influences on the thermal physiology of *Rana sylvatica*. Journal of Thermal Biology 11:31-36.
- Mannan, R.N. 2008. An assessment of survey methodology, calling activity, and habitat associations of Wood Frogs (*Rana sylvatica*) and Boreal Chorus Frogs (*Pseudacris maculata*) in a tundra biome. M.S. thesis, Texas Tech University, Lubbock.
- Manter, H.W. 1938. A collection of trematodes from Florida amphibia. Transactions of the American Microscopical Society 57:26-37.
- Mao, J., D.E. Green, G. Fellers, and V.G. Chinchar. 1999. Molecular characterization of iridoviruses isolated from sympatric amphibians and fish. Virus Research 63:45-52.
- Marchisin, A., and J.D. Anderson. 1978. Strategies employed by frogs and toads (Amphibia, Anura) to avoid predation by snakes (Reptilia, Serpentes). Journal of Herpetology 12:151-155.
- Marco, A., J.M. Kiesecker, D.P. Chivers, and A. Blaustein. 1998. Sex recognition and mate choice by male Western Toads, *Bufo boreas*. Animal Behaviour 55:1631-1635.
- Marco, A., C. Quilchano, and A.R. Blaustein. 1999. Sensitivity of nitrate and nitrite in pond-breeding amphibians from the Pacific Northwest. Environmental Toxicology and Chemistry 18:2836-2839.
- Marcogliese, D.J., K.C. King, H.M. Salo, M. Fournier, P. Brousseau, P. Spear, L. Champoux, J.D. McLaughlin, and M. Boily. 2009. Combined effects of agricultural activity and parasites on biomarkers in the Bullfrog, *Rana catesbeiana*. Aquatic Toxicology 91:126-134.
- Marcotte, L. 1907. Addition à notre faune batracienne. Naturaliste Canadien 34(10):155-157.
- Marcotte, L. 1918. La "Hyla pickeringii Holbrook." Naturaliste Canadien 44:113.
- Mares, M.A. 1972. Notes on *Bufo marinus* tadpole aggregations. Texas Journal of Science 23:433-435.
- Maret, E. 1867. Frogs on Newfoundland. Proceedings of the Nova Scotia Institute of Science 1(3):6.
- Marimon, S. 1923. Notes on the color changes of frogs. Pomona College Journal of Entomology and Zoology 15:27-31.
- Markle, T.M., and D.M. Green. 2009. New distributional records of amphibians in Quebec and Labrador. Herpetological Review 40:240-241.
- Marnell, L.F. 1997. Herpetofauna of Glacier National Park. Northwestern Naturalist 78:17-33.
- Marr, S.K., S.A. Johnson, A.H. Hara, and M.E. McGarrity. 2010. Preliminary evaluation of the potential of the helminth parasite *Rhabdias elegans* as a biological control agent for invasive Puerto Rico coquis (*Eleutherodactylus coqui*) in Hawaii. Biological Control 54:69-74.
- Marshall, J.L., and C.D. Camp. 1995. Aspects of

- the feeding ecology of the Little Grass Frog, *Pseudacris ocularis* (Anura: Hylidae). *Brimleyana* 22:1-7.
- Marshall, V.T., S.C. Humfeld, and M.A. Bee. 2003. Plasticity of aggressive signaling and its evolution in male Spring Peepers, *Pseudacris crucifer*. *Animal Behaviour* 65:1223-1234.
- Marshall, W.H., and M.F. Buell. 1955. A study of the occurrence of amphibians in relation to a bog succession, Itasca State Park, Minnesota. *Ecology* 36:381-387.
- Martin, C.H. 1940. Life cycle of toads in Yosemite Valley. *Yosemite Nature Notes* 19:90-92.
- Martin, D.L. 1991. Population census of a species of special concern: the Yosemite Toad (*Bufo canorus*). Fourth Biennial Conference of Research in California's National Parks. University of California, Davis.
- Martin, T.R., and D.B. Conn. 1990. The pathogenicity, localization, and cyst structure of echinostomatid metacercariae (Trematoda) infecting the kidneys of the frogs *Rana clamitans* and *Rana pipiens*. *Journal of Parasitology* 76:414-419.
- Martinez, J.L. 1948. Cuban frog leg industry. U.S. Fish and Wildlife Service, Fishery Leaflet 284.
- Martinez-Ortiz, M. 2004. Predicting habitat suitability and occurrence for Blanchard's Cricket Frogs (*Acris crepitans blanchardi*) in northwest Ohio. M.S. thesis, Bowling Green State University, Bowling Green, OH.
- Martinez Rodriguez, E., T. Gamble, M.V. Hurt, and S. Cotner. 2009. Presence of *Batrachochytrium dendrobatidis* at the headwaters of the Mississippi River, Itasca State Park, Minnesota, USA. *Herpetological Review* 40:48-50.
- Martof, B.S. 1952. Early transformation of the Greenfrog, *Rana clamitans* Latreille. *Copeia* 1952:115-116.
- Martof, B.S. 1953a. Home range and movements of the Green Frog, *Rana clamitans*. *Ecology* 34:529-543.
- Martof, B.S. 1953b. Territoriality in the Green Frog, *Rana clamitans*. *Ecology* 34:165-174.
- Martof, B.S. 1955. Observations on the life history and ecology of the amphibians of the Athens area, Georgia. *Copeia* 1955:166-170.
- Martof, B.S. 1956a. Growth and development of the Green Frog, *Rana clamitans*, under natural conditions. *American Midland Naturalist* 55:101-117.
- Martof, B.S. 1956b. Factors influencing the size and composition of populations of *Rana clamitans*. *American Midland Naturalist* 56:224-245.
- Martof, B.S. 1956c. *Amphibians and Reptiles of Georgia*. University of Georgia Press, Athens.
- Martof, B.S. 1958. Reproductive behavior of the chorus frog, *Pseudacris nigrita*. *Behaviour* 13:243-257.
- Martof, B.S. 1960. Autumnal breeding of *Hyla crucifer*. *Copeia* 1960:58-59.
- Martof, B.S. 1961. Vocalization as an isolating mechanism in frogs. *American Midland Naturalist* 65:118-126.
- Martof, B.S. 1962a. Some observations on the role of olfaction among salientian amphibia. *Physiological Zoology* 35:270-272.
- Martof, B.S. 1962b. The behavior of Fowler's Toad under various conditions of light and temperature. *Physiological Zoology* 35:38-46.
- Martof, B.S. 1962c. An unusual color variant of *Rana pipiens*. *Herpetologica* 17:269-270.
- Martof, B.S. 1963. Some observations on the herpetofauna of Sapelo Island, Georgia. *Herpetologica* 19:70-72.
- Martof, B.S., and R.L. Humphries. 1955. Observations on some amphibians from Georgia. *Copeia* 1955:245-248.
- Martof, B.S., and R.L. Humphries. 1959. Geographic variation in the Wood Frog *Rana sylvatica*. *American Midland Naturalist* 61:350-389.
- Martof, B.S., and E.F. Thompson Jr. 1964. A behavioral analysis of the mating call of the chorus frog, *Pseudacris triseriata*. *American Midland Naturalist* 71:198-209.
- Martof, B.S., W.M. Palmer, J.R. Bailey, and J.R. Harrison III. 1980. *Amphibians and Reptiles of the Carolinas and Virginia*. University of North Carolina Press, Chapel Hill. [second edition with different authorship in 2010]
- Maskell, A.J., J.H. Waddle, and K.G. Rice. 2003. *Osteopilus septentrionalis* (Cuban Treefrog). Diet. *Herpetological Review* 34:137.
- Maslin, T.P. 1947. *Rana sylvatica cantabrigensis* Baird in Colorado. *Copeia* 1947:158-162.
- Maslin, T.P. 1959. An annotated check list of the amphibians and reptiles of Colorado. *University of Colorado Studies, Series in Biology* No. 6:1-98.
- Masta, S.E., B.K. Sullivan, T. Lamb, and E.J. Routman. 2002. Molecular systematics, hybridization, and phylogeography of the *Bufo americanus* complex in eastern North

- America. Molecular Phylogenetics and Evolution 24:302-314.
- Masta, S.E., N.M. Laurent, and E.J. Routman. 2003. Population genetic structure of the toad *Bufo woodhousii*: an empirical assessment of the effects of haplotype extinction on nested cladistic analysis. Molecular Ecology 12:1541-1554.
- Mata-Silva, V., L.D. Wilson, J.D. Johnson, A. Rocha and W.D. Lukefahr. 2012. *Anaxyrus punctatus* (Red-spotted Toad). Predation. Herpetological Review 43:629.
- Materna, E.J., C.F. Rabini, and T.W. LaPoint. 1995. Effects of the synthetic pyrethroid insecticide, esfenvalerate, on larval leopard frogs (*Rana* spp.). Environmental Toxicology and Chemistry 14:613-622.
- Mathews, R.C., and A.C. Echternacht. 1984. Herpetofauna of the spruce-fir ecosystem in the southern Appalachian Mountains regions, with emphasis on the Great Smoky Mountains National Park. Pp. 155-167 In P.S. White (ed.), The Southern Appalachian Spruce-Fir Ecosystem. National Park Service, Research/Resources Management Report SER-71.
- Mathewson, R.F. 1955. Reptiles and amphibians of Staten Island. Proceedings of the Staten Island Institute of Arts and Sciences 17:28-50.
- Matson, T.O. 1990. A morphometric comparison of Gray Treefrogs, *Hyla chrysoscelis* and *H. versicolor*, from Ohio. Ohio Journal of Science 90:98-101.
- Matsuda, B.M. 2001. The effects of clear-cut timber harvest on the movement patterns of Tailed Frogs (*Ascaphus truei*) in southwestern British Columbia. M.S. thesis, University of British Columbia, Vancouver.
- Matsuda, B.M., and J.S. Richardson. 2005. Movement patterns and relative abundance of Coastal Tailed Frogs in clearcuts and mature forest stands. Canadian Journal of Forest Resources 35:1131-1138.
- Matsuda, B.M., D.M. Green, and P.T. Gregory. 2006. Amphibians and Reptiles of British Columbia. Royal BC Museum Handbook, Victoria, British Columbia.
- Mattfeldt, S.D., L.L. Bailey, and E.H.C. Grant. 2009. Monitoring multiple species: estimating state variables and exploring the efficacy of a monitoring program. Biological Conservation 142:720-737.
- Matthews, K.R., and K.L. Pope. 1999. A telemetric study of the movement patterns and habitat use of *Rana muscosa*, the Mountain Yellow-legged Frog, in a high-elevation basin in Kings Canyon National Park, California. Journal of Herpetology 33:615-624.
- Matthews, K.R., and H.K. Preisler. 2010. Site fidelity of the declining amphibian *Rana sierrae* (Sierra Nevada Yellow-legged Frog). Canadian Journal of Fisheries and Aquatic Sciences 67: 243-255.
- Matthews, K.R., K.L. Pope, H.K. Preisler, and R.A. Knapp. 2001. Effects of nonnative trout on Pacific Treefrogs (*Hyla regilla*) in the Sierra Nevada. Copeia 2001:1130-1137.
- Matthews, T.C. 1971. Genetic changes in a population of Boreal Chorus Frogs (*Pseudacris triseriata*) polymorphic for color. American Midland Naturalist 85:208-221.
- Matthews, T., and D. Pettus. 1966. Color inheritance in *Pseudacris triseriata*. Herpetologica 22:269-275.
- Maunder, J.E. 1983. Amphibians of the Province of Newfoundland. Canadian Field-Naturalist 97:33-46.
- Maunder, J.E. 1997. Amphibians of Newfoundland and Labrador: status changes since 1983. SSAR Herpetological Conservation 1:93-99.
- Mautz, W.J., and M.R. Dohm. 2004. Respiratory and behavioral effects of ozone on a lizard and a frog. Comparative Biochemistry and Physiology 139A:371-377.
- Maxson, L.R., and A.C. Wilson. 1975. Albumin evolution and organismal evolution in tree frogs (Hylidae). Systematic Zoology 24:1-15.
- Maxson, L., E. Pepper, and R.D. Maxon. 1977. Immunological resolution of a diploid-tetraploid species complex of tree frogs. Science 197:1012-1013.
- Maxson, R.D., and L.R. Maxson. 1978. Reply to Ralin. Science 202:336.
- Maxwell, B.A., and D.G. Hokit. 1999. Amphibians and reptiles. Pp. 2.1-2.29 In G. Joslin and H. Youmans (coordinators), Effects of Recreation on Rocky Mountain Wildlife. A Review for Montana. Committee on Effects of Recreation on Wildlife, Montana Chapter of the Wildlife Society. <http://joomla.wildlife.org/Montana/images/Documents/2hp1.pdf>
- Maxwell, B.A., J.K. Werner, P. Hendricks, and D.L. Flath. 2003. Herpetology in Montana. Northwest Fauna No. 5.
- Maxwell, J. P. 1999. Effects of species, size, and density on the feeding behavior of three anuran tadpoles. M.S. thesis, Mississippi State

- University, Mississippi State, MS.
- Mayer, F.L., and M.R. Ellersiek. 1986. Manual of acute toxicity: interpretation and data base for 410 chemicals and 66 species of freshwater animals. U.S. Fish and Wildlife Service Resource Publication 160.
- Mayhew, W.W. 1965. Adaptations of the amphibian, *Scaphiopus couchi*, to desert conditions. American Midland Naturalist 74:95-109.
- Maynard, E.A. 1934. The aquatic migration of the toad, *Bufo americanus* Le Conte. Copeia 1934:174-177.
- Mazanti, L.E. 1999. The effects of atrazine, metolachlor and chlorpyrifos on the growth and survival of larval frogs under laboratory and field conditions. Ph.D. diss., University of Maryland, College Park.
- Mazerolle, M.J. 2003. Detrimental effects of peat mining on amphibian abundance and species richness in bogs. Biological Conservation 113:215-223.
- Mazerolle, M.J. 2004. Amphibian road mortality in response to nightly variations in traffic intensity. Herpetologica 60:45-53.
- Mazerolle, M.J., M. Huot and M. Gravel. 2005. Behavior of amphibians on the road in response to car traffic. Herpetologica 61:380-388.
- Mazzoni, R., A.A. Cunningham, P. Daszak, A. Apolo, E. Perdomo, and G. Speranza. 2003. Emerging pathogen of wild amphibians in frogs (*Rana catesbeiana*) farmed for international trade. Emerging Infectious Diseases 9:995-998.
- McAlister, W.H. 1958. Species distribution in a mixed *Scaphiopus-Bufo* breeding chorus. Southwestern Naturalist 3:227-229.
- McAlister, W.H. 1959. The vocal structures and method of call production in the genus *Scaphiopus* Holbrook. Texas Journal of Science 11:60-77.
- McAlister, W.H. 1961. Artificial hybridization between *Rana a. areolata* and *R. p. pipiens* from Texas. Texas Journal of Science 13:423-426.
- McAlister, W.H. 1962. Variation in *Rana pipiens* Schreber in Texas. American Midland Naturalist 67:334-363.
- McAlister, W.H. 1963. A post-breeding concentration of the Spring Peeper. Herpetologica 19:293.
- McAllister, C.T. 1987. Protozoan and metazoan parasites of Strecker's Chorus Frog, *Pseudacris streckeri streckeri* (Anura: Hylidae), from north-central Texas. Proceedings of the Helminthological Society of Washington 54:271-274.
- McAllister, C.T. 1991. Protozoan, helminth, and arthropod parasites of the Spotted Chorus Frog, *Pseudacris clarkii* (Anura: Hylidae), from north-central Texas. Journal of the Helminthological Society of Washington 58:51-56.
- McAllister, C.T., and S.P. Tabor. 1985. *Gastrophryne olivacea* (Great Plains Narrowmouth Toad). Coexistence. Herpetological Review 16:109.
- McAllister, C.T., and D.B. Conn. 1990. Occurrence of tetrathyridia of *Mesocestoides* sp. (Cestoidea: Cyclophyllidea) in North American anurans (Amphibia). Journal of Wildlife Diseases 26:540-543.
- McAllister, C.T., and S.E. Trauth. 1995. New host records for *Myxidium serotinum* (Protozoa: Myxosporea) from North American amphibians. Journal of Parasitology 81:485-488.
- McAllister, C.T., and S.E. Trauth. 1996. Ultrastructure of *Cedpedia virginiensis* (Protista: Haptophrynidae) from the gall bladder of the Pickerel Frog, *Rana palustris*, in Arkansas. Proceedings of the Arkansas Academy of Science 50:133-136.
- McAllister, C.T., and C.R. Bursey. 2012. *Anaxyrus americanus charlesmithi* (Dwarf American Toad). Nematode parasite. Herpetological Review 43:117.
- McAllister, C.T., S.J. Upton, and D.B. Conn. 1989. A comparative study of endoparasites in three species of sympatric *Bufo* (Anura: Bufonidae), from Texas. Proceedings of the Helminthological Society of Washington 56:162-167.
- McAllister, C.T., S.J. Upton, S.E. Trauth, and C.R. Bursey. 1995a. Parasites of Wood Frogs, *Rana sylvatica* (Ranidae), from Arkansas, with a description of a new species of *Eimera* (Apicomplexa: Eimeriidae). Journal of the Helminthological Society of Washington 62:143-149.
- McAllister, C.T., S.E. Trauth, and L.D. Gage. 1995b. Vertebrate fauna of abandoned mines at Gold Mine Springs, Independence County, Arkansas. Proceedings of the Arkansas Academy of Science 49:184-187.
- McAllister, C.T., S.E. Trauth, and C.R. Bursey. 1995c. Parasites of the Pickerel Frog, *Rana*

- palustris* (Anura: Ranidae), from the southern part of its range. *Southwestern Naturalist* 40:111-116.
- McAllister, C.T., C.R. Bursey, and S.E. Trauth. 2008. New host and geographic records for some endoparasites (Myxosporea, Trematoda, Cestoidea, Nematoda) of amphibians and reptiles from Arkansas and Texas, U.S.A. *Comparative Parasitology* 75:241-254.
- McAllister, K.R. 1995. Distribution of amphibians and reptiles in Washington State. *Northwest Fauna* 3:81-112.
- McAllister, K.R., and W.P. Leonard. 1997. Washington State status report for the Oregon Spotted Frog. Washington Department of Fish and Wildlife, Olympia.
- McAllister, K.R., W.P. Leonard, and R.M. Storm. 1993. Spotted Frog (*Rana pretiosa*) surveys in the Puget Trough of Washington, 1989-1991. *Northwestern Naturalist* 74:10-15.
- McAllister, K.R., J.W. Watson, K. Risenhoover, and T. McBride. 2004. Marking and radiotelemetry of Oregon Spotted Frogs (*Rana pretiosa*). *Northwestern Naturalist* 85:20-25.
- McAlpine, D.F. 1996. Acanthocephala parasitic in North American amphibians: a review with new records. *Alytes* 14:115-121.
- McAlpine, D.F. 1997a. Historical evidence does not suggest New Brunswick amphibians have declined. *SSAR Herpetological Conservation* 1:117-127.
- McAlpine, D.F. 1997b. Helminth communities in Bullfrogs (*Rana catesbeiana*), Green Frogs (*Rana clamitans*), and Leopard Frogs (*Rana pipiens*) from New Brunswick, Canada. *Canadian Journal of Zoology* 75:1883-1890.
- McAlpine, D.F. 1997c. A simple transect technique for estimating abundance of aquatic ranid frogs. *SSAR Herpetological Conservation* 1:180-184.
- McAlpine, D.F., and T.G. Dilworth. 1989. Microhabitat and prey size among three species of *Rana* (Anura: Ranidae) sympatric in eastern Canada. *Canadian Journal of Zoology* 67:2244-2252.
- McAlpine, D.F., and M.D.B. Burt. 1998. Helminth communities in Bullfrogs (*Rana catesbeiana*), Green Frogs (*Rana clamitans*), and Leopard Frogs (*Rana pipiens*) from New Brunswick, Canada. *Canadian Field-Naturalist* 112:50-68.
- McAlpine, D.F., R.W. Harding, and R. Curley. 2006. Occurrence and biogeographic significance of the Pickerel Frog (*Rana palustris*) on Prince Edward Island, Canada. *Herpetological Natural History* 10:95-98.
- McAlpine, S. 1993. Genetic heterozygosity and reproductive success in the Green Treefrog, *Hyla cinerea*. *Heredity* 70:553-558.
- McAlpine, S., and M.H. Smith. 1995. Genetic correlates of fitness in the Green Treefrog, *Hyla cinerea*. *Herpetologica* 51:393-400.
- McAtee, W.L. 1921. Homing and other habits of the Bullfrog. *Copeia* (96):39-40.
- McAuliffe, J.R. 1978. Biological survey and management of sport-hunted Bullfrog populations in Nebraska. *Nebraska Game and Parks Commission, Lincoln*.
- McCaffery, R.M.W. 2011. Population dynamics of the Columbia Spotted Frog (*Rana luteiventris*): inference from long-term demography. Ph.D. diss., University of Montana, Missoula.
- McCaffery, R., A. Solonen and E. Crone. 2012. Frog population viability under present and future climate conditions: a Bayesian state-space approach. *Journal of Animal Ecology* 81:978-985.
- McCallum, M.L. Use of the claws to facilitate ecdysis in *Xenopus laevis*. *Bulletin of the Chicago Herpetological Society* 32:28.
- McCallum, M.L. 1998. Comparison of the feeding behavior of *Xenopus laevis* and *Hymenochirus boettgeri* with emphasis on the use of the forelimbs. *Bulletin of the Maryland Herpetological Society* 34:29-33.
- McCallum, M.L. 1998. Comparison of the feeding behaviors of two pipids. *Bulletin of the Chicago Herpetological Society* 32:24-25.
- McCallum, M.L. 1999a. *Rana sphenocephala* (Southern Leopard Frog) malformities found in Illinois with behavioral notes. *Transactions of the Illinois State Academy of Science* 92:257-264.
- McCallum, M.L. 1999b. *Acris crepitans* (Northern Cricket Frog). Death feigning. *Herpetological Review* 30:90.
- McCallum, M.L. 2003. Reproductive ecology and taxonomic status of *Acris crepitans blanchardi* with additional investigations on the Hamilton and Zuk hypotheses. Ph.D. diss., Arkansas State University, Jonesboro.
- McCallum, M.L. 2010. Future climate change spells catastrophe for Blanchard's Cricket Frog, *Acris blanchardi* (Amphibia: Anura: Hylidae). *Acta Herpetologica* 5:119-130.
- McCallum, M.L. 2011. Road mortality of turtles and Bullfrogs during a major flood.

- Herpetology Notes 4:183-186.
- McCallum, M.L. 2011. Orientation and directional escape by Blanchard's Cricket Frog (*Acris blanchardi*) in response to a human predator. *Acta Herpetologica* 6:161-168.
- McCallum, M.L. and J.L. McCallum. 2004. *Hyla chrysoscelis* (Cope's Treefrog) Tadpole overwintering. *Herpetological Review* 36:54.
- McCallum, M.L. and J.L. McCallum. 2012. Does body size reflect foraging in metamorphic Marine Toads? *Herpetology Notes* 5:15-18.
- McCallum, M.L., and S.E. Trauth. 2001a. Are tadpoles of the Illinois Chorus Frog (*Pseudacris streckeri illinoensis*) cannibalistic? *Transactions of the Illinois Academy of Science* 94:171-178.
- McCallum, M.L., and S.E. Trauth. 2001b. *Pseudacris streckeri illinoensis* (Illinois Chorus Frog). Terrestrial feeding. *Herpetological Review* 32:35.
- McCallum, M.L., and S.E. Trauth. 2001d. *Hyla cinerea* (Green Treefrog) Pre-hibernation live body weights. *Herpetological Review* 32:182.
- McCallum, M.L., and S.E. Trauth. 2002. Performance of Wood Frog (*Rana sylvatica*) tadpoles on three soybean meal - corn meal rations. *Pod@rcis* 3:78-85.
- McCallum, M.L., and S.E. Trauth. 2003a. A forty-three year museum study of Northern Cricket Frog (*Acris crepitans*) abnormalities in Arkansas: upward trends and distributions. *Journal of Wildlife Diseases* 39:522-528.
- McCallum, M.L., and S.E. Trauth. 2003b. *Acris crepitans* (Northern Cricket Frog). Communal hibernaculum. *Herpetological Review* 34:228.
- McCallum, M.L., and S.E. Trauth. 2004. Blanchard's Cricket Frog in Nebraska and South Dakota. *Prairie Naturalist* 36:129-135.
- McCallum, M.L., and S.E. Trauth. 2006. An evaluation of the subspecies *Acris crepitans blanchardi* (Anura, Hylidae). *Zootaxa* 1104:1-21.
- McCallum, M.L., and S.E. Trauth. 2007. Physiological trade-offs between immunity and reproduction in the Northern Cricket Frog (*Acris crepitans*). *Herpetologica* 63:269-274.
- McCallum, M.L., and S.E. Trauth. 2008. Egg mass fidelity suggests oophagy in the Illinois Chorus Frog (*Pseudacris streckeri illinoensis*). *Journal of Kansas Herpetology* 28:14.
- McCallum, M.L., and S.E. Trauth. 2009. *Hyla cinerea* (Green Tree Frog) and *Pseudacris triseriata* (Western Chorus Frog). Calling in amplexus. *Herpetological Review* 40:204-205.
- McCallum, M.L., V. Bogosian III, and E. Walsh. 2008. Mortality of Bullfrogs (*Rana catesbeiana*) from an in-ground swimming pool. *Journal of Kansas Herpetology* 28:15.
- McCallum, M.L., B.A. Wheeler, and S.E. Trauth. 2001a. *Pseudacris streckeri illinoensis* (Illinois Chorus Frog). Dysfunctional vocal sac. *Herpetological Review* 32:248-249.
- McCallum, M.L., B.A. Wheeler, and S.E. Trauth. 2001b. *Acris crepitans* (Northern Cricket Frog) Attempted cannibalism. *Herpetological Review* 32:99-100.
- McCallum, M.L., T.L. Klotz, and S.E. Trauth. 2003a. *Rana sylvatica* (Wood Frog). Death feigning. *Herpetological Review* 34:54-55.
- McCallum, M.L., T.L. Klotz, and S.E. Trauth. 2003b. *Rana sylvatica* (Wood Frog). Phonotactic stalking. *Herpetological Review* 34:54.
- McCallum, M.L., R.G. Neal, and S.E. Trauth. 2003. *Pseudacris streckeri illinoensis* (Illinois Chorus Frog) Satellite behavior. *Herpetological Review* 34:53.
- McCallum, M.L., C. Brooks, R. Mason, and S.E. Trauth. 2011a. Growth, reproduction, and life span in Blanchard's Cricket Frog (*Acris blanchardi*) with notes on the growth of the Northern Cricket Frog (*Acris crepitans*). *Herpetology Notes* 4:25-35.
- McCallum, M.L., W.E. Moser, B.A. Wheeler and S.E. Trauth. 2011b. Amphibian infestation and host size preference by the leech *Placobdella picta* (Verrill, 1872) (Hirudinida: Rhynchobdellida: Glossiphoniidae) from the eastern Ozarks, USA. *Herpetology Notes* 4:147-151.
- McCallum, M.L., S.E. Trauth, M.N. Mary, C.R. McDowell, and B.A. Wheeler. 2004. Fall breeding of the Southern Leopard Frog (*Rana sphenocephala*) in northeastern Arkansas. *Southeastern Naturalist* 3:401-408.
- McCallum, M.L., S.E. Trauth, C.R. McDowell, R.G. Neal and T.L. Klotz. 2006. Calling site characterization of the Illinois Chorus Frog (*Pseudacris streckeri illinoensis*) with additional notes on population size and breeding choruses. *Herpetological Natural History* 9:183-185.
- McClanahan, L. Jr. 1964. Osmotic tolerance of the muscles of two desert-inhabiting toads, *Bufo cognatus* and *Scaphiopus couchi*. *Comparative Biochemistry and Physiology* 12:501-508.

- McClanahan, L. Jr. 1967. Adaptations of the spadefoot toad, *Scaphiopus couchi*, to desert environments. Comparative Biochemistry and Physiology 20:73-99.
- McClanahan, L.L., R. Ruibal, and V.H. Shoemaker. 1994. Frogs and toads in deserts. Scientific American 270(3):82-88.
- McClelland, B.E., and W. Wilczynski. 1989. Release call characteristics of male and female *Rana pipiens*. Copeia 1989:1045-1049.
- McClelland, B.E., W. Wilczynski, and M.J. Ryan. 1996. Correlations between call characteristics and morphology in male cricket frogs (*Acris crepitans*). Journal of Experimental Biology 199:1907-1919.
- McClure, K.A. 1996. Ecology of *Pseudacris brachyphona*: a second look. M.S. thesis, Marshall University, Huntington, WV.
- McClure, K.V., J.W. Mora and G.R. Smith. 2009. Effects of light and group size on the activity of Wood Frog tadpoles (*Rana sylvatica*) and their response to a shadow stimulus. Acta Herpetologica 4:103-107.
- McCoid, M.J. 1985. An observation of reproductive behavior in a wild population of African clawed frogs, *Xenopus laevis*, in California. California Fish and Game 71:245-246.
- McCoid, M.J. 2005. *Rana berlandieri* (Rio Grande Leopard Frog). Salinity tolerance. Herpetological Review 36:437-438.
- McCoid, M.J., and T.H. Fritts. 1980a. Notes on the diet of a feral population of *Xenopus laevis* (Pipidae) in California. Southwestern Naturalist 25:272-275.
- McCoid, M.J., and T.H. Fritts. 1980b. Observations of feral populations of *Xenopus laevis* (Pipidae) in Southern California. Bulletin of the Southern California Academy of Science 79:82-86.
- McCoid, M.J., and T.H. Fritts. 1989. Growth and fatbody cycles in feral populations of the African Clawed Frog, *Xenopus laevis* (Pipidae), in California with comments on reproduction. Southwestern Naturalist 34:499-505.
- McCoid, M.J., and T.H. Fritts. 1993. Speculations on colonizing success of the African Clawed Frog, *Xenopus laevis* (Pipidae), in California. South African Journal of Zoology 28:59-61.
- McCoid, M.J., and T.H. Fritts. 1995. Female reproductive potential and winter growth of African Clawed Frogs (Pipidae: *Xenopus laevis*) in California. California Fish and Game 81:39-42.
- McCoid, M.J., G.K. Pregill, and R.M. Sullivan. 1993. Possible decline of *Xenopus* populations in Southern California. Herpetological Review 24:29-30.
- McCollum, S.A. 1993. Ecological consequences of predator-induced polyphenism in larval hylid frogs. Ph.D. diss., Duke University, Durham, NC.
- McCollum, S.A., and J. Van Buskirk. 1996. Costs and benefits of a predator-induced polyphenism in the Gray Treefrog *Hyla chrysoscelis*. Evolution 50:583-593.
- McCollum, S.A., and J.D. Leimberger. 1997. Predator-induced morphological changes in an amphibian: predation by dragonflies affects tadpole shape and color. Oecologia 109:615-621.
- McComb, W.C., and R.E. Noble. 1981. Herpetofaunal use of natural tree cavities and nest boxes. Wildlife Society Bulletin 9:261-267.
- McCormick, J. 1970. The Pine Barrens: a preliminary ecological inventory. Research Report No. 2, New Jersey State Museum, Trenton.
- McCoy, C.J. 1969. Diet of Bullfrogs (*Rana catesbeiana*) in central Oklahoma farm ponds. Proceedings of the Oklahoma Academy of Science 48:44-45.
- McCoy, C.J. 1982. Amphibians and reptiles in Pennsylvania. Carnegie Museum of Natural History Special Publication No. 6.
- McCoy, C.J., and C.J. Durden. 1965. New distribution records of amphibians and reptiles in eastern Canada. Canadian Field-Naturalist 79:156-157.
- McCoy, C.J., H.M. Smith, and J.A. Tihen. 1967. Natural hybrid toads, *Bufo punctatus* x *Bufo woodhousei*, from Colorado. Southwestern Naturalist 12:45-54.
- McCoy, K.A. 2006. The reproductive and ecotoxicological effects of agricultural exposure on anurans. Ph.D. diss., University of Florida, Gainesville.
- McCoy, K.A., L.J. Bortnick, C.M. Campbell, H.J. Hamlin, L.J. Guillette Jr., and C.M. St. Mary. 2008a. Agriculture alters gonadal form and function in the toad *Bufo marinus*. Environmental Health Perspectives 116:1526-1532.
- McCoy, K.A., L.K. Hoang, L.J. Guillette Jr. and C.M. St. Mary. 2008b. Renal pathologies in

- Giant Toads (*Bufo marinus*) vary with land use. *Science of the Total Environment* 407:348-357.
- McCoy, M.W. 2006. Trait-mediated predator-prey interactions between treefrog tadpoles and aquatic invertebrates: integrating size-structure, density, and among-individual variation. Ph.D. diss., University of Florida, Gainesville.
- McCoy, M.W. 2007. Conspecific density determines the magnitude and character of predator-induced phenotype. *Oecologia* 153:871-878.
- McCoy, M.W., and B.M. Bolker. 2008. Trait-mediated interactions: influence of prey size, density and experience. *Journal of Animal Ecology* 77:478-486.
- McCreary, B., and C.A. Pearl. 2010. *Pseudacris regilla* (Northern Pacific Treefrog). Cavity use. *Herpetological Review* 41:202-203.
- McDaniel, V.R., and J.E. Gardner. 1977. Cave fauna of Arkansas: vertebrate taxa. *Proceedings of the Arkansas Academy of Science* 31:68-71.
- McDonald, D.G., J.L. Ozog, and B.P. Simons. 1984. The influence of low pH environments on ion regulation in the larval stages of the anuran amphibian, *Rana clamitans*. *Canadian Journal of Zoology* 62:2171-2177.
- McGarrity, M.E., and S.A. Johnson. 2009. Geographic trend in sexual size dimorphism and body size of *Osteopilus septentrionalis* (Cuban Treefrog): implications for invasion of the southeastern United States. *Biological Invasions* 11:1411-1420.
- McGarrity, M.E., and S.A. Johnson. 2010. A radio telemetry study of invasive Cuban Treefrogs. *Florida Scientist* 73:225-235.
- McGrath, E.A., and M.M. Alexander. 1979. Observations on the exposure of larval Bullfrogs to fuel oil. *Transactions of the Northeast Section of The Wildlife Society* 36:45-51.
- McHenry, D.J., M.A. Gaston, and M.R.J. Forstner. 2010. *Bufo houstonensis* (Houston Toad). Predation. *Herpetological Review* 41:193.
- McKamie, J.A., and G.A. Heidt. 1974. A comparison of spring food habits of the bullfrog, *Rana catesbeiana*, in three habitats of central Arkansas. *Southwestern Naturalist* 19:105-119.
- McKeever, S. 1977. Observations of *Corethrella* feeding on tree frogs (*Hyla*). *Mosquito News* 37:522-523.
- McKeever, S., and F.E. French. 1991. *Corethrella* (Diptera: Corethrellidae) of eastern North America: laboratory life history and field responses to anuran calls. *Annals of the Entomological Society of America* 84:493-497.
- McKeown, J.P. 1968. The ontogenetic development of Y-axis orientation in four species of anurans. Ph.D. diss., Mississippi State University, Mississippi State.
- McKeown, S. 1996. *A Field Guide to Reptiles and Amphibians in the Hawaiian Islands*. Diamond Head Publishing, Los Osos, CA.
- McKibbina, R., W.T. Dushenob, G. van Aggelenc, and C.A. Bishop. 2008. The influence of water quality on the embryonic survivorship of the Oregon Spotted Frog (*Rana pretiosa*) in British Columbia, Canada. *Science of the Total Environment* 395: 28-40.
- McKinnell, R.G. 1984. Lucké tumor of frogs. Pp. 581-605 *In* G.L. Hoff, F.L. Frye, and E.R. Jacobson (eds.), *Diseases of Amphibians and Reptiles*. Plenum Press, New York.
- McKinnell, R.G., and J. Zambernard. 1968. Virus particles in renal tumors obtained from spring *Rana pipiens* of known geographic origin. *Cancer Research* 28:684-688.
- McKinnell, R.G., and D.L. Carlson. 2005. Lucké renal adenocarcinoma. Pp. 96-102 *In* M.J. Lannoo (ed.), *Amphibian Declines. The Conservation Status of United States Species*. University of California Press, Berkeley.
- McKinnell, R.G., D.M. Hoppe, and B.K. McKinnell. 2005. Monitoring pigment pattern morphs of Northern Leopard Frogs. Pp. 328-337 *In* M.J. Lannoo (ed.), *Amphibian Declines. The Conservation Status of United States Species*. University of California Press, Berkeley.
- McKnight, D.T. 2012. *Hyla chrysoscelis* (Cope's Gray Treefrog). Calling/mate choice. *Herpetological Review* 43:120-121.
- McLaren, I.A. 1965. Temperature and frog eggs. *Journal of General Physiology* 48:1071-1079.
- McLeod, D.S. 2005. Nebraska's declining amphibians. Pp. 292-294 *In* M.J. Lannoo (ed.), *Amphibian Declines. The Conservation Status of United States Species*. University of California Press, Berkeley.
- McLeod, R.F. 1995. The effects of timber harvest and prescribed burning on the distribution and abundance of reptiles and amphibians at Remington Farms, Maryland.

- M.S. thesis, Frostburg State University, Frostburg, MD.
- McLeod, R.F., and J.E. Gates. 1998. Response of herpetofaunal communities to forest cutting and burning at Chesapeake Farms, Maryland. *American Midland Naturalist* 139:164-177.
- McMahon T.A., N.T. Halstead, S. Johnson, T.R. Raffel, J.M. Romansic, P.W. Crumrine, R.K. Boughton, L.B. Martin, and J.R. Rohr. 2011. The fungicide Chlorothalonil is nonlinearly associated with corticosterone levels, immunity, and mortality in amphibians. *Environmental Health Perspectives* 119:1098-1103.
- McMahon, T.A., L.A. Brannelly, M.W.H. Chatfield, P.T.J. Johnson, M.B. Joseph, V.J. McKenzie, C.L. Richards-Zawacki, M.D. Venesky and J.R. Rohr. 2012. Chytrid fungus *Batrachochytrium dendrobatidis* has nonamphibian hosts and releases chemicals that cause pathology in the absence of infection. *Proceedings of the National Academy of Sciences, USA*. 110:210-215.
- McMenamin, S.K., E.A. Hadly, and C.K. Wright. 2008. Climatic change and wetland desiccation cause amphibian decline in Yellowstone National Park. *Proceedings of the National Academy of Sciences USA* 105:16988-16993.
- McMenamin, S.K., E.A. Hadly, and C.K. Wright. 2009. Reply to Patha et al.: amphibian habitat and populations in Yellowstone damaged by drought and global warming. *Proceedings of the National Academy of Sciences USA* 106:E23.
- McNicholl, M.K. 1972. An observation of apparent death-feigning by a toad. *Blue Jay* 30:54-55.
- Meacham, W.R. 1958. Factors affecting gene exchange between two allopatric populations of the *Bufo woodhousei* complex. Ph.D. diss., University of Texas, Austin.
- Meacham, W.R. 1962. Factors affecting secondary intergradation between two allopatric populations in the *Bufo woodhousei* complex. *American Midland Naturalist* 67:282-304.
- Means, D.B., and C.J. Longden. 1976. Aspects of the biology and zoogeography of the Pine Barrens Treefrog (*Hyla andersonii*) in northern Florida. *Herpetologica* 32:117-130.
- Means, D.B., and D. Simberloff. 1987. The peninsula effect: habitat correlated species decline in Florida's herpetofauna. *Journal of Biogeography* 14:551-568.
- Means, D.B., and R.C. Means. 2005. Effects of sand pine silviculture on pond-breeding amphibians in the Woodville Karst Plain of north Florida. Pp. 56-61 *In* W.E. Meshaka Jr. and K.J. Babbitt (eds.), *Amphibians and Reptiles. Status and Conservation in Florida*. Krieger Publishing, Malabar, FL.
- Means, R.C., and R. Franz. 2005. Herpetofauna of impacted wetlands in east Florida: a pre-augmentation assessment. Pp. 23-31 *In* W.E. Meshaka Jr. and K.J. Babbitt (eds.), *Amphibians and Reptiles. Status and Conservation in Florida*. Krieger Publishing, Malabar, FL.
- Mecham, J.S. 1954. Geographic variation in the Green Frog, *Rana clamitans* Latreille. *Texas Journal of Science* 6:1-24.
- Mecham, J.S. 1957. Some hybrid combinations between Strecker's Chorus Frog, *Pseudacris streckeri*, and certain related forms. *Texas Journal of Science* 9:337-345.
- Mecham, J.S. 1958. Some Pleistocene amphibians and reptiles from Friesenhahn Cave, Texas. *Southwestern Naturalist* 3:17-27.
- Mecham, J.S. 1959. Experimental evidence of the relationship of two allopatric chorus frogs of the genus *Pseudacris*. *Texas Journal of Science* 11:343-347.
- Mecham, J.S. 1960a. Introgressive hybridization between two southeastern treefrogs. *Evolution* 14:445-457.
- Mecham, J.S. 1960b. Natural hybridization between the tree frogs *Hyla versicolor* and *Hyla avivoca*. *Journal of the Elisha Mitchell Scientific Society* 76:64-67.
- Mecham, J.S. 1961. Isolating mechanisms in anuran amphibians. Pp. 24-61 *In* W.F. Blair (ed.), *Vertebrate Speciation*. University of Texas Press, Austin.
- Mecham, J.S. 1964. Ecological and genetic relationships of the two cricket frogs, genus *Acris*, from Alabama. *Herpetologica* 20:84-91.
- Mecham, J.S. 1965. Genetic relationships and reproductive isolation in southeastern frogs of the genera *Pseudacris* and *Hyla*. *American Midland Naturalist* 74:269-308.
- Mecham, J.S. 1968. Evidence of reproductive isolation between two populations of the frog, *Rana pipiens*, in Arizona. *Southwestern Naturalist* 13:35-44.
- Mecham, J.S. 1969. New information from experimental crosses on genetic relationships within the *Rana pipiens* species group. *Journal*

- of Experimental Zoology 170:169-180.
- Mecham, J.S., M.J. Littlejohn, R.S. Oldham, L.E. Brown, and J.R. Brown. 1973. A new species of leopard frog (*Rana pipiens* complex) from the plains of the central United States. Occasional Papers of the Museum of Texas Tech University 18:1-11.
- Meehan, W.E. 1906. Frog-farming. Pennsylvania Department of Fisheries, Bulletin No. 4.
- Meehan, W.E. 1908a. Frog farming an industry. Technical World Magazine 9(3):246-250.
- Meehan, W.E. 1908b. Possibilities of frog farming. Country Life in America 13:614-615, 640.
- Meehan, W.E., and E.A. Andrews. 1908. Frogs, *Rana* spp., Ranidae. Pp. 394-395 In L.H. Bailey (ed.), Cyclopedias of American Agriculture. A Popular Survey of Agricultural Conditions, Practices and Ideals in the United States and Canada. Macmillan, New York.
- Meek, S.E., and D.G. Elliot. 1899. Notes on a collection of cold-blooded vertebrates from the Olympic Mountains. Field Columbian Museum Publication 31, Zoological Series 1:225-236.
- Meeks, D.E., and J.W. Nagel. 1973. Reproduction and development of the Wood Frog, *Rana sylvatica*, in eastern Tennessee. Herpetologica 29:188-191.
- Meier, P.T. 2007. Fine spatial scale phenotypic divergence in Wood Frogs (*Lithobates sylvaticus*). Canadian Journal of Zoology 85: 873-882.
- Meijden, A. van der, M. Vinces, S. Hoegg, R. Boistel, A. Channing, and A. Meyer. 2007. Nuclear gene phylogeny of narrow-mouthed toads (Family: Microhylidae) and a discussion of competing hypotheses concerning their biogeographical origins. Molecular Phylogenetics and Evolution 44:1017-1030.
- Mendonça, M.T., P. Licht, M.J. Ryan, and R. Barnes. 1985. Changes in hormone levels in relation to breeding behavior in male Bullfrogs (*Rana catesbeiana*) at the individual and population levels. General and Comparative Endocrinology 58:270-279.
- Mengel, D.C. 2010. Amphibians as wetland restoration indicators on Wetlands Reserve Program sites in Lower Grand River Basin, Missouri. M.S. thesis, University of Missouri, Columbia, MO.
- Mennell, L. 1997. Amphibians in southwestern Yukon and northwestern British Columbia. SSAR Herpetological Conservation 1:107-109.
- Merkle, D.A. 1977. The occurrence of the Eastern Spadefoot, *Scaphiopus h. holbrookii*, in the central Piedmont of Virginia. Bulletin of the Maryland Herpetological Society 13:196-197.
- Merovich, C.E., and J.H. Howard. 2000. Amphibian use of constructed ponds on Maryland's Eastern Shore. Journal of the Iowa Academy of Science 107:151-159.
- Merrell, D.J. 1965. The distribution of the dominant Burnsi gene in the leopard frog, *Rana pipiens*. Evolution 19:69-85.
- Merrell, D.J. 1968. A comparison of the estimated size and the "effective size" of breeding populations of the leopard frog, *Rana pipiens*. Evolution 22:274-283.
- Merrell, D.J. 1969. Natural selection in a leopard frog population. Journal of the Minnesota Academy of Science 35:86-89.
- Merrell, D.J. 1970. Migration and gene dispersal in *Rana pipiens*. American Zoologist 10:47-52.
- Merrell, D.J. 1972. Laboratory studies bearing on pigment pattern polymorphisms in wild populations of *Rana pipiens*. Genetics 70:141-161.
- Merrell, D.J. 1973. Ecological genetics of anurans as exemplified by *Rana pipiens*. Pp. 329-335 In J.L. Vial (ed.), Evolutionary Biology of the Anurans. University of Missouri Press, Columbia.
- Merrell, D.J. 1977. Life history of the leopard frog, *Rana pipiens*, in Minnesota. University of Minnesota Bell Museum of Natural History, Occasional Papers No. 15.
- Merrell, D.J., and C.F. Rodell. 1968. Seasonal selection in the leopard frog, *Rana pipiens*. Evolution 22:284-288.
- Mertins, J.W., S.M. Torrence, and M.C. Sterner. 2011. Chiggers recently infesting *Spea* spp. in Texas, USA, were *Eutrombicula affreddugesi*, not *Hannemania* sp. Journal of Wildlife Diseases 47:612-617.
- Meshaka, W.E. Jr. 1993. Hurricane Andrew and the colonization of five invading species in south Florida. Florida Scientist 56:193-201.
- Meshaka, W.E. Jr. 1994. Giant Toad eaten by Red-shouldered Hawk. Florida Field Naturalist 22:54-55.
- Meshaka, W.E. Jr. 1996a. Diet and the colonization of buildings by the Cuban Treefrog, *Osteopilus septentrionalis* (Anura: Hylidae). Caribbean Journal of Science 32:59-63.

- Meshaka, W.E. Jr. 1996b. Vigilance and the Florida distribution of the Cuban Treefrog (*Osteopilus septentrionalis*). Herpetological Review 27:37-40.
- Meshaka, W.E. Jr. 1996c. Retreat use by the Cuban Treefrog (*Osteopilus septentrionalis*): implications for successful colonization in Florida. Journal of Herpetology 30:443-445.
- Meshaka, W.E. Jr. 2001. The Cuban Treefrog in Florida. University Press of Florida, Gainesville.
- Meshaka, W.E., Jr. 2011. A runaway train in the making: the exotic amphibians, reptiles, turtles, and crocodilians of Florida. Herpetological Conservation and Biology, Monograph 1:1-107.
- Meshaka, W.E. Jr., and B. Ferster. 1995. Two species of snakes prey on Cuban Treefrogs in southern Florida. Florida Field Naturalist 23:97-98.
- Meshaka, W.E. Jr., and G.E. Woolfenden. 1999. Relation of temperature and rainfall to movements and reproduction of the eastern narrow-mouthed toad (*Gastrophryne carolinensis*) in south-central Florida. Florida Scientist 62:213-221.
- Meshaka, W.E. Jr., and A.L. Mayer. 2005. Diet of the Southern Toad (*Bufo terrestris*) from the southern Everglades. Florida Scientist 68:261-266.
- Meshaka, W.E., Jr., and J.T. Collins. 2010. A Pocket Guide to Pennsylvania Frogs & Toads. Mennonite Press Inc., Newton, Kansas.
- Meshaka, W.E. Jr., and R. Powell. 2010. Diets of the native Southern Toad (*Anaxyrus terrestris*) and the exotic Cane Toad (*Rhinella marina*) from a single site in south-central Florida. Florida Scientist 73:175-179.
- Meshaka, W.E., Jr., and S.D. Marshall. 2011a. Clutch characteristics of the Southern Leopard Frog, *Lithobates sphenocephalus* (Cope, 1886), in Natchitoches, Louisiana. Bulletin of the Maryland Herpetological Society 47:36-37.
- Meshaka, W.E., Jr., and S.D. Marshall. 2011b. Clutch characteristics of the Pickerel Frog, *Lithobates palustris* (LeConte, 1825), in Natchitoches, Louisiana. Bulletin of the Maryland Herpetological Society 47:45-46.
- Meshaka, W.E., Jr., and S.D. Marshall. 2012. Seasonal activity, reproductive cycles, and growth of the Bronze Frog (*Lithobates clamitans clamitans*) in Florida. Florida Scientist 75:176-188.
- Meshaka, W.E. Jr., W.F. Loftus, and T. Steiner. 2000. The herpetofauna of Everglades National Park. Florida Scientist 63:84-103.
- Meshaka, W.E. Jr., B.P. Butterfield, and J.B. Hauge. 2004. The Exotic Amphibians and Reptiles of Florida. Krieger Publishing, Malabar, FL.
- Meshaka, W.E. Jr., S.D. Marshall, L.R. Raymond, and L.M. Hardy. 2009a. Seasonal activity, reproductive cycles, and growth of the bronze frog (*Lithobates clamitans clamitans*) in northern Louisiana: the long and the short of it. Journal of Kansas Herpetology 29:12-20.
- Meshaka, W.E. Jr., J. Boundy, S.D. Marshall, and J. Delahoussaye. 2009b. Seasonal activity, reproductive cycles, and growth of the Bronze Frog (*Lithobates clamitans clamitans*) in southern Louisiana: an endpoint in its geographic distribution and the variability of its geographic life history traits. Journal of Kansas Herpetology 31:12-17.
- Meshaka, W.E. Jr., J. Boundy, and A. Williams. 2009c. The dispersal of the Greenhouse Frog, *Eleutherodactylus planirostris* (Anura: Eleutherodactylidae), in Louisiana, with preliminary observations on several potential exotic colonizing species. Journal of Kansas Herpetology 32:13-16.
- Meshaka, W.E., Jr., S.D. Marshall and D. Heinicke. 2011a. Seasonal activity, reproductive cycles, and growth of the Bronze Frog (*Lithobates clamitans clamitans*) at the western edge of its geographic range. Bulletin of the Maryland Herpetological Society 47:11-22.
- Meshaka, W.E., Jr., P.R. Delis and S.A. Mortzfeldt. 2011b. Seasonal activity, reproductive cycles, and growth of the Northern Leopard Frog, *Lithobates pipiens* (Schreber, 1782), from Pennsylvania. Bulletin of the Maryland Herpetological Society 47:23-35.
- Meshaka, W.E., Jr., E. Wingert, R.W. Cassell, P.R. Delis and S.A. Mortzfeldt. 2011c. Breeding episodes of the Eastern Spadefoot, *Scaphiopus holbrookii* (Harlan, 1835), in central Pennsylvania. Journal of Kansas Herpetology 40:10-12.
- Meshaka, W.E., Jr., S. Bartle, P.R. Delis and E. Wingert. 2012a. Adult body size and clutch characteristics of the Spring Peeper, *Pseudacris crucifer* (Wied-Neuwied, 1838), from a single site in south-central Pennsylvania. Collinsorum 1:7-8.
- Meshaka, W.E., Jr., E. Wingert, R.W. Cassell,

- P.R. Delis and N. Potter, Jr. 2012b. Status and distribution of the Eastern Spadefoot, *Scaphiopus holbrookii* (Harlan, 1835), in Pennsylvania: statewide conservation implications for an imperiled species. *Collinsorum* 1:20-24.
- Meshaka, W.E., Jr., N. Edwards and P. R. Delis. 2012c. Seasonal activity, reproductive cycles, and growth of the Pickerel Frog, *Lithobates palustris* (LeConte, 1825), from Pennsylvania. *Herpetological Bulletin* 119:1-8.
- Metcalf, M.M. 1928. The Belltoads and their opalinid parasites. *American Naturalist* 62:5-21.
- Metcalf, Z.P. 1921. The food capacity of the toad. *Copeia* (100):81-82.
- Meteyer, C.U. 2000. Field guide to malformations of frogs and toads, with radiographic interpretations. U.S. Geological Survey, Biological Science Report USGS/BRD/BSR-2000-0005.
- Meteyer, C.U., I.K. Loeffler, J.F. Fallon, K.A. Converse, E. Green, J.C. Helgen, S. Kersten, R. Levey, L. Eaton-Poole, and J.G. Burkhardt. 2000a. Hind limb malformations in free-living Northern Leopard Frogs (*Rana pipiens*) from Maine, Minnesota, and Vermont suggest multiple etiologies. *Teratology* 62:151-171.
- Meteyer, C.U., R.A. Cole, K.A. Converse, D.E. Docherty, M. Wolcott, J.C. Helgren, R. Levey, L. Eaton-Poole, and J.G. Burkhardt. 2000b. Defining anuran malformations in the context of a developmental problem. *Journal of the Iowa Academy of Science* 107:72-78.
- Metter, D.E. 1960. The distribution of amphibians in eastern Washington. M.S. thesis, Washington State University, Pullman.
- Metter, D.E. 1961. Water levels as an environmental factor in the breeding season of *Bufo boreas boreas* (Baird and Girard). *Copeia* 1961:488.
- Metter, D.E. 1962. *Ascaphus truei* Stejneger in the Blue Mountains of southeastern Washington. Occasional Papers, Department of Biology, College of Puget Sound No. 21:205-206.
- Metter, D.E. 1963. Stomach contents of Idaho larval *Dicamptodon*. *Copeia* 1963:435-436.
- Metter, D.E. 1964a. A morphological and ecological comparison of two populations of the tailed frog, *Ascaphus truei* Stejneger. *Copeia* 1964:181-195.
- Metter, D.E. 1964b. On breeding and sperm retention in *Ascaphus*. *Copeia* 1964:710-711.
- Metter, D.E. 1966. Some temperature and salinity tolerances of *Ascaphus truei* Stejneger. *Journal of the Idaho Academy of Science* 4:44-47.
- Metter, D.E. 1967. Variation in the Ribbed Frog *Ascaphus truei* Stejneger. *Copeia* 1967:634-649.
- Metter, D.E. 1968. The influence of floods on population structure of *Ascaphus truei* Stejneger. *Journal of Herpetology* 1:105-106.
- Metter, D.E., and R.J. Pauken. 1969. An analysis of the reduction of gene flow in *Ascaphus truei* in the northwest U.S. since the Pleistocene. *Copeia* 1969:307-310.
- Metts, B.S., J.D. Lanham, and K.R. Russell. 2001. Evaluation of herpetofaunal communities on upland streams and beaver-impounded streams in the upper Piedmont of South Carolina. *American Midland Naturalist* 145:54-65.
- Metts, B.S., K.A. Buhlmann, D.E. Scott, T.D. Tuberville, and W.A. Hopkins. 2012. Interactive effects of maternal and environmental exposure to coal combustion wastes decrease survival of larval Southern Toads (*Bufo terrestris*). *Environmental Pollution* 164:211-218.
- Meyer, F.P. 1965. The experimental use of Guthion as a selective fish eradicant. *Transactions of the American Fisheries Society* 94:203-209.
- Meyers, J.M., and D.A. Pike. 2006. Herpetofaunal diversity of Alligator River National Wildlife Refuge, North Carolina. *Southeastern Naturalist* 5:235-252.
- Meylan, P. 2005. Late Pliocene anurans from Inglis 1A, Citrus County, Florida. *Bulletin of the Florida Museum of Natural History* 45:171-178.
- Micancin, J.P. 2008. Acoustic variation and species discrimination in southeastern sibling species, the cricket frogs *Acris crepitans* and *Acris gryllus*. Ph.D. diss., University of North Carolina, Chapel Hill.
- Micancin, J.P. 2010. *Acris gryllus* (Southern Cricket Frog). Dispersal. *Herpetological Review* 41:192.
- Micancin, J.P., and J.T. Mette. 2009. Acoustic and morphological identification of the sympatric cricket frogs *Acris crepitans* and *A. gryllus* and the disappearance of *A. gryllus* near the edge of its range. *Zootaxa* 2076:1-36.
- Micancin, J.P., and J.T. Mette. 2010. *Acris crepitans* (Northern Cricket Frog) and *Acris*

- gryllus* (Southern Cricket Frog). Interspecific agonism. *Herpetological Review* 41:192.
- Micancin, J.P., A. Tóth, R. Anderson and J.T. Mette. 2012. Sympatry and syntopy of the cricket frogs *Acris crepitans* and *Acris gryllus* in southeastern Virginia, USA and decline of *A. gryllus* at the northern edge of its range. *Herpetological Conservation and Biology* 7:276-298.
- Michaud, T.C. 1962. Call discrimination by females of the chorus frogs, *Pseudacris clarkii* and *Pseudacris nigrita*. *Copeia* 1962:213-215.
- Michaud, T.C. 1964. Vocal variation in two species of chorus frogs, *Pseudacris nigrita* and *Pseudacris clarkii*, in Texas. *Evolution* 18:498-506.
- Middendorf, L.J. 1957. Observations on the early spring activities of the Western Spotted Frog (*Rana pretiosa pretiosa*) in Gallatin County, Montana. *Proceedings of the Montana Academy of Science* 17:55-56.
- Middlemis Maher, J.E. 2011. Ecological and evolutionary context of the stress response in larval anurans. Ph.D. diss., University of Michigan, Ann Arbor.
- Mierzwa, K.S. 1998. Status of northeastern Illinois amphibians. Pp. 115-124 In M.J. Lannoo (ed.), *Status & Distribution of Midwestern Amphibians*. University of Iowa Press, Iowa City.
- Mierzwa, K.S. 2000. Wetland mitigation and amphibians: preliminary observations at a southwestern Illinois bottomland hardwood forest restoration site. *Journal of the Iowa Academy of Science* 107:191-194.
- Mifsud, D.A., and R. Mifsud. 2008. Golf courses as refugia for herpetofauna in an urban river floodplain. Pp. 303-310 In J.C. Mitchell, R.E. Jung Brown, and B. Bartholomew (eds.), *Urban Herpetology*. *Herpetological Conservation 3*. Society for the Study of Amphibians and Reptiles, Salt Lake City, UT.
- Mikaelian, I., M. Ouellet, B. Pauli, J. Rodrigue, J.C. Harshbarger, and D.M. Green. 2000. *Ichthyophonus*-like infection in wild amphibians from Québec, Canada. *Diseases of Aquatic Organisms* 40:195-201.
- Mikulka, P., J. Highes, and G. Aggerup. 1980. The effect of pretraining procedures and discriminative stimuli on the development of food selection behaviors in the toad (*Bufo terrestris*). *Behavioral and Neural Biology* 29:52-62.
- Milius, S. 1998. Fatal skin fungus found in U.S. frogs. *Science News* 154:7-8.
- Miller, C.E. 1968. Frogs with five legs. *Carolina Tips No. 31(1)*.
- Miller, D.A.W., C.S. Brehme, J.E. Hines, J.D. Nichols and R.N. Fisher. 2012a. Joint estimation of habitat dynamics and species interactions: disturbance reduces co-occurrence of non-native predators with an endangered toad. *Journal of Animal Ecology* [online first]
- Miller, D.A.W., L.A. Weir, B.T. McClintock, E.H. Campbell Grant, L.L. Bailey, T.R. Simons. 2012b. Experimental investigation of false positive errors in auditory species occurrence surveys. *Ecological Applications* 22: 1665-1674.
- Miller, D.G. Jr. 1899. A new treefrog from the District of Columbia. *Proceedings of the Biological Society of Washington* 13:75-78.
- Miller, D.L., C.R. Bursey, M.J. Gray, and L.M. Smith. 2004. Metacercariae of *Clinostomum attenuatum* in *Ambystoma tigrinum marmoratum*, *Bufo cognatus* and *Spea multiplicata* from west Texas. *Journal of Helminthology* 78:373-376.
- Miller, D.L., S. Rajeev, M.J. Gray, and C.A. Baldwin. 2007. Frog Virus 3 infection, cultured American Bullfrogs. *Emerging Infectious Diseases* 13:342-343.
- Miller, D.L., M.J. Gray, and A. Storfer. 2011. Ecopathology of ranaviruses infecting amphibians. *Viruses* 3:2351-2373.
- Miller, D.M., R.A. Young, T.W. Gatlin, and J.A. Richardson. 1982. Amphibians and reptiles of the Grand Canyon. *Grand Canyon Natural History Association, Monograph 4*:i-144.
- Miller, J.D. 1978. Observations on the diets of *Rana pretiosa*, *Rana pipiens*, and *Bufo boreas* from western Montana. *Northwest Science* 52:243-249.
- Miller, K., and G.C. Packard. 1977. An altitudinal cline in critical thermal maxima of chorus frogs (*Pseudacris triseriata*). *American Naturalist* 111:267-277.
- Miller, L.K., and P.J. Dehlinger. 1969. Neuromuscular function and low temperatures in frogs from cold and warm climates. *Comparative Biochemistry and Physiology B* 28:915-921.
- Miller, N. 1909a. The American Toad (*Bufo lentiginosus americanus*, LeConte). A study in dynamic biology. *American Naturalist* 43:641-668.
- Miller, N. 1909b. The American Toad (*Bufo*

- lentiginosus americanus*, LeConte). 2. A study in dynamic biology. American Naturalist 43:730-745.
- Miller, W.D., and J. Chapin. 1910. The toads of the northeastern United States. Science 32:315-317.
- Mills, N.E., and R.D. Semlitsch. 2004. Competition and predation mediate the indirect effects of an insecticide on Southern Leopard Frogs. Ecological Applications 14:1041-1054.
- Millzner, R. 1924. A larval acathocephalid, *Centrorhynchus californicus*, sp. nov., from the mesentery of *Hyla regilla*. University of California Publications in Zoology 26:225-230.
- Milstead, W.W., J.S. Mecham, and H. McClintock. 1950. The amphibians and reptiles of the Stockton Plateau in northern Terrell County, Texas. Texas Journal of Science 2:543-562.
- Milstead, W.W., A.S. Rand, and M.M. Stewart. 1974. Polymorphism in cricket frogs: an hypothesis. Evolution 28:489-491.
- Miner, B. G., S. E. Sultan, S. G. Morgan, D. K. Padilla and R. A. Relyea. 2005. Ecological consequences of phenotypic plasticity. Trends in Ecology and Evolution 20:685-692.
- Minton, J.E. 1949. Coral snake preyed upon by the Bullfrog. Copeia 1949:288.
- Minton, S.A. Jr. 1958. Observations on amphibians and reptiles of the Big Bend region of Texas. Southwestern Naturalist 3:28-54.
- Minton, S.A. Jr. 2001. Amphibians & Reptiles of Indiana. Indiana Academy of Science, Indianapolis.
- Minton, S.A., J.C. List, and M.J. Lodato. 1982. Recent records and status of amphibians and reptiles in Indiana. Proceedings of the Indiana Academy of Science 92:489-498.
- Mirarchi, R.E., M.A. Bailey, J.T. Garner, T.M. Haggerty T.L. Best, M.F. Mettee and P. O'Neil (eds.). 2004. Alabama Wildlife. Vol. 4. Conservation and Management Recommendations for Imperiled Wildlife. University of Alabama Press, Tuscaloosa.
- Mitchell, J.C. 1986. Life history patterns in a central Virginia frog community. Virginia Journal of Science 37:262-271.
- Mitchell, J.C. 1990. *Pseudacris feriarum* (Upland Chorus Frog). Predation. Herpetological Review 21:89-90.
- Mitchell, J.C. 1991. Amphibians and reptiles. Pp. 411-476 In K. Terwilliger (ed.), Virginia's Endangered Species. McDonald Woodward Publishing Company, Blacksburg, VA.
- Mitchell, J.C. 2002. An overview of amphibian and reptile assemblages on Virginia's Eastern Shore, with comments on conservation. Banisteria 20:31-45.
- Mitchell, J.C. 2012. Amphibians and reptiles of the Eastern Shore of Virginia National Wildlife Refuge and Fisherman Island National Wildlife Refuge. Banisteria 39:21-33.
- Mitchell, J.C., and J.M. Anderson. 1994. Amphibians and Reptiles of Assateague and Chincoteague Islands. Virginia Museum of Natural History, Special Publication No. 2.
- Mitchell, J.C., and K.A. Buhlmann. 1999. Amphibians and reptiles of the Shenandoah Valley sinkhole pond system in Virginia. Banisteria 13:129-142.
- Mitchell, J.C., and K.K. Reay. 1999. Atlas of Amphibians and Reptiles in Virginia. Virginia Department of Game and Inland Fisheries, Wildlife Diversity Division, Special Publication No.1.
- Mitchell, J.C., and B. Burwell. 2004. A malformed Fowler's Toad (*Bufo fowleri*) from the Shenandoah Valley of Virginia. Banisteria 24:51-52.
- Mitchell, J.C., and C.T. Georgel. 2005. Anophthalmia in an Upland Chorus Frog (*Pseudacris feriarum feriarum*) from southeastern Virginia. Banisteria 25:53-54.
- Mitchell, J.C., and L. McGranaghan. 2005. Albinism in American Bullfrog (*Rana catesbeiana*) tadpoles in Virginia. Banisteria 25:51.
- Mitchell, J.C., and T.K. Pauley. 2005. *Pseudacris brachyphona* (Cope, 1889). Mountain Chorus Frog. Pp. 465-466 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Mitchell, J.C., and J. White. 2005. Leucistic Wood Frog (*Rana sylvatica*) tadpole from northern Virginia. Banisteria 25:52-53.
- Mitchell, J.C., A.R. Breisch, and K.A. Buhlmann. 2006. Habitat Management Guidelines for Amphibians and Reptiles of the Northeastern United States. Partners in Amphibian and Reptile Conservation, Technical Publication HMG-3, Montgomery, AL.
- Mitrovich, M.J., E.A. Gallegos, L.M. Lyren, R.E. Lovich and R.N. Fisher. 2011. Habitat use and movement of the endangered Arroyo Toad (*Anaxyrus californicus*) in coastal Southern

- California. *Journal of Herpetology* 45:319-328.
- Mittleman, M.B. 1945. The status of *Hyla phaeocrypta* with notes on its variation. *Copeia* 1945:31-37.
- Mittleman, M.B. 1950. Miscellaneous notes on some amphibians and reptiles from the southeastern United States. *Herpetologica* 6:20-24.
- Mittleman, M.B., and G.S. Myers. 1949. Geographic variation in the Ribbed Frog, *Ascaphus truei*. *Proceedings of the Biological Society of Washington* 62:57-68.
- Mizelle, J.D., D.C. Kritsky, and H.D. McDougal. 1969. Studies on monogenetic trematodes. 2. New species of *Gyrodactylus* from amphibia. *Journal of Parasitology* 55:740-741.
- Mohr, C.E. 1948. Unique animals inhabit subterranean Texas. *National Speleological Society Bulletin* 10:15-21, 88.
- Mohr, J.R., and M.E. Dorcas. 1999. A comparison of anuran calling patterns at two Carolina Bays in South Carolina. *Journal of the Elisha Mitchell Scientific Society* 115:63-70.
- Moler, P.E. 1981. Notes on *Hyla andersonii* in Florida and Alabama. *Journal of Herpetology* 15: 441-444.
- Moler, P.E. 1985. A new species of frog (Ranidae: *Rana*) from northwestern Florida. *Copeia* 1985:379-383.
- Moler, P.E. 1992. Florida Bog Frog *Rana okaloosae* Moler. Pp. 30-33 In P.E. Moler (ed.), Rare and Endangered Biota of Florida. Vol. 3. Amphibians and Reptiles. University Press of Florida, Gainesville.
- Monello, R.J., and R.G. Wright. 1999. Amphibian habitat preferences among artificial ponds in the Palouse Region of northern Idaho. *Journal of Herpetology* 33:298-303.
- Monroe, B.L. Jr., and R.W. Taylor. 1972. Occurrence of the Barking Treefrog, *Hyla gratiosa*, in Kentucky. *Journal of Herpetology* 6:78.
- Monroe, B.L. Jr., and R.W. Giannini. 1977. Distribution of the Barking Treefrog in Kentucky. *Transactions of the Kentucky Academy of Science* 38:143-144.
- Monsen, K.J., and M.S. Blouin. 2003. Genetic structure in a montane ranid frog: restricted gene flow and nuclear-mitochondrial discordance. *Molecular Ecology* 12:3275-3286.
- Monsen-Collar, K., L. Hazard, and R. Dussa. 2010. Comparison of PCR and RT-PCR in the first report of *Batrachochytrium dendrobatidis* in amphibians in New Jersey, USA. *Herpetological Review* 41:460-462.
- Montanucci, R. 2006. A review of the amphibians of the Jim Timmerman Natural Resources Area, Oconee and Pickens counties, South Carolina. *Southeastern Naturalist* 5 (Monograph 1):1-58.
- Moore, H. 1965. A mid-summer trip to Moosonee. *The Wood Duck* 19:163-165.
- Moore, J.A. 1939. Temperature tolerance and rates of development in eggs of Amphibia. *Ecology* 20:459-478.
- Moore, J.A. 1940. Adaptive differences in the egg membranes of frogs. *American Naturalist* 74:89-93.
- Moore, J.A. 1942a. Embryonic temperature tolerance and rates of development in *Rana catesbeiana*. *Biological Bulletin* 83:375-388.
- Moore, J.A. 1942b. An embryological and genetical study of *Rana burnsi* Weed. *Genetics* 27:408-416.
- Moore, J.A. 1944. Geographic variation in *Rana pipiens* Schreber of eastern North America. *Bulletin of the American Museum of Natural History* 82:345-370.
- Moore, J.A. 1949a. Patterns of evolution in the genus *Rana*. Pp. 315-338 In G.L. Jepsen, E. Mayr, and G.G. Simpson (eds.), *Genetics, Paleontology and Evolution*. Princeton University Press, Princeton, NJ.
- Moore, J.A. 1949b. Geographic variation of adaptive characters in *Rana pipiens* Schreber. *Evolution* 3:1-24.
- Moore, J.A. 1952. An analytical study of the geographic distribution of *Rana septentrionalis*. *American Naturalist* 86:5-22.
- Moore, J.A. 1955. Abnormal combinations of nuclear and cytoplasmic systems in frogs and toads. *Advances in Genetics* 7:139-182.
- Moore, J.A. 1975. *Rana pipiens*: the changing paradigm. *American Zoologist* 15:837-849.
- Moore, J.E., and E.H. Strickland. 1954. Notes on the food of three species of Alberta amphibians. *American Midland Naturalist* 52:221-224.
- Moore, J.E., and E.H. Strickland. 1955. Further notes on the food of Alberta amphibians. *American Midland Naturalist* 54:253-256.
- Moore, R.D. 1929. *Canis latrans lestes* Merriam feeding on tadpoles and frogs. *Journal of Mammalogy* 10:255.
- Moore, R.G., and B.A. Moore. 1980.

- Observations on the body temperature and activity in the Red Spotted Toad, *Bufo punctatus*. Copeia 1980:362-363.
- Moore, R.H. 1976. Reproductive habits and growth of *Bufo speciosus* on Mustang Island, Texas, with notes on the ecology and reproduction of other anurans. Texas Journal of Science 27:173-178.
- Morafka, D.J., and B.H. Banta. 1976. Ecological relationships of the Recent herpetofauna of Pinnacles National Monument, Monterey and San Benito counties, California. Wasmann Journal of Biology 34:304-324.
- Morey, S.R., and D.N. Janes. 1994. Variation in larval habitat duration influences metamorphosis in *Scaphiopus couchii*. Pp. 159-165 In P.R. Brown and J.W. Wright (eds.), Herpetology of the North American Deserts. Proceedings of a Symposium. Southwestern Herpetologists Society, Special Publication No. 5.
- Morey, S., and D. Reznick. 2000. A comparative analysis of plasticity in larval development in three species of spadefoot toads. Ecology 81:1736-1749.
- Morey, S., and D. Reznick. 2004. The relationship between habitat permanence and larval development in California spadefoot toads: field and laboratory comparisons of developmental plasticity. Oikos 104:172-190.
- Morgan, D. 2010. *Rana sylvatica* (Wood Frog). Egg mass survey. Herpetological Review 41:206.
- Moriarty, E.C., and D.C. Cannatella. 2004. Phylogenetic relationships of the North American chorus frogs (*Pseudacris*: Hylidae). Molecular Phylogenetics and Evolution 30:409-420.
- Moriarty, J.J. 1995. Leaping leopards and other frogs, toads, and treefrogs. Minnesota Volunteer 58(3):20-33.
- Moriarty, J.J. 2000. Status of amphibians in Minnesota. Pp. 166-168 In M.J. Lannoo (ed.), Status & Conservation of Midwestern Amphibians. University of Iowa Press, Iowa City.
- Moriarty, J.J., A. Forbes and D. Jones. 1998. Geographic distribution: *Acris crepitans blanchardi* (Blanchard's Cricket Frog). Herpetological Review 29:172.
- Morin, P.J. 1983. Predation, competition, and the composition of larval anuran guilds. Ecological Monographs 53:119-138.
- Morin, P.J. 1985. Predation intensity, prey survival and injury frequency in an amphibian predator-prey interaction. Copeia 1985:638-644.
- Morin, P.J. 1986. Interactions between intraspecific competition and predation in an amphibian predator-prey system. Ecology 67:713-720.
- Morin, P.J., and E.A. Johnson. 1988. Experimental studies of asymmetric competition among anurans. Oikos 53:398-407.
- Morin, P.J., S.P. Lawler, and E.A. Johnson. 1988. Competition between aquatic insects and vertebrates: interaction strength and higher order interactions. Ecology 69:1401-1409.
- Morin, P.J., S.P. Lawler, and E.A. Johnson. 1990. Ecology and breeding phenology of larval *Hyla andersonii*: the disadvantages of breeding late. Ecology 71:1590-1598.
- Morizot, D.C., and N.H. Douglas. 1970. Notes on *Pseudacris streckeri streckeri* in northwest Louisiana. Bulletin of the Maryland Herpetological Society 6:18.
- Morris, M.A., and P.W. Smith. 1981. Endangered and threatened amphibians and reptiles. Pp. 21-33 In Endangered and Threatened Vertebrate Animals and Vascular Plants of Illinois. Illinois Department of Conservation, Springfield.
- Morris, M.R. 1989. Female choice of large males in the treefrog *Hyla chrysoscelis*: the importance of identifying the scale of choice. Behavioral Ecology and Sociobiology 25:275-281.
- Morris, M.R., and S.L. Yoon. 1989. A mechanism for female choice of large males in the treefrog *Hyla chrysoscelis*. Behavioral Ecology and Sociobiology 25:65-71.
- Morris, R.L., and W.W. Tanner. 1969. The ecology of the Western Spotted Frog, *Rana pretiosa pretiosa* Baird and Girard: a life history study. Great Basin Naturalist 29:45-81.
- Morrissey, C.A., and R.J. Olenick. 2004. American Dipper, *Cinclus mexicanus*, preys upon larval tailed frogs, *Ascaphus truei*. Canadian Field-Naturalist 118:446-448.
- Morse, M. 1904. Batrachians and reptiles of Ohio. Proceedings of the Ohio State Academy of Science 4: 93-144.
- Morton, M.L., and K.N. Sokolski. 1978. Sympatry in *Bufo boreas* and *Bufo canorus* and additional evidence of natural hybridization. Bulletin of the Southern California Academy of Science 77:52-55.

- Morton, M.L., and M.E. Pereyra. 2010. Habitat use by Yosemite toads: life history traits and implications for conservation. *Herpetological Conservation and Biology* 5:388-394.
- Moseley, K.R., S.B. Castleberry, and S.H. Schweitzer. 2003. Effects of prescribed fire on herpetofauna in bottomland hardwood forests. *Southeastern Naturalist* 2:475-486.
- Mosher, D.D. 1982. Sun-compass orientation in the treefrogs, *Hyla crucifer* and *Pseudacris triseriata triseriata*. Ph.D. diss., Ball State University, Muncie, IN.
- Mossman, M.J., L.M. Hartman, R. Hay, J.R. Sauer, and B.J. Dhuey. 1998. Monitoring long-term trends in Wisconsin frog and toad populations. Pp. 169-198 In M.J. Lannoo (ed.), *Status & Conservation of Midwestern Amphibians*. University of Iowa Press, Iowa City.
- Moulton, C.A. 1996. Assessing effects of pesticides on frog populations (*Hyla squirella*, *Gastrophryne carolinensis*, *Scaphiopus holbrookii*, *Bufo terrestris*, *Acris grylli*, *Hyla femoralis*, *Rana virgatipes*). Ph.D. diss., North Carolina State University, Raleigh.
- Moulton, C.A., W.J. Fleming and B.R. Nerney. 1996. The use of PVC pipes to capture hylid frogs. *Herpetological Review* 27:186-187.
- Moulton, J.M. 1954. A late August breeding of *Hyla cinerea* in Florida. *Herpetologica* 10:107.
- Mount, R.H. 1975. The Reptiles & Amphibians of Alabama. Agricultural Experiment Station, Auburn University, Auburn, AL.
- Mount, R.H. (ed.). 1986. Vertebrate Animals of Alabama in Need of Special Attention. Alabama Agricultural Experiment Station, Auburn University, AL.
- Moyle, P.B. 1973. Effects of introduced Bullfrogs, *Rana catesbeiana*, on the native frogs of the San Joaquin Valley, California. *Copeia* 1973:18-22.
- Muenz, T.K., S.W. Golladay, G. Vellidis, and L.L. Smith. 2006. Stream buffer effectiveness in an agriculturally influenced area, southwestern Georgia: responses of water quality, macroinvertebrates, and amphibians. *Journal of Environmental Quality* 35:1924-1938.
- Muhse, E.F. 1909. The cutaneous glands of the common toads. *American Journal of Anatomy* 9:322-359.
- Mulaik, S. 1937. Notes on *Leptodactylus labialis* (Cope). *Copeia* 1937:72-73.
- Mulaik, S. 1945. New mites in the family Caeculidae. *Bulletin of the University of Utah* 35(17): 1-23.
- Mulaik, S., and D. Sollberger. 1938. Notes on the eggs and habits of *Hypopachus cuneus* Cope. *Copeia* 1938:90.
- Mulcahy, D.G., and J.R. Mendelsohn. 2000. Phylogeography and speciation of the morphologically variable, widespread species *Bufo valliceps*, based on molecular evidence from mtDNA. *Molecular Phylogenetics and Evolution* 17:173-189.
- Mulcare, D.J. 1966. The problem of toxicity in *Rana palustris*. *Proceedings of the Indiana Academy of Science* 75:319-324.
- Mulla, M.S. 1962. Frog and toad control with insecticides! *Pest Control* 30:20, 64.
- Mulla, M.S. 1963. Toxicity of organochlorine insecticides to mosquitofish *Gambusia affinis* and the Bullfrog *Rana catesbeiana*. *Mosquito News* 23:299-303.
- Mullally, D.P. 1952. Habits and minimum temperatures of the toad *Bufo boreas halophilus*. *Copeia* 1952:274-276.
- Mullally, D.P. 1953. Observations on the ecology of the toad *Bufo canorus*. *Copeia* 1953:182-183.
- Mullally, D.P. 1958. Daily period of activity of the Western Toad. *Herpetologica* 14:29-31.
- Mullally, D.P., and J.D. Cunningham. 1956a. Aspects of the thermal ecology of the Yosemite Toad. *Herpetologica* 12:57-67.
- Mullally, D.P., and J.D. Cunningham. 1956b. Ecological relations of *Rana muscosa* at high elevations in the Sierra Nevada. *Herpetologica* 12:189-198.
- Mullally, D.P., and D.H. Powell. 1958. The Yosemite toad: northern range extension and possible hybridization with the Western Toad. *Herpetologica* 14:31-33.
- Munger, J.C., M. Gerber, K. Madrid, M.-A. Carroll, W. Petersen, and L. Heberger. 1998. U.S. National Wetlands Inventory classifications as predictors of the occurrence of Columbia Spotted Frogs (*Rana luteiventris*) and Pacific Treefrogs (*Hyla regilla*). *Conservation Biology* 12:320-330.
- Munsey, L.D. 1972. Salinity tolerance of the African Clawed Frog, *Xenopus laevis*. *Copeia* 1972:584-586.
- Munz, P.A. 1920. A study of the food habits of the Ithacan species of anura during transformation. *Pomona College Journal of Entomology and Zoology* 12:33-56.
- Murlett, H. 1896. An albino frog. *The Oregon*

- Naturalist 3(11):147.
- Murphy, C.G. 1994a. Chorus tenure of male Barking Treefrogs, *Hyla gratiosa*. Animal Behaviour 48:763-777.
- Murphy, C.G. 1994b. Determinants of chorus tenure in Barking Treefrogs (*Hyla gratiosa*). Behavioral Ecology and Sociobiology 34:285-294.
- Murphy, J.F., E.T. Simandle, and D.E. Becker. 2003. Population status and conservation of the Black Toad, *Bufo exsul*. Southwestern Naturalist 48:54-60.
- Murphy, M.A., R. Dezzani, D.S. Pilliod and A. Storfer. 2010a. Landscape genetics of high mountain frog metapopulations: an application of gravity models. Molecular Ecology 19:3634-3649.
- Murphy, M.A., J.S. Evans and A. Storfer. 2010b. Quantifying ecological process at multiple spatial scales using landscape genetics: *Bufo boreas* connectivity in Yellowstone National Park. Ecology 91: 252-261.
- Murphy, M.B., M. Hecker, K.K. Coady, A.R. Tompsett, P.D. Jones, L.H. DuPreez, G.J. Everson, K.R. Solomon, J.A. Carr, E.E. Smith, R.J. Kendall, G. Van Der Kraak, and J.P. Giesy. 2006. Atrazine concentrations, gonadal gross morphology and histology in ranid frogs collected in Michigan agricultural areas. Aquatic Toxicology 76:230-245.
- Murphy, P.J., S. St.-Hilaire, S. Bruer, P.S. Corn, and C.R. Peterson. 2009. Distribution and pathogenicity of *Batrachochytrium dendrobatidis* in boreal toads from the Grand Teton area of western Wyoming. EcoHealth 6:109-120.
- Murphy, R.K. 1987. Observations of the wood frog in northwestern North Dakota. Prairie Naturalist 19:262.
- Murphy, T.D. 1963. Amphibian populations and movements at a small semi-permanent pond in Orange County, North Carolina. Ph.D. diss., Duke University, Durham.
- Murphy, T.D. 1965. High incidence of two parasitic infestations and two morphological abnormalities in a population of the frog, *Rana palustris* Le Conte. American Midland Naturalist 74:233-239.
- Murray, D.L. 1990. The effects of food and density on growth and metamorphosis in larval Wood Frogs (*Rana sylvatica*) from central Labrador. Canadian Journal of Zoology 68:1221-1226.
- Murray, I., and C.W. Painter. 2003. Geographic distribution: *Eleutherodactylus augusti* (Barking Frog). Herpetological Review 34:161.
- Musgrave, M.E. 1930. *Bufo alvarius*, a poisonous toad. Copeia 1930:96-98.
- Mushinsky, H.R. 1973. Ontogenetic development of habitat preference in amphibians: the influence of early experience. Ph.D. diss., Clemson University, Clemson, SC.
- Muths, E. 2003. Home range and movements of Boreal Toads in undisturbed habitat. Copeia 2003:160-165.
- Muths, E., and R.D. Scherer. 2011. Portrait of a small population of Boreal Toads (*Anaxyrus boreas*). Herpetologica 67:369-377.
- Muths, E., T.L. Johnson, and P.S. Corn. 2001. Experimental repatriation of Boreal Toads (*Bufo boreas*) eggs, metamorphs, and adults in Rocky Mountain National Park. Southwestern Naturalist 46:106-113.
- Muths, E., P.S. Corn, A.P. Pessier, and D.E. Green. 2003. Evidence for disease-related amphibian decline in Colorado. Biological Conservation 110:357-365.
- Muths, E., S. Rittmann, J. Irwin, D. Keinath, and R. Scherer. 2005. Wood Frog (*Rana sylvatica*): a technical conservation assessment. USDA Forest Service, Rocky Mountain Region, Species Conservation Project. <http://www.fs.fed.us/r2/projects/scp/assessment/s/woodfrog.pdf> (accessed 20 June 2007).
- Muths, E., R.D. Scherer, P.S. Corn, and B.A. Lambert. 2006. Estimation of temporary emigration in male toads. Ecology 87:1048-1056.
- Muths, E., A.L. Gallant, E.H.C. Grant, W.A. Battaglin, D.E. Green, J.S. Staiger, S.C. Walls, M.S. Gunzburger and R.F. Kearney. 2006. The Amphibian Research and Monitoring Initiative (ARMI): 5-year Report. U.S. Geological Survey Scientific Investigations Report 2006-5224.
- Muths, E., D.S. Pilliod, and L.J. Livo. 2008. Distribution and environmental limitations of an amphibian pathogen in the Rocky Mountains, USA. Biological Conservation 141:1484-1492.
- Muzzall, P. M. 1991. Helminth infracommunities of the frogs *Rana catesbeiana* and *Rana clamitans* from Turkey Marsh, Michigan. Journal of Parasitology 77: 366-371.
- Muzzall, P.M., and C.R. Peebles. 1991. Helminths of the Wood Frog, *Rana sylvatica*, and Spring Peeper, *Pseudacris c. crucifer*,

- from southern Michigan. *Journal of the Helminthological Society of Washington* 58:263-265.
- Muzzall, P.M., and E. Sonntag. 2012. Helminths and symbiotic protozoa of Blanchard's Cricket Frog, *Acris blanchardi* Harper, 1947 (Hylidae), from Michigan and Ohio, U.S.A. *Comparative Parasitology* 79:340-343.
- Myers, C.W., and W.D. Klimstra. 1963. Amphibians and reptiles of an ecologically disturbed (strip-mined) area in southern Illinois. *American Midland Naturalist* 70:126-132.
- Myers, G.S. 1927. The differential characters of *Bufo americanus* and *Bufo fowleri*. *Copeia* (163):50-53.
- Myers, G.S. 1930a. Notes on some amphibians in western North America. *Proceedings of the Biological Society of Washington* 43:55-64.
- Myers, G.S. 1930b. The status of the Southern California Toad, *Bufo californicus* (Camp). *Proceedings of the Biological Society of Washington* 43:73-78.
- Myers, G.S. 1942. The black toad of Deep Springs Valley, Inyo County, California. *Occasional Papers of the Museum of Zoology, University of Michigan* 460:1-13.
- Myers, T.K., C.H., L. Eigner, J.A. Harris, R. Hilman, M.D. Johnson, R. Kalinowski, J.J. Muri, M. Reyes and L.E. Tucci. 2007. A comparison of ground-based and tree-based polyvinyl chloride pipe refugia for capturing *Pseudacris regilla* in northwestern California. *Northwestern Naturalist* 88:147-154.
- Najarian, H.H. 1955. Trematode parasites in the Salientia in the vicinity of Ann Arbor, Michigan. *American Midland Naturalist* 53:195-197.
- Nash, C.W. 1905. Check list of the vertebrates of Ontario and catalogue of specimens in the Biological Section of the Provincial Museum. Department of Education, Toronto.
- Nash, C.W. 1908. Vertebrates of Ontario. L.K. Cameron, Toronto.
- Nash, R.F., G.G. Gallup Jr., and M.K. McClure. 1970. The immobility reaction in leopard frogs (*Rana pipiens*) as a function of noise-induced fear. *Psychonomic Science* 21:155-156.
- Naugle, D.E., T.D. Fischer, K.F. Higgins, and D.C. Backlund. 2005. Distribution of South Dakota anurans. Pp. 283-291 *In* M.J. Lannoo (ed.), *Amphibian Declines. The Conservation Status of United States Species*. University of California Press, Berkeley.
- Navarro-Martín, L., C. Lanctôt, C. Edge, J. Houlahan and V.L. Trudeau. 2012. Expression profiles of metamorphosis-related genes during natural transformations in tadpoles of wild Wood Frogs (*Lithobates sylvaticus*). *Canadian Journal of Zoology* 90:1059-1071.
- Nebeker, A.V., and G.S. Schuytema. 2000. Effects of ammonium sulfate on growth of larval Northwestern Salamanders, Red-legged and Pacific Treefrog tadpoles, and juvenile Fathead Minnows. *Bulletin of Environmental Contamination and Toxicology* 64:271-278.
- Nebeker, A.V., G.S. Schuytema, W.L. Griffis, and A. Cataldo. 1998. Impact of Guthion on survival and growth of the frog *Pseudacris regilla* and the salamanders *Ambystoma gracile* and *Ambystoma maculatum*. *Archives of Environmental Contamination and Toxicology* 35:48-51.
- Necker, W.L. 1939. Records of amphibians and reptiles of the Chicago region, 1935-1938. *Bulletin of the Chicago Academy of Sciences* 6:1-10.
- Needham, J.G. 1905. The summer food of the Bullfrog (*Rana catesbeiana* Shaw) at Saranac Inn. *New York State Museum, Bulletin* 86:9-15.
- Needham, J.G. 1924. Observations on the life of the ponds at the head of Laguna Canyon. *Pomona College Journal of Entomology and Zoology* 16:1-12.
- Neill, W.E., and J.C. Grubb. 1971. Arboreal habits of *Bufo valliceps* in central Texas. *Copeia* 1971:347-348.
- Neill, W.T. 1947. Doubtful type localities in South Carolina. *Herpetologica* 4:75-76.
- Neill, W.T. 1948. A new subspecies of treefrog from Georgia and South Carolina. *Herpetologica* 4:175-179.
- Neill, W.T. 1949a. Hybrid toads from Georgia. *Herpetologica* 5:30-32.
- Neill, W.T. 1949b. The status of Baird's chorus-frog. *Copeia* 1949:227-228.
- Neill, W.T. 1950a. Reptiles and amphibians in urban areas of Georgia. *Herpetologica* 6:113-116.
- Neill, W.T. 1950b. Taxonomy, nomenclature, and distribution of Southeastern cricket frogs, genus *Acridis*. *American Midland Naturalist* 43:152-156.
- Neill, W.T. 1951. A bromeliad herpetofauna in Florida. *Ecology* 32:140-143.
- Neill, W.T. 1952. New records of *Rana virgatipes* and *Rana grylio* in Georgia and

- South Carolina. Copeia 1952:194-195.
- Neill, W.T. 1954. Ranges and taxonomic allocations of amphibians and reptiles in the Southeastern United States. Publications of the Research Division, Ross Allen's Reptile Institute 1:75-96.
- Neill, W.T. 1957a. Notes on metamorphic and breeding aggregations of the Eastern Spadefoot, *Scaphiopus holbrookii* (Harlan). Herpetologica 13:185-188.
- Neill, W.T. 1957b. The status of *Rana capito stertens* Schwartz and Harrison. Herpetologica 13:47-52.
- Neill, W.T. 1957c. Homing by a Squirrel Treefrog, *Hyla squirella* Latreille. Herpetologica 13:217-218.
- Neill, W.T. 1958a. The occurrence of amphibians and reptiles in saltwater areas, and a bibliography. Bulletin of Marine Science of the Gulf and Caribbean 8:1-97.
- Neill, W.T. 1958b. The varied calls of the Barking Treefrog, *Hyla gratiosa* LeConte. Copeia 1958:44-46.
- Neill, W.T. 1961. River Frog swallows Eastern Diamondback Rattlesnake. Bulletin of the Philadelphia Herpetological Society 9:19.
- Neill, W.T. 1964. Frogs introduced on islands. Quarterly Journal of the Florida Academy of Sciences 27:127-130.
- Nelson, C.E. 1971. Breakdown of ethological isolation between *Rana pipiens* and *Rana sylvatica*. Copeia 1971:344.
- Nelson, C.E. 1972. Systematic studies of the North American microhylid genus *Gastrophryne*. Journal of Herpetology 6:111-137.
- Nelson, C.E. 1973. Mating calls of the Microhylinae: descriptions and phylogenetic and ecological considerations. Herpetologica 29:163-176.
- Nelson, C.E. 1974. Further studies on the systematics of *Hypopachus* (Anura: Microhylidae). Herpetologica 30:250-274.
- Nelson, C.E. 1980. What determines the species composition of larval amphibian pond communities in south central Indiana, U.S.A.? Proceedings of the Indiana Academy of Science 89:149.
- Nelson, C.E., and H.S. Cuellar. 1968. Anatomical comparison of tadpoles of the genera *Hypopachus* and *Gastrophryne* (Microhylidae). Copeia 1968:423-424.
- Nelson, D.H. 1974. Growth and developmental responses of larval toad populations to heated effluent in a South Carolina reservoir. Pp. 264-276 In J.W. Gibbons and R.R. Sharitz (eds.), Thermal Ecology. Atomic Energy Commission Symposium Series, CONF-730505.
- Nelson, G.L., and B.M. Graves. 2004. Anuran population monitoring: comparison of the North American Amphibian Monitoring Program's calling index with mark-recapture estimates for *Rana clamitans*. Journal of Herpetology 38:355-359.
- Nero, R.W. 1967. A possible record of death-feigning in a toad. Blue Jay 25:193-194.
- Nero, R.W., and F.R. Cook. 1964. A range extension for the Wood Frog in northeastern Saskatchewan. Canadian Field-Naturalist 78:268-269.
- **Netting, M.G. 1929. Further distinctions between *Bufo americanus* Holbrook and *Bufo fowleri* Garman. Papers of the Academy of Science, Arts and Letters 11:437-443.
- Netting, M.G. 1933. The amphibians of Pennsylvania. Proceedings of the Pennsylvania Academy of Science 7:1-11.
- Netting, M.G., and L.W. Wilson. 1940. Notes on amphibians from Rockingham County, Virginia. Annals of the Carnegie Museum 28:1-8.
- Netting, M.G., and C.J. Goin. 1942. Additional notes on *Rana sevosa*. Copeia 1942:259.
- Netting, M.G., and C.J. Goin. 1945. The occurrence of Fowler's Toad, *Bufo woodhousii fowleri* Hinckley, in Florida. Proceedings of the Florida Academy of Sciences 7:181-184.
- Neufeldt, J.H. 2004. Terrestrial movements and habitat use of Gopher Frogs (*Rana capito*) at Fort Benning, Georgia. M.S. thesis, Columbus State University, Columbus, GA.
- Nevo, E. 1973a. Adaptive color polymorphism in cricket frogs. Evolution 27:353-367.
- Nevo, E. 1973b. Adaptive variation in size of cricket frogs. Ecology 54:1271-1281.
- Nevo, E., and R.R. Capranica. 1985. Evolutionary origin of ethological reproductive isolation in cricket frogs, *Acris*. Pp. 147-214 In M.K. Hecht, B. Wallace, and G.T. Prance (ed.), Evolutionary Biology, Vol. 19. Plenum Press, New York.
- Newman, C.E., and L.J. Rissler. 2011. Phylogeographic analyses of the southern leopard frog: the impact of geography and climate on the distribution of genetic lineages vs. subspecies. Molecular Ecology 20:5295-5312.
- Newman, C.E., J.A. Feinberg, L.J. Rissler, J.

- Burger, and H.B. Shaffer. 2012. A new species of leopard frog (Anura: Ranidae) from the urban northeastern US. Molecular Phylogenetics and Evolution 63:445-455.
- Newman, R.A. 1987. Effects of density and predation on *Scaphiopus couchii* tadpoles in desert ponds. *Oecologia* 71:301-307.
- Newman, R.A. 1988a. Adaptive plasticity in development of *Scaphiopus couchii* tadpoles in desert ponds. *Evolution* 42:774-783.
- Newman, R.A. 1988b. Genetic variation for larval anuran (*Scaphiopus couchii*) development time in an uncertain environment. *Evolution* 42:763-773.
- Newman, R.A. 1989. Developmental plasticity of *Scaphiopus couchii* tadpoles in an unpredictable environment. *Ecology* 70:1775-1787.
- Newman, R.A. 1992. Adaptive plasticity in amphibian metamorphosis. *Bioscience* 42:671-678.
- Newman, R.A. 1994. Genetic variation for phenotypic plasticity in the larval life history of spadefoot toads (*Scaphiopus couchii*). *Evolution* 48:1773-1785.
- Newman, R.A., and A.E. Dunham. 1994. Size at metamorphosis and water loss in a desert anuran (*Scaphiopus couchii*). *Copeia* 1994:372-381.
- Newman, R.A., and T. Squire. 2001. Microsatellite variation and fine-scale population structure in the Wood Frog (*Rana sylvatica*). *Molecular Ecology* 10:1087-1100.
- Nichols, A. 1852. Occurrence of *Scaphiopus solitarius* in Essex County: with some notices of its history, habits, &c. *Journal of the Essex County Natural History Society* 1:113-117.
- Nichols, R.J. 1937. Taxonomic studies on the mouth parts of larval Anura. *University of Illinois Bulletin, Illinois Biological Monographs* 15:1-73.
- Nicholson, F.E. 1932. Nature discloses more queer life. *The Philadelphia Ledger*, 30 October. [republished in *Literary Digest*, 10 December 1932, pp. 31-32 and in the *National Speleological Society Bulletin* 10 (1948):22-26]
- Nicholson, M.C. 1980. The effects of density and predation on the growth rate, larval period and survivorship of *Rana utricularia* and *Bufo terrestris* tadpoles. M.A. thesis, University of South Florida, Tampa.
- Nickerson, M.A., and C.E. Mays. 1968. *Bufo retiformis* Sanders and Smith from the Santa Rosa Valley, Pinal County, Arizona. *Journal of Herpetology* 1:103.
- Nickerson, M.A., and J.A. Hutchison. 1971. The distribution of the fungus *Basidiobolus ranarum* Eidam in fish, amphibians and reptiles. *American Midland Naturalist* 86:500-502.
- Nickum, J.G. 1961. Intra-specific variation in the chorus frog *Pseudacris nigrita* Le Conte. M.A. thesis, State University of South Dakota, Vermillion.
- Nie, M., J.D. Crim, and G.R. Ultsch. 1999. Dissolved oxygen, temperature, and habitat selection by Bullfrog (*Rana catesbeiana*) tadpoles. *Copeia* 1999:155-162.
- Nielsen, H.I., and J. Dyck. 1978. Adaptation of the tree frog, *Hyla cinerea*, to colored backgrounds, and the role of the three chromatophore types. *Journal of Experimental Zoology* 205:79-94.
- Nielson, M., K. Lohman, and J. Sullivan. 2001. Phylogeography of the Tailed Frog (*Ascaphus truei*): implications for the biogeography of the Pacific Northwest. *Evolution* 55:147-160.
- Niemiller, M.L. and R.G. Reynolds. 2011. The Amphibians of Tennessee. University of Tennessee Press, Knoxville.
- Nieto, N.C., M.A. Camann, J.E. Foley, and J.O. Reiss. 2007. Disease associated with integumentary and cloacal parasites in tadpoles of Northern Red-legged Frog *Rana aurora aurora*. *Diseases of Aquatic Organisms* 78:61-71.
- Nityananda, V., and M.A. Bee M. 2011. Finding your mate at a cocktail party: frequency separation promotes auditory stream segregation of concurrent voices in multi-species frog choruses. *PLoS One* 6:e21191.
- Nityananda, V., and M.A. Bee. 2012. Spatial release from masking in a free-field source identification task by Gray Treefrogs. *Hearing Research* 285:86-97.
- Noble, G.K., and R.C. Noble. 1923. The Anderson Tree Frog (*Hyla andersonii* Baird): observations on its habits and life history. *Zoologica* 11:413-455.
- Noble, G.K., and E.J. Farris. 1929. The method of sex recognition in the Wood Frog, *Rana sylvatica* Le Conte. *American Museum Novitates* 363:1-17.
- Noble, G.K., and P.G. Putnam. 1931. Observations on the life history of *Ascaphus truei* Stejneger. *Copeia* 1931:97-101.
- Noble, G.K., and W.G. Hassler. 1936. Three

- salientians of geographic interest from southern Maryland. *Copeia* 1936:63-64.
- Noble, G.K., and L.R. Aronson. 1942. The sexual behavior of Anura. 1. The normal mating pattern of *Rana pipiens*. *Bulletin of the American Museum of Natural History* 80:127-142.
- Noles, P. 2010. Reconciling western toad phylogeography with Great Basin prehistory. M.S. thesis, University of Nevada, Reno.
- Northern, P.T. 1970. The geographic and taxonomic relationships of the Great Basin Spadefoot Toad, *Scaphiopus intermontanus*, to other members of the subgenus *Spea*. Ph.D. diss., University of Wisconsin, Madison.
- Norton, V.M., and M.J. Harvey. 1975. Herpetofauna of Hardeman County, Tennessee. *Journal of the Tennessee Academy of Science* 50:131-136.
- Nunziata, S.O. 2011. Population and conservation genetics of Crawfish Frogs, *Lithobates areolatus*, at their northeastern range limits. M.S. thesis, Eastern Kentucky University, Richmond.
- Nussbaum, R.A., E.D. Brodie Jr., and R.M. Storm. 1983. *Amphibians & Reptiles of the Pacific Northwest*. University Press of Idaho, Moscow.
- NVDW (Nevada Division of Wildlife). 2003. Conservation agreement and conservation strategy. Columbia Spotted Frog (*Rana luteiventris*). Toiyabe Great Basin subpopulation Nevada. Nevada Division of Wildlife, Carson City.
- Nyberg, D., and I. Lerner. 2000. Revitalization of ephemeral pools as frog breeding habitat in an Illinois forest preserve. *Journal of the Iowa Academy of Science* 107:187-190.
- Nyman, S. 1986. Mass mortality in larval *Rana sylvatica* attributable to the bacterium *Aeromonas hydrophila*. *Journal of Herpetology* 20:196-201.
- Oberfoell, C.E.C., and J.L. Christiansen. 2001. Identification and distribution of the treefrogs *Hyla versicolor* and *Hyla chrysoscelis* in Iowa. *Journal of the Iowa Academy of Science* 108:79-83.
- O'Bryan, C.J., M.J. Gray and C.S. Brooks. 2012. Further presence of ranavirus infection in amphibian populations of Tennessee, USA. *Herpetological Review* 43:293-295.
- Odlaug, T.O. 1954. Parasites of some Ohio batrachians. *Ohio Journal of Science* 54:126-128.
- O'Donnell, S.P. 2012. Genetic diversity and genetic structuring at multiple spatial scales across the range of the Northern Leopard Frog, *Rana pipiens*. Ph.D. diss., Utah State University, Logan.
- Odum, R.A., and P.S. Corn. 2005. *Bufo baxteri* Porter, 1988. Wyoming Toad. Pp. 390-392 In M.J. Lannoo (ed.), *Amphibian Declines. The Conservation Status of United States Species*. University of California Press, Berkeley.
- O'Hara, R.K., and A.R. Blaustein. 1981. An investigation of sibling recognition in *Rana cascadae* tadpoles. *Animal Behaviour* 29:1121-1126.
- O'Hara, R.K., and A.R. Blaustein. 1982. Kin preference behavior in *Bufo boreas* tadpoles. *Behavioral Ecology and Sociobiology* 11:43-49.
- O'Hara, R.K., and A.R. Blaustein. 1985. *Rana cascadae* tadpoles aggregate with siblings: an experimental field study. *Oecologia* 67:44-51.
- O'Hara, R.K., and A.R. Blaustein. 1988. *Hyla regilla* and *Rana pretiosa* tadpoles fail to display kin recognition behaviour. *Animal Behaviour* 36:946-948.
- Okafor, J.I., D. Testrake, H.R. Mushinsky, and B.G. Yangco. 1984. A *Basidiobolus* sp. and its association with reptiles and amphibians in southern Florida. *Sabouraudia, Journal of Medical and Veterinary Mycology* 22:47-51.
- Okonkwo, G.E. 2011. The use of small ephemeral wetlands and streams by amphibians in the mixedwood forest of boreal Alberta. M.S. thesis, University of Alberta, Edmonton.
- Oláh-Hemmings, V., J.R. Jaeger, M.J. Sredl, M.A. Schlaepfer, R.D. Jennings, C.A. Drost, D.F. Bradford, and B.R. Riddle. 2009. Phylogeography of declining relict and lowland leopard frogs in the desert Southwest of North America. *Journal of Zoology* 280:343-354.
- Oldfield, B., and J.J. Moriarty. 1994. *Amphibians & Reptiles Native to Minnesota*. University of Minnesota Press, Minneapolis.
- Oldham, M.J. 1992. Declines in Blanchard's Cricket Frog in Ontario. *Canadian Wildlife Service Occasional Paper No. 76*:30-31.
- Oldham, R.S. 1966. Spring movements in the American Toad, *Bufo americanus*. *Canadian Journal of Zoology* 44:63-100.
- Oldham, R.S. 1967. Orienting mechanisms of the Green Frog, *Rana clamitans*. *Ecology* 48:477-491.

- Oldham, R.S. 1974. Mate attraction by vocalization in members of the *Rana pipiens* complex. *Copeia* 1974:982-984.
- Oldham, R.S., and H.C. Gerhardt. 1975. Behavioral isolating mechanisms of the treefrogs *Hyla cinerea* and *H. gratiosa*. *Copeia* 1975:223-231.
- Oliver, J.A., and J.R. Bailey. 1939. Amphibians and reptiles of New Hampshire, exclusive of marine forms. New Hampshire Fish and Game Commission, Biological Survey of Connecticut Watershed Report 4:195-217.
- Oliver, J.A., and C.E. Shaw. 1953. The amphibians and reptiles of the Hawaiian Islands. *Zoologica* 38:65-95.
- Oliver, J.H. Jr., M.P. Hayes, J.E. Keirans, and D.R. Lavender. 1993. Establishment of the foreign parthenogenetic tick *Amblyomma rotundatum* (Acari: Ixodidae) in Florida. *Journal of Parasitology* 79:786-790.
- Olsen, O.W. 1937. Description and life history of the trematode *Haplometrana utahensis* sp. nov. (Plagiorchiidae) from *Rana pretiosa*. *Journal of Parasitology* 23:13-28.
- Olsen, O.W. 1938. *Aplectana gigantica* (Cosmocercidae), a new species of nematode from *Rana pretiosa*. *Transactions of the American Microscopical Society* 57:200-203.
- Olsen, O.W. 1962. Animal Parasites: Their Biology and Life Cycles. Burgess, Minneapolis, MN.
- Olson, C.A. 2011. Diet, density, and distribution of the introduced Greenhouse Frog, *Eleutherodactylus planirostris*, on the island of Hawaii. M.S. thesis, Utah State University, Logan.
- Olson, C.A., and K.H. Beard. 2012. Diet of the introduced Greenhouse Frog in Hawaii. *Copeia* 2012:121-129.
- Olson, C.A., K.H. Beard, D.N. Koons and W.C. Pitt. 2012a. Detection probabilities of two introduced frogs in Hawaii: implications for assessing non-native species distributions. *Biological Invasions* 14:889-900.
- Olson, C.A., K.H. Beard, and W.C. Pitt. 2012b. Biology and impacts of Pacific island invasive species. 8. *Eleutherodactylus planirostris*, the Greenhouse Frog (Anura: Eleutherodactylidae). *Pacific Science* 66:255-270.
- Olson, D.H. 1988. The ecological and behavioral dynamics of breeding in three sympatric anuran amphibians. Ph.D. diss., Oregon State University, Corvallis.
- Olson, D.H. 1989. Predation on breeding Western Toads (*Bufo boreas*). *Copeia* 1989:391-397.
- Olson, D.H. 2001. Ecology and management of montane amphibians of the U.S. Pacific Northwest. *Biota* 2:51-74.
- Olson, D.H., A.R. Blaustein, and R.K. O'Hara. 1986. Mating pattern variability among Western Toad (*Bufo boreas*) populations. *Oecologia* 70:351-356.
- Olson, E.R. 2010. *Rana pipiens* (Northern Leopard Frog). Winter activity. *Herpetological Review* 41:206.
- Olson, M.E., S. Gard, M. Brown, R. Hampton, and D.W. Morck. 1992. *Flavobacterium indologenes* infection in leopard frogs. *Journal of the American Veterinary Medical Association* 201:1766-1770.
- Olson, R.E. 1959. Notes on some Texas herptiles. *Herpetologica* 15:48.
- O'Neill, C.E. 2001. Determination of a terrestrial buffer zone for conservation of the cricket frog, *Acris crepitans*. M.S. thesis, Illinois State University, Normal.
- O'Neill, E.D. 1995. Amphibian and reptile communities of temporary ponds in a managed pine flatwoods. M.S. thesis, University of Florida, Gainesville.
- O'Neill, E.M., and K.H. Beard. 2011. Clinal variation in calls of native and introduced populations of *Eleutherodactylus coqui*. *Copeia* 2011:18-28.
- Oplinger, C.S. 1963. The life history of the Northern Spring Peeper, *Hyla crucifer crucifer* Wied at Ithaca, New York. Ph.D. diss., Cornell University, Ithaca, NY.
- Oplinger, C.S. 1966. Sex ratio, reproductive cycles, and time of ovulation in *Hyla crucifer crucifer* Wied. *Herpetologica* 22:276-283.
- Oplinger, C.S. 1967. Food habits and feeding activity of recently transformed and adult *Hyla crucifer crucifer* Wied. *Herpetologica* 23:209-217.
- Orchard, S.A. 1999. The American Bullfrog in British Columbia: the frog who came to dinner. Pp. 289-296 In R. Claudi and J.H. Leach (eds.), Nonindigenous Freshwater Organisms. Vectors, Biology, and Impacts. Lewis Publishers, Boca Raton, FL.
- Orlofske, S.A. and W.A. Hopkins. 2009. Energetics of metamorphic climax in the pickerel frog (*Rana palustris*). *Comparative Biochemistry and Physiology* 154:191-196.
- Orlofske, S.A., L.K. Belden and W.A. Hopkins,

- W.A. 2009. Moderate *Echinostoma trivolvis* infection has no effects on physiology and fitness-related traits of larval pickerel frogs (*Rana palustris*). *Journal of Parasitology* 95:787-792.
- Orlofske, S.A., R.C. Jadin, D.L. Preston and P.T.J. Johnson. 2012. Parasite transmission in complex communities: predators and alternative hosts alter pathogenic infections in amphibians. *Ecology* 93:1247-1253.
- Orr, L.P., J. Neumann, E. Vogt, and A. Collier. 1998. Status of Northern Leopard Frogs in northeastern Ohio. Pp. 91-93 In M.J. Lannoo (ed.), *Status & Conservation of Midwestern Amphibians*. University of Iowa Press, Iowa City.
- Ortenburger, A.I. 1924. Life history notes—*Scaphiopus*—the spadefoot toad. *Proceedings of the Oklahoma Academy of Science* 4:19-20.
- Orton, G.L. 1943. The tadpole of *Rhinophryne dorsalis*. *Occasional Papers of the Museum of Zoology, University of Michigan* 472:1-7 + 1 plate.
- Orton, G.L. 1946. Larval development of the eastern narrow-mouthed frog, *Microhyla carolinensis* (Holbrook), in Louisiana. *Annals of the Carnegie Museum* 30:241-248.
- Orton, G.L. 1947. Notes on some hylid tadpoles in Louisiana. *Annals of the Carnegie Museum* 30:363-380 + 1 plate.
- Orton, G.L. 1951. An example of interspecific mating in toads. *Copeia* 1951:78.
- Orton, G.L. 1952. Key to the genera of tadpoles in the United States and Canada. *American Midland Naturalist* 47:382-395.
- Orton, G.L. 1954. Dimorphism in larval mouth-parts in spadefoot toads of the *Scaphiopus hammondi* group. *Copeia* 1954:97-100.
- Osbourne, M.S. 2012. Initial juvenile movement of pond-breeding amphibians in altered forest habitat. Ph.D., University of Missouri, Columbia.
- Oseen, K.L., and R.J. Wassersug. 2002. Environmental factors influencing calling in sympatric anurans. *Oecologia* 133:616-625.
- Oseen, K.L., L.K.D. Newhook, and R.J. Wassersug. 2001. Turning bias in Woodfrog (*Rana sylvatica*) tadpoles. *Herpetologica* 57:432-437.
- Ostergaard, E.C., K.O. Richter, and S.D. West. 2008. Amphibian use of stormwater ponds in the Puget lowlands of Washington, USA. Pp. 259-270 In J.C. Mitchell, R.E. Jung Brown, and B. Bartholomew (eds.), *Urban Herpetology. Herpetological Conservation 3*. Society for the Study of Amphibians and Reptiles, Salt Lake City, UT.
- Otani, A., N. Palumbo, and G. Read. 1969. Pharmacodynamics and treatment of mammals poisoned by *Bufo marinus* toxin. *American Journal of Veterinary Research* 30:1865-1872.
- Otto, C.V., J.W. Snodgrass, D.C. Forester, J.C. Mitchell, and R.W. Miller. 2007a. Climatic variation and the distribution of an amphibian polyploid complex. *Journal of Animal Ecology* 76:1053-1061.
- Otto, C.V., D.C. Forester, and J.W. Snodgrass. 2007b. Influences of wetland and landscape characteristics on the distribution of Carpenter Frogs. *Wetlands* 27:261-269.
- Ouellet, M., J. Bonin, J. Rodrigue, J.-L. DesGranges, and S. Lair. 1997. Hindlimb deformities (ectromelia, ectrodactyly) in free-living anurans from agricultural habitats. *Journal of Wildlife Diseases* 33:95-104.
- Ouellet, M., I. Mikaelian, B.D. Pauli, J. Rodrigue, and D.M. Green. 2005a. Historical evidence of widespread chytrid infection in North American amphibian populations. *Conservation Biology* 19:1431-1440.
- Ouellet, M., P. Galois, R. Pétré, and C. Fortin. 2005b. Les amphibiens et les reptiles des collines montérégiennes: enjeux et conservation. *Le naturaliste canadien* 129:42-49.
- Ouellet, M., C. Fortin, and M.-J. Grimard. 2009. Distribution and habitat use of the Boreal Chorus Frog (*Pseudacris maculata*) at its extreme northeastern range limit. *Herpetological Conservation and Biology* 4:277-284.
- Ovaska, K., T.M. Davis, and I.N. Flamarique. 1997. Hatching success and larval survival of the frogs *Hyla regilla* and *Rana aurora* under ambient and artificially enhanced solar ultraviolet radiation. *Canadian Journal of Zoology* 75:1081-1088.
- Overton, F. 1914. Long Island flora and fauna. 3. The frogs and toads. *The Museum of the Brooklyn Institute of Arts and Sciences Science Bulletin* 2(3):21-40.
- Owen, P.C. 2003. The structure, function, and evolution of aggressive signals in anuran amphibians. Ph.D. diss., University of Connecticut, Storrs, CT.
- Owen, R.D. 1996. Breeding phenology and microhabitat use among three chorus frog species (*Pseudacris*) in east-central Florida.

- M.S. thesis, University of Central Florida, Orlando.
- Pace, A.E. 1974. Systematics and biological studies of the leopard frogs (*Rana pipiens* complex) of the United States. Miscellaneous Publications, University of Michigan Museum of Zoology 148:1-140.
- Pack, H.J. 1920. Eggs of the swamp tree frog. Copeia (77):7.
- Packard, A.S. 1866. List of vertebrates observed at Okak, Labrador, by Rev. Samuel Weiz, with annotations. Proceedings of the Boston Society of Natural History 10:264-277.
- Packard, G.C., J.K. Tucker, and L.D. Lohmiller. 1998. Distribution of Strecker's Chorus Frogs (*Pseudacris streckeri*) in relation to their tolerance for freezing. Journal of Herpetology 32:437-440.
- Padgett-Flohr, G.E. 2008. Pathogenicity of *Batrachochytrium dendrobatidis* in two threatened California amphibians: *Rana draytonii* and *Ambystoma californiense*. Herpetological Conservation and Biology 3:182-191.
- Padgett-Flohr, G.E., and R.L. Hopkins III. 2009. *Batrachochytrium dendrobatidis*, a novel pathogen approaching endemism in central California. Diseases of Aquatic Organisms 83:1-9.
- Padgett-Flohr, G.E., and M.P. Hayes. 2011. Assessment of the vulnerability of the Oregon Spotted Frog (*Rana pretiosa*) to the amphibian chytrid fungus (*Batrachochytrium dendrobatidis*). Herpetological Conservation and Biology 6:99-106.
- Paetow, L. J. 2010. Effects of agricultural pesticides and the chytrid fungus *Batrachochytrium dendrobatidis* on the health of post-metamorphic Northern Leopard Frogs (*Lithobates pipiens*). M.S. thesis. Concordia University, Montreal.
- Paetow, L., D.K. Cone, T. Huyse, J.D. McLaughlin, and D.J. Marcogliese. 2009. Morphology and molecular taxonomy of *Gyrodactylus jennyae* n. sp. (Monogenea) from tadpoles of captive *Rana catesbeiana* Shaw (Anura), with a review of the species of *Gyrodactylus* Nordmann, 1832 parasitising amphibians. Systematic Parasitology 73:219-227.
- Paetow, L.J., B.D. Pauli, J.D. McLaughlin, J. Bidulka and D.J. Marcogliese. 2011. First detection of ranavirus in *Lithobates pipiens* in Quebec. Herpetological Review 42:211-214.
- Paetow, L.J., J. D. McLaughlin, R. I. Cue, B. D. Pauli, D. J. Marcogliese. 2012. Effects of herbicides and the chytrid fungus *Batrachochytrium dendrobatidis* on the health of post-metamorphic Northern Leopard Frogs (*Lithobates pipiens*). Ecotoxicology and Environmental Safety 80: 372-380.
- Pague, C.A., and J.C. Mitchell. 1987. The status of amphibians in Virginia. Virginia Journal of Science 38:304-318.
- Pais, R.C., S.A. Bonney, and W.C. McComb. 1988. Herpetofaunal species richness and habitat associations in an eastern Kentucky forest. 1988 Proceedings of the Annual Conference of Southeastern Fish and Wildlife Agencies:448-455.
- Palen, W.J., and D.E. Schindler. 2010. Water clarity, maternal behavior, and physiology combine to eliminate UV radiation risk to amphibians in a montane landscape. Proceedings of the National Academy of Science, USA 107:9701-9706.
- Palen, W.J., D.E. Schindler, M.J. Adams, C.A. Pearl, R.B. Bury, and S.A. Diamond. 2002. Optical characteristics of natural waters protect amphibians from UV-B in the U.S. Pacific Northwest. Ecology 83:2951-2957.
- Palis, J. 1994. Night of the spadefoots. Florida Wildlife (Nov/Dec):12-13.
- Palis, J.G. 1997. Species profile: Gopher Frog (*Rana capito* spp.) on military installations in the Southeastern United States. U.S. Army Corps of Engineers Waterways Experiment Station Technical Report SERDP-97-5.
- Palis, J.G. 1998. Breeding biology of the Gopher Frog, *Rana capito*, in western Florida. Journal of Herpetology 32:217-223.
- Palis, J. 2000. *Scaphiopus holbrookii* (Eastern Spadefoot). Predation. Herpetological Review 31:42-43.
- Palis, J.G. 2007. If you build it, they will come: herpetofaunal colonization of constructed wetlands and adjacent terrestrial habitat in the Cache River drainage of southern Illinois. Transactions of the Illinois State Academy of Science 100:177-189.
- Palis, J.G. 2009. Frog pond, fish pond: temporal co-existence of crawfish frog tadpoles and fishes. Proceedings of the Indiana Academy of Science 118:196-199.
- Palis, J.G. 2012a. *Hyla avivoca* (Bird-voiced Treefrog). Constructed wetland colonization. Herpetological Review 43:119-120.
- Palis, J.G. 2012b. *Pseudacris crucifer* (Spring

- Peepers). Predation. *Herpetological Review* 43:325.
- Palis, J.G., and M.J. Aresco. 2007. Immigration orientation and migration distance of four pond-breeding amphibians in northwestern Florida. *Florida Scientist* 70:251-263.
- Palmer, W.M., and A.L. Braswell. 1980. Additional records of albinistic amphibians and reptiles from North Carolina. *Brimleyana* 3:49-52.
- Palmer, W.M., and A.L. Braswell. 1995. *Reptiles of North Carolina*. University of North Carolina Press, Chapel Hill.
- Palmeri-Miles, A.F., K.A. Douville, J.A. Tyson, K.D. Ramsdell, and M.P. Hayes. 2010. Field observations of oviposition and early development of the Coastal Tailed Frog (*Ascaphus truei*). *Northwestern Naturalist* 91:206-213.
- Palorski, R.A. 2008. Relationship between lakeshore development and frog populations on central Wisconsin. Pp. 77-83 In J.C. Mitchell, R.E. Jung Brown, and B. Bartholomew (eds.), *Urban Herpetology. Herpetological Conservation 3*. Society for the Study of Amphibians and Reptiles, Salt Lake City, UT.
- Panik, H.R., and S. Barrett. 1994. Distribution of amphibians and reptiles along the Truckee River system. *Northwest Science* 68:197-204.
- Paoletti, D.J. 2009. Responses of Foothill Yellow-legged Frog (*Rana boylii*) larvae to an introduced predator. M.S. thesis, Oregon State University, Corvallis.
- Paoletti, D.J., D.H. Olson, and A.R. Blaustein. 2011. Responses of Foothill Yellow-legged Frog (*Rana boylii*) larvae to an introduced predator. *Copeia* 2011:161-168.
- Parker, J.M. 2000. Habitat use and movements of the Wyoming Toad, *Bufo baxteri*: a study of wild juvenile, adult, and released captive-raised toads. M.S. thesis, University of Wyoming, Laramie.
- Parker, J.M., and S.H. Anderson. 2003. Habitat use and movements of repatriated Wyoming Toads. *Journal of Wildlife Management* 67:439-446.
- Parker, J., S.H. Anderson, and F.J. Lindzey. 2000. *Bufo baxteri* (Wyoming Toad). Predation. *Herpetological Review* 31:167-168.
- Parker, M.V. 1937. Some amphibians and reptiles from Reelfoot Lake. *Journal of the Tennessee Academy of Science* 12:60-86.
- Parker, M.V. 1941. The trematode parasites from a collection of amphibians and reptiles. *Journal of the Tennessee Academy of Science* 16:27-45.
- Parker, M.V. 1951. Notes on the Bird-voiced Tree Frog, *Hyla phaeocrypta*. *Journal of the Tennessee Academy of Science* 26:208-213.
- Parker, W.S. 1973. Observations on a small, isolated population of *Bufo punctatus* in Arizona. *Southwestern Naturalist* 18:93-114.
- Parmelee, J.R., M.G. Knutson and J.E. Lyon. 2002. A field guide to amphibian larvae and eggs of Minnesota, Wisconsin, and Iowa. USGS Information and Technology Report 2002-0004, Washington, D.C.
- Parmley, D.C., and J.D. Tyler. 1978. Gray treefrog in southwestern Oklahoma. *Southwestern Naturalist* 23:157-158.
- Parris, M.J. 1998. Terrestrial burrowing ecology of newly metamorphosed frogs (*Rana pipiens* complex). *Canadian Journal of Zoology* 76:2124-2129.
- Parris, M.J., and R.D. Semlitsch. 1998. Asymmetric competition in larval amphibian communities: conservation implications for the Northern Crawfish Frog, *Rana areolata circulosa*. *Oecologia* 116:219-226.
- Parris, M.J., and J.G. Beaudoin. 2004. Chytridiomycosis impacts predator-prey interactions in larval amphibian communities. *Oecologia* 140:626-632.
- Parry, J.E., and A.W. Grundman. 1965. Species composition and distribution of the parasites of some common amphibians of Iron and Washington counties, Utah. *Proceedings of the Utah Academy of Sciences, Arts, and Letters* 42:271-279.
- Pask, J.D., D.C. Woodhams, and L.A. Rollins-Smith. 2012. The ebb and flow of antimicrobial skin peptides defends Northern Leopard Frogs (*Rana pipiens*) against chytridiomycosis. *Global Change Biology* 18:1231-1238.
- Patch, C.L. 1918. The economic value of batrachians and reptiles. *Ottawa Naturalist* 32:29-30.
- Patch, C.L. 1922. Some amphibians and reptiles from British Columbia. *Copeia* (111):74-79.
- Patch, C.L. 1925. The frog eats the bird. *Canadian Field-Naturalist* 39:150.
- Patch, C.L. 1929. Some amphibians of western North America. *Canadian Field-Naturalist* 43:137-138.
- Patch, C.L. 1939. Northern records of the Wood Frog. *Copeia* 1939:235.

- Patla, D.A. 1997. Changes in a population of Spotted Frogs in Yellowstone National Park between 1953 and 1995: the effects of habitat modification. M.S. thesis, Idaho State University, Pocatello.
- Patla, D.A., and C.R. Peterson. 1999. Are amphibians declining in Yellowstone National Park? *Yellowstone Science* 7:2-11.
- Patla, D.A., C.R. Peterson, and P.S. Corn. 2009. Amphibian decline in Yellowstone National Park. *Proceedings of the National Academy of Sciences, USA* 106:E22.
- Paton, P., S. Stevens, and L. Longo. 2000. Seasonal phenology of amphibian breeding and recruitment at a pond in Rhode Island. *Northeastern Naturalist* 7:255-269.
- Paton, P.W.C., R.S. Egan, J.E. Osenkowski, C.J. Raithel, and R.T. Brooks. 2003. *Rana sylvatica* (Wood Frog). Breeding behavior during drought. *Herpetological Review* 34:236-237.
- Patrick, D.A., A.J.K. Calhoun, and M.L. Hunter Jr. 2007. Orientation of juvenile Wood Frogs, *Rana sylvatica*, leaving experimental ponds. *Journal of Herpetology* 41:158-163.
- Patrick, D.A., C.M. Schalk, J.P. Gibbs, and H.W. Woltz. 2010. Effective culvert placement and design facilitate passage of amphibians across roads. *Journal of Herpetology* 44:618-626.
- Patrick, D.A., E.B. Harper, V.D. Popescu, Z. Bozic, A. Byrne, J. Daub, A. Lecheminant and J. Pierce. 2012a. The ecology of the Mink Frog, *Lithobates septentrionalis*, in the Adirondack Park, New York, with notes on conducting experimental research. *Herpetological Review* 43:396-398.
- Patrick, D.A., J.P. Gibbs, V.D. Popescu and D.A. Nelson. 2012b. Multi-scale habitat-resistance models for predicting road mortality “hotspots” for turtles and amphibians. *Herpetological Conservation and Biology* 7:407-426.
- Patten, M.A., and S.J. Myers. 1992. Geographic distribution: *Bufo microscaphus californicus*. *Herpetological Review* 23:124.
- Pauken, R.J., and D.E. Metter. 1971. Geographic representation of morphologic variation among populations of *Ascaphus truei* Stejneger. *Systematic Zoology* 20:434-441.
- Paukstis, G.L., and L.E. Brown. 1987. Evolution of the intercalary cartilage in chorus frogs, genus *Pseudacris* (Salientia: Hylidae). *Brimleyana* 13:55-61.
- Pauley, B.A., and T.K. Pauley. 2007. Survey of abandoned coal mines for amphibians and reptiles in New River Gorge National River, West Virginia. *Proceedings of the West Virginia Academy of Science* 79:22-30.
- Pauley, T.K. 2001. Toads and frogs of West Virginia. West Virginia Division of Natural Resources, Elkins, WV.
- Pauley, T.K., J.C. Mitchell, R.R. Buech, and J.J. Moriarty. 2000. Ecology and management of riparian habitats for amphibians and reptiles. Pp. 169-192 In E.S. Verry, J.W. Hornbeck, and C.A. Dolloff (eds.), *Riparian Management in Forests of the Continental Eastern United States*. Lewis Publishers, Boca Raton, FL.
- Paulmier, F.C. 1902. Catalogue of New York reptiles and batrachians. Lizards, tortoises and batrachians of New York. *New York State Museum Bulletin* 51:389-409.
- Paulson, B.K., and V.H. Hutchison. 1987. Origin of the stimulus for muscular spasms at the critical thermal maximum in anurans. *Copeia* 1987:810-813.
- Pauly, G.B., D.M. Hillis, and D.C. Cannatella. 2004. The history of a Nearctic colonization: molecular phylogenetics and biogeography of the Nearctic toads (*Bufo*). *Evolution* 58:2517-2535.
- Peacor, S.D., and E.E. Werner. 2000. Predator effects on an assemblage of consumers through induced changes in consumer foraging behavior. *Ecology* 81:1998-2010.
- Pearl, C.A., and M.P. Hayes. 2002. Predation by Oregon Spotted Frogs (*Rana pretiosa*) on Western Toads (*Bufo boreas*) in Oregon. *American Midland Naturalist* 147:145-152.
- Pearl, C.A., and J. Bowerman. 2006. Observations of rapid colonization of constructed ponds by Western Toads (*Bufo boreas*) in Oregon, USA. *Western North American Naturalist* 66:397-401.
- Pearl, C.A., M.J. Adams, G.S. Schuytema, and A.V. Nebeker. 2003. Behavioral responses of anuran larvae to chemical cues of native and introduced predators in the Pacific Northwestern United States. *Journal of Herpetology* 37:572-576.
- Pearl, C.A., M.J. Adams, R.B. Bury, and B. McCreary. 2004. Asymmetrical effects of introduced Bullfrogs (*Rana catesbeiana*) on native ranid frogs in Oregon. *Copeia* 2004:11-20.
- Pearl, C.A., M.P. Hayes, R. Haycock, J.D. Engler, and J. Bowerman. 2005a. Observations of interspecific amplexus between western North American ranid frogs and the introduced

- American Bullfrog (*Rana catesbeiana*) and an hypothesis concerning breeding interference. American Midland Naturalist 154:126-134.
- Pearl, C.A., M.J. Adams, N. Leuthold, and R.B. Bury. 2005b. Amphibian occurrence and aquatic invaders in a changing landscape: implications for wetland mitigation in the Willamette Valley, Oregon, USA. Wetlands 25:76-88.
- Pearl, C.A., J. Bowerman, and D. Knight. 2005c. Feeding behavior and aquatic habitat use by Oregon Spotted Frogs (*Rana pretiosa*) in central Oregon. Northwestern Naturalist 86:36-38.
- Pearl, C.A., M.J. Adams, R.B. Bury, W.H. Wente, and B. McCreary. 2009a. Evaluating amphibian declines with site revisits and occupancy models: status of montane anurans in the Pacific Northwest USA. Diversity 1:166-181.
- Pearl, C.A., M.J. Adams, and N. Leuthold. 2009b. Breeding habitat and local population size of the Oregon Spotted Frog (*Rana pretiosa*) in Oregon, USA. Northwestern Naturalist 90:136-147.
- Pearman, P.B. 1993. Effects of habitat size on tadpole populations. Ecology 74:1982-1991.
- Pearse, A.S. 1910. The reactions of amphibians to light. Proceedings of the American Academy of Arts and Sciences 45:159-208.
- Pearse, A.S. 1936. Estuarine animals at Beaufort, North Carolina. Journal of the Elisha Mitchell Scientific Society 52:174-222.
- Pearson, H.A., R.R. Lohoefener and J.L. Wolfe. 1987. Amphibians and reptiles on Longleaf Slash Pine forests in Mississippi. Pp. 157-165 In Ecological, Physical, and Socioeconomic Relationships within Southern National Forests, Proceedings of the Southern Evaluation Project Workshop. USDA Forest Service, Southern Forest Experiment Station, New Orleans.
- Pearson, K.J. 2009. Status of the Great Plains Toad (*Bufo [Anaxyrus] cognatus*) in Alberta: update 2009. Alberta Sustainable Resource Development, Wildlife Status Report No. 14 (update 2009), Edmonton.
- Pearson, P.G. 1955. Population ecology of the spadefoot toad, *Scaphiopus h. holbrookii* (Harlan). Ecological Monographs 25:233-267.
- Pearson, P.G. 1957. Further notes on the population ecology of the spadefoot toad. Ecology 38:580-586.
- Pearson, P.G. 1958. Body measurements of *Scaphiopus holbrookii*. Copeia 1958:215-217.
- Pease, K.M. 2011. Rapid evolution of anti-predator defenses in Pacific Tree Frog tadpoles exposed to invasive predatory crayfish. Ph.D. diss., University of California, Los Angeles.
- Pechmann, J.H.K., and R.D. Semlitsch. 1986. Diel activity patterns in the breeding migrations of winter-breeding anurans. Canadian Journal of Zoology 64:1116-1120.
- Pechmann, J.H.K., D.E. Scott, J.W. Gibbons, and R.D. Semlitsch. 1989. Influence of wetland hydroperiod on diversity and abundance of metamorphosing juvenile amphibians. Wetlands Ecology and Management 1:3-11.
- Pechmann, J.H.K., D.E. Scott, R.D. Semlitsch, J.P. Caldwell, L.J. Vitt, and J.W. Gibbons. 1991. Declining amphibian populations: the problem of separating human impacts from natural fluctuations. Science 253:892-895.
- Pechmann, J.H.K., R.A. Estes, D.E. Scott, and J.W. Gibbons. 2001. Amphibian colonization and use of ponds created for trial mitigation of wetland loss. Wetlands 21:93-111.
- Pehek, E.L. 1995. Competition, pH, and the ecology of larval *Hyla andersonii*. Ecology 76:1786-1793.
- Pemberton, C.E. 1933. Introductions to Hawaii of the tropical American toad *Bufo marinus*. Hawaiian Planters' Record 37:15-16.
- Pemberton, C.E. 1934. Local investigations on the introduced tropical American toad *Bufo marinus*. Hawaiian Planters' Record 38:186-192.
- Pemberton, C.E. 1949. Longevity of the tropical American Toad, *Bufo marinus*. Science 110:512.
- Penn, G.H. 1950. Utilization of crawfishes by cold-blooded vertebrates in the eastern United States. American Midland Naturalist 44:643-658.
- Perkins, D.W. 2004. The effects of riparian timber management on amphibians in western Maine. Ph.D. diss., University of Maine, Orono.
- Perkins, D.W., and M.L. Hunter Jr. 2006. Effects of riparian timber management on amphibians in Maine. Journal of Wildlife Management 70:657-670.
- Perrill, S.A. 1984. Male mating behavior in *Hyla regilla*. Copeia 1984:727-732.
- Perrill, S.A., and R.E. Daniel. 1983. Multiple egg clutches in *Hyla regilla*, *H. cinerea*, and *H. gratiosa*. Copeia 1983:513-516.
- Perrill, S.A., and M. Magier. 1988. Male mating

- behavior in *Acris crepitans*. Copeia 1988:245-248.
- Perrill, S.A., and W.J. Shepherd. 1989. Spatial distribution and male-male communication in the Northern Cricket Frog, *Acris crepitans blanchardi*. Journal of Herpetology 23:237-243.
- Perrill, S.A., H.C. Gerhardt, and R. Daniel. 1978. Sexual parasitism in the Green Tree Frog (*Hyla cinerea*). Science 200:1179-1180.
- Perrill, S.A., H.C. Gerhardt, and R. Daniel. 1982. Mating strategy shifts in male Green Treefrogs (*Hyla cinerea*): an experimental study. Animal Behaviour 30:43-48.
- Peters, B., and F.S. Ruth. 1962. Albino Bullfrog (*Rana catesbeiana*) population found in San Leandro Creek, Alameda County, California. Turtox News 40(1):7.
- Peterson, C.R. 1974. A preliminary report on the amphibians and reptiles of the Black Hills of South Dakota and Wyoming. M.S. thesis, University of Illinois, Urbana-Champaign.
- Peterson, H.W., R. Garrett, and J.P. Lantz. 1952. The mating period of the Giant Tree Frog *Hyla dominicensis*. Herpetologica 8:63.
- Peterson, J.A., and A.R. Blaustein. 1991. Unpalatability in anuran larvae as a defense against natural salamander predators. Ethology Ecology & Evolution 3:63-72.
- Peterson, J.A., and A.R. Blaustein. 1992. Relative palatabilities of anuran larvae to natural aquatic insect predators. Copeia 1992:577-584.
- Peterson, J.D., M.B. Wood, W.A. Hopkins, J.M. Unrine, and M.T. Mendonça. 2007. Prevalence of *Batrachochytrium dendrobatidis* in American Bullfrog and Southern Leopard Frog larvae from wetlands on the Savannah River Site, South Carolina. Journal of Wildlife Diseases 43:450-460.
- Petraska, J.W. 1989. Response of toad tadpoles to conflicting chemical stimuli: predator avoidance versus "optimal" foraging. Herpetologica 45:283-292.
- Petraska, J.W., and D.A.G. Thomas. 1995. Explosive breeding reduces egg and tadpole cannibalism in the Wood Frog, *Rana sylvatica*. Animal Behaviour 50:731-739.
- Petraska, J.W., M.E. Hopey, B.T. Jennings, S.D. Baird, and S.J. Boone. 1994. Breeding habitat segregation of Wood Frogs and American Toads: the role of interspecific tadpole predation and adult choice. Copeia 1994:691-697.
- Petraska, J.W., A.W. Rushlow, and M.E. Hopey. 1998. Predation by tadpoles of *Rana sylvatica* on embryos of *Ambystoma maculatum*: implications of ecological role reversals by *Rana* (predator) and *Ambystoma* (prey). Herpetologica 54:1-13.
- Petraska, J.W., S.S. Murray, and C.A. Kennedy. 2003. Responses of amphibians to restoration of a Southern Appalachian wetland: perturbations confound post-restoration assessment. Wetlands 23:278-290.
- Petraska, J.W., C.K. Smith, and A.F. Scott. 2004. Identifying the minimal demographic unit for monitoring pond-breeding amphibians. Ecological Applications 14:1065-1078.
- Petrovic, C.A. 1973. An "albino" frog, *Eleutherodactylus planirostris* Cope. Journal of Herpetology 7:49-51.
- Pettus, D., and A.W. Spencer. 1964. Size and metabolic differences in *Pseudacris triseriata* (Anura) from different elevations. Southwestern Naturalist 9:20-26.
- Pettus, D., and G.M. Angleton. 1967. Comparative reproductive biology of Montane and Piedmont Chorus Frogs. Evolution 21:500-507.
- Pfeiffer, E.E. 1949. The toad: the gardener's assistant. Organic Farming Digest 1(12):18-23.
- Pfennig, D.W. 1989. Evolution, development, and behavior of alternative amphibian morphologies. Ph.D. diss., University of Texas, Austin.
- Pfennig, D. 1990a. The adaptive significance of an environmentally-cued developmental switch in an anuran tadpole. Oecologia 85:101-107.
- Pfennig, D.W. 1990b. "Kin recognition" among spadefoot toad tadpoles: a side-effect of habitat selection? Evolution 44:785-798.
- Pfennig, D.W. 1992. Polyphenism in spadefoot toad tadpoles as a locally adjusted evolutionarily stable strategy. Evolution 46:1408-1420.
- Pfennig, D.W. 1999. Cannibalistic tadpoles that pose the greatest threat to kin are most likely to discriminate kin. Proceedings of the Royal Society, London 266B:57-61.
- Pfennig, D.W., and P.J. Murphy. 2000. Character displacement in polyphenic tadpoles. Evolution 54:1738-1749.
- Pfennig, D.W., and P.J. Murphy. 2002. How fluctuating competition and phenotypic plasticity mediate species divergence. Evolution 56:1217-1228.
- Pfennig, D.W., and P.J. Murphy. 2003. A test of

- alternative hypotheses for character divergence between coexisting species. *Ecology* 84:1288-1297.
- Pfennig, D.W., and R.A. Martin. 2009. A maternal effect mediates rapid population divergence and character displacement in spadefoot toads. *Evolution* 63:898-909.
- Pfennig, D.W., A. Mabry, and D. Orange. 1991. Environmental causes of correlations between age and size at metamorphosis in *Scaphiopus multiplicatus*. *Ecology* 72:2240-2248.
- Pfennig, K.S. 2000. Female spadefoot toads compromise on mate quality to ensure conspecific matings. *Behavioral Ecology* 11:220-227.
- Pfennig, K.S. 2003. A test of alternative hypotheses for the evolution of reproductive isolation between spadefoot toads: support for the reinforcement hypothesis. *Evolution* 57:2842-2851.
- Pfennig, K.S., and M.A. Simovich. 2002. Differential selection to avoid hybridization in two toad species. *Evolution* 56:1840-1848.
- Pfennig, K.S., K. Rapa, and R. McNutt. 2000. Evolution of male mating behavior: male spadefoot toads preferentially associate with conspecific males. *Behavioral Ecology and Sociobiology* 48:69-74.
- Pfingsten, R.A. 1998. Distribution of Ohio amphibians. Pp. 220-255 In M.J. Lannoo (ed.), *Status & Distribution of Midwestern Amphibians*. University of Iowa Press, Iowa City.
- Pham, L., S. Boudreaux, S. Karhbet, B. Price, A.S. Ackleh, J. Carter, and N. Pal. 2007. Population estimates of *Hyla cinerea* (Schneider) (Green Tree Frog) in an urban Environment. *Southeastern Naturalist* 6:203-216.
- Phelps, J.P. 1993. The effect of clearcutting on herpetofauna of a South Carolina blackwater bottomland. M.S. thesis, North Carolina State University, Raleigh.
- Phelps, J.P., and R. A. Lancia. 1995. Effects of a clearcut on the herpetofauna of a South Carolina bottomland swamp. *Brimleyana* 22:31-45.
- Phillips, C.A., R.A. Brandon, and E.O. Moll. 1999. Field Guide to the Amphibians and Reptiles of Illinois. Illinois Natural History Survey, Champaign, IL.
- Phillips, K.A., and G.C. Boone. 1976. Occurrence of yellow Bullfrogs (*Rana catesbeiana* Shaw) in central Pennsylvania. *Proceedings of the Pennsylvania Academy of Science* 50:163-164.
- Phillips, K.M. 1995. *Rana capito capito*, the Carolina Gopher Frog, in southeast Georgia: reproduction, early growth, adult movement patterns, and tadpole fright response. M.S. thesis, Georgia Southern University, Statesboro.
- Phillipsen, I.C. 2010. Population genetics of ranid frogs : investigating effective population size and gene flow. Ph.D. diss., Oregon State University, Corvallis.
- Phillipsen, I.C., and A.E. Metcalf. 2009. Phylogeography of a stream-dwelling frog (*Pseudacris cadaverina*) in southern California. *Molecular Phylogenetics and Evolution* 53:152-170.
- Phillipsen, I.C., J. Bowerman, and M. Blouin. 2010. Effective number of breeding adults in Oregon Spotted Frogs (*Rana pretiosa*): genetic estimates at two life stages. *Conservation Genetics* 11:737-745.
- Piacenza, T. 2008. Population densities of the Cuban Treefrog, *Osteopilus septentrionalis* and three native species of *Hyla* (Hylidae), in urban and natural habitats of southwest Florida. M.S. thesis, University of South Florida, Tampa.
- Pickens, A.L. 1927a. Intermediate between *Bufo fowleri* and *B. americanus*. *Copeia* (162):25-26.
- Pickens, A.L. 1927b. Amphibians of the upper South Carolina. *Copeia* (165):106-110.
- Pickwell, G. (ed.). 1930. Frogs Toads Salamanders. Western Nature Study 1:1-55.
- Pickwell, G. 1947. *Amphibians & Reptiles of the Pacific States*. Stanford University Press, Stanford, California. [reissued by Dover Publications, 1972]
- Pierce, B.A., and N. Sikand. 1985. Intrapopulation variation in acid tolerance of Connecticut Wood Frogs: genetic and maternal effects. *Canadian Journal of Zoology* 63:1647-1651.
- Pierce, B.A., and J.M. Harvey. 1987. Geographic variation in acid tolerance of Wood Frogs. *Copeia* 1987:94-103.
- Pierce, B.A., and D.K. Wooten. 1992. Genetic variation in tolerance of amphibians to low pH. *Journal of Herpetology* 26:422-429.
- Pierce, B.A., M.A. Margolis, and L.J. Niraut. 1987. The relationship between egg size and acid tolerance in *Rana sylvatica*. *Journal of Herpetology* 21:178-184.

- Pierce, J.R. 1975. Genetic compatibility of *Hyla arenicolor* with other species in the Family, Hylidae. Texas Journal of Science 26:431-441.
- Pierce, J.R. 1976. Distribution of two mating call types of the Plains Spadefoot, *Scaphiopus bombifrons*, in southwestern United States. Southwestern Naturalist 20:578-582.
- Pierce, J.R., and D.B. Ralin. 1972. Vocalizations and behavior of the males of three species in the *Hyla versicolor* complex. Herpetologica 28:329-337.
- Piersol, W.H. 1913. Amphibia. Pp. 242-248 In J.H. Faull (ed.), The Natural History of the Toronto Region, Ontario, Canada. The Canadian Institute, Toronto.
- Pietersen, C.B., L.M. Addison, J.N. Agobian, B. Brooks-Solveson, J. Cassani, and E.M. Everham III. 2006. Five years of the Southwest Florida Frog Monitoring Network: changes in frog communities as an indicator of landscape change. Florida Scientist 69 (Supplement 2):117-126.
- Piha, H., M. Luoto, and J. Merilä. 2007. Amphibian occurrence is influenced by current and historic landscape characteristics. Ecological Applications 17:2298-2309.
- Pike, N. 1886. Notes on the Hermit Spadefoot (*Scaphiopus holbrookii* Harlan; *S. solitarius* Holbr.). Bulletin of the American Museum of Natural History 1(14):213-221.
- Pilliod, D.S. 2002. Clark's Nutcracker (*Nucifraga columbiana*) predation on tadpoles of the Columbia Spotted Frog (*Rana luteiventris*). Northwestern Naturalist 83:59-61.
- Pilliod, D.S., and C.R. Peterson. 2000. Evaluating effects of fish stocking on amphibian populations in wilderness lakes. Pp. 328-335 In Wilderness Science in a Time of Change Conference. Vol. 5. Wilderness Ecosystems, Threats, and Management. RMRS-P-15. http://www.fs.fed.us/rm/pubs/rmrs_p015_5/rmrs_p015_5_328_335.pdf
- Pilliod, D.S., and C.R. Peterson. 2001. Local and landscape effects of introduced trout on amphibians in historically fishless watersheds. Ecosystems 4:322-333.
- Pilliod, D.S., and E. Wind (eds.). 2008. Habitat Management Guidelines for Amphibians and Reptiles of the Northwestern United States and Western Canada. Partners in Amphibian and Reptile Conservation, Technical Publication HMG-4, Montgomery, AL.
- Pilliod, D.S., C.R. Peterson, and P.I. Ritson. 2002. Seasonal migration of Columbia Spotted Frogs (*Rana luteiventris*) among complementary resources in a high mountain basin. Canadian Journal of Zoology 80:1849-1862.
- Pilliod, D.S., R.B. Bury, E.J. Hyde, C.A. Pearl, and P.S. Corn. 2003. Fire and amphibians in North America. Forest Ecology and Management 178:163-181.
- Pilliod, D.S., E. Muths, R.D. Scherer, P.E. Bartelt, P.S. Corn, B.R. Hossack, B.A. Lambert, R. McCaffery, and C. Gaughan. 2010. Effects of amphibian chytrid fungus on individual survival probability in wild boreal toads. Conservation Biology 24:1259-1267.
- Pimentel, R.A. 1955. Habitat distribution and movements of *Bufo b. boreas*, Baird and Girard. Herpetologica 11:72.
- Pinder, A., and S. Friet. 1994. Oxygen transport in egg masses of the amphibians *Rana sylvatica* and *Ambystoma maculatum*: convection, diffusion and oxygen production by algae. Journal of Experimental Biology 197:17-30.
- Pinder, R. 2010. *Rana clamitans* (Green Frog). Coloration. Herpetological Review 41:66.
- Pine, R.H. 1975. Star-nosed mole eaten by bull frog. Mammalia 39:713-714.
- Piovia-Scott, J., K.L. Pope, S.P. Lawler, E.M. Cole and J.E. Foley. 2011. Factors related to the distribution and prevalence of the fungal pathogen *Batrachochytrium dendrobatidis* in *Rana cascadae* and other amphibians in the Klamath Mountains. Biological Conservation 144:2913-2921.
- Pittman, S.E., and M.E. Dorcas. 2006. Catawba River Corridor coverboard program: a citizen science approach to amphibian and reptile inventory. Journal of the North Carolina Academy of Science 122:142-151.
- Pittman, S.E., A.L. Jendrek, S.J. Price and M.E. Dorcas. 2008. Habitat selection and site fidelity of Cope's Gray Treefrog (*Hyla chrysoscelis*) at the aquatic-terrestrial ecotone. Journal of Herpetology 42:378-385.
- Pitt, A.L., C.M. Allard, J.E. Hawley, R.F. Baldwin and B.L. Brown. 2011. *Lithobates sylvaticus*. Predation. Herpetological Review 42:263.
- Platin, T.J., and K.O. Richter. 1995. Amphibians as bioindicators of stress associated with watershed urbanization. Pp. 163-170 In Puget Sound Research 95 Proceedings, Vol. 1. Puget

- Sound Water Quality Authority, Olympia, WA.
- Platt, D.R. (Chairman of Conservation Committee). 1973. Rare, endangered and extirpated species in Kansas. 2. Amphibians and reptiles. *Transactions of the Kansas Academy of Science* 76:185-192.
- Platt, S.G., K.R. Russell, W.E. Snyder, L.W. Fontenot, and S. Miller. 1999. Distribution and conservation status of selected amphibians and reptiles in the Piedmont of South Carolina. *Journal of the Elisha Mitchell Scientific Society* 115:8-19.
- Platz, J.E. 1976. Biochemical and morphological variation of leopard frogs in Arizona. *Copeia* 1976:660-672.
- Platz, J.E. 1981. Suture zone dynamics: Texas populations of *Rana berlandieri* and *R. blairi*. *Copeia* 1981:733-734.
- Platz, J.E. 1988a. Geographic variation in mating call among the four subspecies of the chorus frog: *Pseudacris triseriata* (Wied). *Copeia* 1988:1062-1066.
- Platz, J.E. 1989. Speciation within the chorus frog *Pseudacris triseriata*: morphometric and mating call analyses of the boreal and western subspecies. *Copeia* 1989:704-712.
- Platz, J.E. 1993. *Rana subaquavocalis*, a remarkable new species of leopard frog (*Rana pipiens* complex) from southeastern Arizona that calls under water. *Journal of Herpetology* 27: 154-162.
- Platz, J.E., and A.L. Platz. 1973. *Rana pipiens* complex: hemoglobin phenotypes of sympatric and allopatric populations in Arizona. *Science* 179:1334-1336.
- Platz, J.E., and J.S. Mecham. 1979. *Rana chiricahuensis*, a new species of leopard frog (*Rana pipiens* complex) from Arizona. *Copeia* 1979:383-390.
- Platz, J.E., and J.S. Frost. 1984. *Rana yavapaiensis*, a new species of leopard frog (*Rana pipiens* complex). *Copeia* 1984:940-948.
- Platz, J.E., and T.A. Grudzien. 2003. Limited genetic heterozygosity and status of two populations of the Ramsey Canyon Leopard Frog: *Rana subaquavocalis*. *Journal of Herpetology* 37:758-761.
- Platz, J.E., R.W. Clarkson, J.C. Rorabaugh, and D.M. Hillis. 1990. *Rana berlandieri*: recently introduced populations in Arizona and southeastern California. *Copeia* 1990:324-333.
- Platz, J.E., A. Lathrop, L. Hofbauer, and M. Vradenburg. 1997. Age distribution and longevity in the Ramsey Canyon Leopard Frog, *Rana subaquavocalis*. *Journal of Herpetology* 31:552-557.
- Plotkin, M., and R. Atkinson. 1979. Geographic distribution. *Eleutherodactylus planirostris*. *Herpetological Review* 10:59.
- Poile, M.E. 1982. The effects of genetic similarity and crowding on intraspecific competition in tadpoles. M.A. thesis, University of South Dakota, Vermillion.
- Pollard, G.M., C.J. Biggers, and M.J. Harvey. 1973. Electrophoretic differentiation of the parotoid venoms of *Bufo americanus* and *Bufo woodhousei fowleri*. *Herpetologica* 29:251-253.
- Pollio, C.A., and S.L. Kilpatrick. 2002. Status of *Pseudacris feriarum* in Prince William Forest Park, Prince William County, Virginia. *Bulletin of the Maryland Herpetological Society* 38:55-61.
- Pollister, A.W., and J.A. Moore. 1937. Tables for the normal development of *Rana sylvatica*. *Anatomical Record* 68:489-496.
- Pomeroy, L.V. 1981. Developmental polymorphism in the tadpoles of the spadefoot toad *Scaphiopus multiplicatus*. Ph.D. diss., University of California, Riverside.
- Pope, C.H. 1964. Amphibians and Reptiles of the Chicago Area. Chicago Natural History Museum, Chicago.
- Pope, K.L. 1999. Mountain Yellow-legged Frog habitat use and movement patterns in a high elevation basin in Kings Canyon National Park. M.S. thesis, California Polytechnic State University, San Luis Obispo, CA.
- Pope, K.L. 1999b. *Rana muscosa* (Mountain Yellow-legged Frog). Diet. *Herpetological Review* 30:163-164.
- Pope, K.L., and K.R. Matthews. 2001. Movement ecology and seasonal distribution of Mountain Yellow-Legged Frogs, *Rana muscosa*, in a high-elevation Sierra Nevada Basin. *Copeia* 2001:787-793.
- Pope, K.L., and K.R. Matthews. 2002. Influence of anuran prey on the condition and distribution of *Rana muscosa* in the Sierra Nevada. *Herpetologica* 58:354-363.
- Pope, S.E., L. Fahrig, and H.G. Merriam. 2000. Landscape complementation and metapopulation effects on leopard frog populations. *Ecology* 81:2498-2508.
- Popescu, V.D., and J.P. Gibbs. 2009. Interactions between climate, beaver activity, and pond occupancy by the cold-adapted Mink Frog in

- New York State, USA. Biological Conservation 142:2059-2068.
- Popescu, V.D., B.S. Brodie, M.L. Hunter and J.D. Zydlowski. 2012. Use of olfactory cues by newly metamorphosed Wood Frogs (*Lithobates sylvaticus*) during emigration. Copeia 2012:424-431.
- Porej, D., M. Micacchion, and T.E. Hetherington. 2004. Core terrestrial habitat for conservation of local populations of salamanders and Wood Frogs in agricultural landscapes. Biological Conservation 120:399-409.
- Porter, K.R. 1961. Experimental crosses between *Rana aurora aurora* Baird and Girard and *Rana cascadae* Slater. Herpetologica 17:156-165.
- Porter, K.R. 1968. Evolutionary status of a relict population of *Bufo hemiophrys* Cope. Evolution 22:583-594.
- Porter, K.R. 1969a. Description of *Rana maslini*, a new species of Wood Frog. Herpetologica 25:212-215.
- Porter, K.R. 1969b. Evolutionary status of the Rocky Mountain population of wood frogs. Evolution 23:163-170.
- Porter, K.R., and D.E. Hakanson. 1976. Toxicity of mine drainage to embryonic and larval Boreal Toads (Bufonidae: *Bufo boreas*). Copeia 1976:327-331.
- Post, D.D. 1972. Species differentiation in the *Rana pipiens* complex. Ph.D. diss., Colorado State University, Fort Collins.
- Post, D.D., and D. Pettus. 1966. Variation in *Rana pipiens* (Anura: Ranidae) of eastern Colorado. Southwestern Naturalist 11:476-482.
- Post, D.D., and D. Pettus. 1967. Sympatry of two members of the *Rana pipiens* complex in Colorado. Herpetologica 23:323.
- Post, T.J., and T. Uzzell. 1981. The relationships of *Rana sylvatica* and the monophyly of the *Rana boylii* group. Systematic Zoology 30:170-180.
- Pough, F.H., and S. Kamel. 1984. Post-metamorphic change in activity metabolism of anurans in relation to life history. Oecologia 65:138-144.
- Powell, R., J.T. Collins and E.D. Hooper, Jr. 2012. Key to the Herpetofauna of the Continental United States and Canada. Second edition, revised and updated. University Press of Kansas, Lawrence.
- Pramuk, J.B., T. Robertson, J.W. Sites Jr., and B.P. Noonan. 2007. Around the world in 10 million years: biogeography of the nearly cosmopolitan true toads (Anura: Bufonidae). Global Ecology and Biogeography 17:72-83.
- Prather, J.W., and J.T. Briggler. 2001. Use of small caves by anurans during a drought period in the Arkansas Ozarks. Journal of Herpetology 35:675-678.
- Preble, E.A. 1902. A biological investigation of the Hudson Bay Region. North American Fauna 22:1-140.
- Preble, E.A. 1908. Reptiles and batrachians of the Athabasca-Mackenzie region. North American Fauna 27:500-502.
- Preston, D.L., J.S. Henderson and P.T.J. Johnson. 2012. Community ecology of invasions: direct and indirect effects of multiple invasive species on aquatic communities. Ecology 93:1254-1261.
- Preston, W.B. 1982. The Amphibians and Reptiles of Manitoba. Manitoba Museum of Man and Science, Winnipeg.
- Prestwich, K.N., K.E. Brugger, and M. Topping. 1989. Energy and communication in three species of hylid frogs: power input, power output and efficiency. Journal of Experimental Biology 144:53-80.
- Price, A.H. 2003. The Houston toad in Bastrop State Park 1990-2002: a narrative. Texas Parks and Wildlife Department, Open File Report 03-0401.
- Price, R.M., and E.R. Meyer. 1979. An amplexus call made by the male American Toad, *Bufo americanus americanus* (Amphibia, Anura, Bufonidae). Journal of Herpetology 13:506-509.
- Price, S.J., D.R. Marks, R.W. Howe, J.M. Hanowski, and G.J. Niemi. 2004. The importance of spatial scale for conservation and assessment of anuran populations in coastal wetlands of the western Great Lakes, USA. Landscape Ecology 20:441-454.
- Priddy, J.M., and D.D. Culley Jr. 1971. The frog culture industry, past and present. Proceedings Annual Conference of the Southeastern Association of Game and Fish Commissioners 25:597-601.
- Priestley, A.S., T.A. Gorman, and C.A. Haas. 2010. Comparative morphology and identification of Florida Bog Frog and Bronze Frog tadpoles. Florida Scientist 73:20-26.
- Provenzano, S.E., and M.D. Boone. 2009. Effects of density on metamorphosis of bullfrogs in a single season. Journal of

- Herpetology 43:49-54.
- Pryor, G.S. 2003. Roles of gastrointestinal symbionts in nutrition, digestion, and development of Bullfrog tadpoles (*Rana catesbeiana*). Ph.D. diss., University of Florida, Gainesville.
- Pryor, G.S. 2008. Anaerobic bacteria isolated from the gastrointestinal tracts of Bullfrog tadpoles (*Rana catesbeiana*). Herpetological Conservation and Biology 3:176-181.
- Puglis, H.J., and M.D. Boone. 2011. Effects of technical grade active ingredients vs. commercial formulation of seven pesticides in the presence or absence of UV radiation on survival of Green Frog tadpoles. Archives of Environmental Contamination and Toxicology 60:145-155.
- Puglis, H.J., and M.D. Boone. 2012. Effects of terrestrial buffer zones on amphibians on golf courses. PLoS One 7:e39590.
- Pulis, E.E., V.V. Tkach, and R.A. Neuman. 2011. Helminth parasites of the Wood Frog, *Lithobates sylvaticus*, in prairie pothole wetlands of the northern Great Plains. Wetlands 31:675-685.
- Punzo, F. 1991a. Feeding ecology of spadefooted toads (*Scaphiopus couchii* and *Spea multiplicata*) in western Texas. Herpetological Review 22:79-80.
- Punzo, F. 1991b. Group learning in tadpoles of *Rana heckscheri* (Anura: Ranidae). Journal of Herpetology 25:214-217.
- Punzo, F. 1992a. Dietary overlap and activity patterns in sympatric populations of *Scaphiopus holbrookii* (Pelobatidae) and *Bufo terrestris* (Bufonidae). Florida Scientist 55:38-44.
- Punzo, F. 1992b. Socially facilitated behavior in tadpoles of *Rana catesbeiana* and *Rana heckscheri*. Journal of Herpetology 26:219-222.
- Punzo, F. 1993a. Effect of mercuric chloride on fertilization and larval development in the River Frog, *Rana heckscheri* (Wright) (Anura: Ranidae). Bulletin of Environmental Contamination and Toxicology 51:575-581.
- Punzo, F. 1993b. Ovarian effects of a sublethal concentration of mercuric chloride in the River Frog, *Rana heckscheri* (Anura: Ranidae). Bulletin of Environmental Contamination and Toxicology 50:385-391.
- Punzo, F. 1995. An analysis of feeding in the Oak Toad, *Bufo quercicus* (Holbrook) (Anura: Bufonidae). Florida Scientist 58:16-20.
- Punzo, F., and L. Lindstrom. 2001. The toxicity of eggs of the giant toad, *Bufo marinus*, to aquatic predators in a Florida retention pond. Journal of Herpetology 35:693-697.
- Punzo, F., J. Laveglia, D. Lohr, and P.A. Dahm. 1979. Organochlorine insecticide residues in amphibians and reptiles from Iowa and lizards from the Southwestern United States. Bulletin of Environmental Contamination and Toxicology 21:842-848.
- Purcell, J.W. 1968. Embryonic temperature adaptations in southwestern populations of *Rana pipiens*. M.S. thesis, Texas Tech University, Lubbock.
- Purgue, A.P. 1997. Tympanic sound radiation in the bullfrog, *Rana catesbeiana*. Journal of Comparative Physiology 181A:438-445.
- Purrenhaege, J.L., and M.D. Boone. 2009. Amphibian community response to variation in habitat structure and competitor density. Herpetologica 65:14-30.
- Puttlitz, M.H., D.P. Chivers, J.M. Kiesecker and A.R. Blaustein. 1999. Threat-sensitive predator avoidance by larval Pacific Treefrogs (Amphibia, Hylidae). Ethology 105: 449-456.
- Pyburn, W.F. 1958. Size and movements of a local population of cricket frogs (*Acrida crepitans*). Texas Journal of Science 10:325-342.
- Pyburn, W.F. 1960. Hybridization between *Hyla versicolor* and *H. femoralis*. Copeia 1960:55-56.
- Pyburn, W.F. 1961a. The inheritance and distribution of vertebral stripe color in the cricket frog. Pp. 235-261 In W.F. Blair (ed.), Vertebrate Speciation, University of Texas Press, Austin.
- Pyburn, W.F. 1961b. Inheritance of the green vertebral stripe in *Acrida crepitans*. Southwestern Naturalist 6:164-167.
- Pyburn, W.F., and J.P. Kennedy. 1960. Artificial hybridization of the Gray Treefrog, *Hyla versicolor* (Hylidae). American Midland Naturalist 64:216-223.
- Pytel, B.A. 1986. Biochemical systematics of the eastern North American frogs of the genus *Rana*. Herpetologica 42:273-282.
- Quaranta, A., V. Bellantuono, G. Cassano, and C. Lippe. 2009. Why amphibians are more sensitive than mammals to xenobiotics. PLoS One 4(11):e7699.
- Quinby, J.A. 1954. *Rana sylvatica sylvatica* Le Conte in South Carolina. Herpetologica 10:87-88.

- Quinn, H. 1979. The Rio Grande Chirping Frog, *Syrrhophus cystignathoides campi* (Amphibia, Leptodactylidae), from Houston, Texas. Transactions of the Kansas Academy of Sciences 82:209-210.
- Quinn, H.R., and G. Mengden. 1984. Reproduction and growth of *Bufo houstonensis* (Bufonidae). Southwestern Naturalist 29:189-195.
- Rachowicz, L.J., R.A. Knapp, J.A.T. Morgan, M.J. Stice, V.T. Vredenburg, J.M. Parker, and C.J. Briggs. 2006. Emerging infectious disease as a proximate cause of amphibian mass mortality. Ecology 87:1671-1683.
- Raffel, T.R., J.O. Lloyd-Smith, S.K. Sessions, P.J. Hudson and J.R. Rohr. 2011. Does the early frog catch the worm? Disentangling potential drivers of a parasite age-intensity relationship in tadpoles. Oecologia 165:1031-1042.
- Rafferty, K.A. Jr. 1964. Kidney tumors of the leopard frog: a review. Cancer Research 24:169-185.
- Raimondo, S.M., C.L. Rowe, and J.D. Congdon. 1998. Exposure to coal ash impacts swimming performance and predator avoidance in larval Bullfrogs (*Rana catesbeiana*). Journal of Herpetology 32:289-292.
- Raihnel, C.J., P.W.C. Paton, P.S. Pooler and, and F.C. Golet. 2011. Assessing long-term population trends of Wood Frogs using egg-mass counts. Journal of Herpetology 45:23-27.
- Ralin, D.B. 1968. Ecological and reproductive differentiation in the cryptic species of the *Hyla versicolor* complex (Hylidae). Southwestern Naturalist 13:283-300.
- Ralin, D.B. 1976 Comparative hybridization of a diploid-tetraploid cryptic species pair of treefrogs. Copeia 1976:191-196.
- Ralin, D.B. 1977. Evolutionary aspects of mating call variation in a diploid-tetraploid species complex of treefrogs (Anura). Evolution 31:721-736.
- Ralin, D.B. 1978. "Resolution" of the diploid-tetraploid tree frogs. Science 202:335-336.
- Ralin, D.B., and J.S. Rogers. 1972. Aspects of tolerance to desiccation in *Acris crepitans* and *Pseudacris streckeri*. Copeia 1972:519-528.
- Ralin, D.B., and R.K. Selander. 1979. Evolutionary genetics of diploid-tetraploid species of treefrogs of the genus *Hyla*. Evolution 33:595-608.
- Raloff, J. 2003. Hawaii's hated frogs: tiny invaders raise a big ruckus. Science News 163:11-13.
- Ramer, J.D., T.A. Jenssen, and C.J. Hurst. 1983. Size-related variation in the advertisement call of *Rana clamitans* (Anura: Ranidae), and its effect on conspecific males. Copeia 1983:141-155.
- Ramesh, R., K. Griffis-Kyle, G. Perry and M. Farmer. 2012. Urban amphibians of the Texas Panhandle: Baseline inventory and habitat associations in a drought year. Reptiles & Amphibians 19:243-253.
- Ramirez, E.A., H. J. Puglis, A. Ritzenthaler and M. Boone. 2012. Terrestrial movements and habitat preferences of male cricket frogs on a golf course. Copeia 2012:191-196.
- Ramsey, J.P. 2011. Amphibian immune defenses against *Batrachochytrium dendrobatis*: a war between host and pathogen. Ph.D. disss., Vanderbilt University, Nashville, TN.
- Raney, E.C. 1940. Summer movements of the Bullfrog, *Rana catesbeiana* Shaw, as determined by the jaw-tag method. American Midland Naturalist 23:733-745.
- Raney, E.C., and W.M. Ingram. 1941. Growth of tagged frogs (*Rana catesbeiana* Shaw and *Rana clamitans* Daudin) under natural conditions. American Midland Naturalist 26:201-206.
- Raney, E.C., and E.A. Lachner. 1947. Studies on the growth of tagged toads (*Bufo terrestris americanus* Holbrook). Copeia 1947:113-116.
- Raphael, M.C. 1988. Long-term trends in abundance of amphibians, reptiles, and mammals in Douglas-fir forests of northwestern California. Pp. 23-31 In R.C. Szaro, K.E. Severson, and D.R. Patton (eds.), Management of Amphibians, Reptiles, and Small Mammals in North America. USDA Forest Service General and Technical Report RM-166.
- Rathbun, G.B., N.J. Scott Jr., and T.G. Murphy. 1997. *Rana aurora draytonii* (California Red-legged Frog). Behavior. Herpetological Review 28:85-86.
- Ratzlaff, K. 2012. Dynamics of chytrid fungus (*Batrachochytrium dendrobatis*) infection in amphibians in the Rincon Mountains and Tucson, Arizona. M.S. thesis, University of Arizona, Tucson.
- Raun, G.G., and F.R. Gehlbach. 1972. Amphibians and reptiles in Texas. Taxonomic synopsis, bibliography, county distribution maps. Dallas Museum of Natural History, Bulletin 2.

- Ray, J.E., D. Preston, and M.L. McCallum. 2006. *Bufo nebulifer* (Coastal Plains Toad) Urban Road Mortality. *Herpetological Review* 37:442.
- Reaser, J.K. 1996. *Rana pretiosa* (Spotted Frog). Vagility. *Herpetological Review* 27:196-197.
- Reaser, J.K. 2000. Demographic analysis of the Columbia Spotted Frog (*Rana luteiventris*): case study in spatiotemporal variation. *Canadian Journal of Zoology* 78:1158-1167.
- Reaser, J.K., and R.E. Dexter. 1996. *Rana pretiosa* (Spotted Frog). Predation. *Herpetological Review* 27:75.
- Recuero, E., I. Martínez-Solano, G. Parra-Olea, and M. García-París. 2006a. Phylogeography of *Pseudacris regilla* (Anura: Hylidae) in western North America, with a proposal for a new taxonomic rearrangement. *Molecular Phylogenetics and Evolution* 39:293-304.
- Recuero, E., I. Martínez-Solano, G. Parra-Olea, and M. García-París. 2006b. Corrigendum to "Phylogeography of *Pseudacris regilla* (Anura: Hylidae) in western North America, with a proposal for a new taxonomic rearrangement." *Molecular Phylogenetics and Evolution* 41:511.
- Redmer, M. 1992. *Rana sphenocephala* (Southern Leopard Frog). Variation. *Herpetological Review* 23:58-59.
- Redmer, M. 1996. Locality records of the Northern Leopard Frog, *Rana pipiens*, in central and southwestern Illinois. *Transactions of the Illinois State Academy of Sciences* 89:215-219.
- Redmer, M. 1998a. Status and distribution of two uncommon frogs, Pickerel Frogs and Wood Frogs, in Illinois. Pp. 83-90 *In* M.J. Lannoo (ed.), *Status & Conservation of Midwestern Amphibians*. University of Iowa Press, Iowa City.
- Redmer, M. 1998b. *Hyla avivoca* (Bird-voiced Treefrog). Amplexus and oviposition. *Herpetological Review* 29:230-231.
- Redmer, M. 2000. Demographic and reproductive characteristics of a southern Illinois population of the Crayfish Frog, *Rana areolata*. *Journal of the Iowa Academy of Science* 107:128-133.
- Redmer, M. 2002. Natural history of the Wood Frog (*Rana sylvatica*) in the Shawnee National Forest, southern Illinois. *Illinois Natural History Survey Bulletin* 36:163-194.
- Redmer, M., and S.E. Trauth. 2005. *Rana sylvatica* LeConte, 1825. Wood Frog. Pp. 590-593 *In* M.J. Lannoo (ed.), *Amphibian Declines. The Conservation Status of United States Species*. University of California Press, Berkeley.
- Redmer, M., L.E. Brown, and R.A. Brandon. 1999a. Natural history of the Bird-voiced Treefrog (*Hyla avivoca*) and Green Treefrog (*Hyla cinerea*) in southern Illinois. *Illinois Natural History Survey Bulletin* 36:37-66.
- Redmer, M., D.H. Jamieson, and S.E. Trauth. 1999b. Notes on the diet of female Bird-voiced Treefrogs (*Hyla avivoca*) in southern Illinois. *Transactions of the Illinois State Academy of Sciences* 92:271-275.
- Redmond, W.H., and R.H. Mount. 1975. A biogeographic analysis of the herpetofauna of the Coosa Valley in Alabama. *Journal of the Alabama Academy of Science* 46:65-81.
- Redmond, W.H., and A.F. Scott. 1996. *Atlas of Amphibians in Tennessee*. Center for Field Biology, Austin Peay State University, Miscellaneous Publication No. 12.
- Reed, C.F. 1957. *Rana virgatipes* in southern Maryland, with notes upon its range from New Jersey to Georgia. *Herpetologica* 13:137-138.
- Reeder, A.L., G.L. Foley, D.K. Nichols, L.G. Hansen, B. Wikoff, S. Faeh, J. Eisold, M.B. Wheeler, R. Warner, J.E. Murphy, and V.R. Beasley. 1998. Forms and prevalence of intersexuality and effects of environmental contaminants on sexuality in cricket frogs (*Acrida crepitans*). *Environmental Health Perspectives* 106:261-266.
- Reeder, A.L., M.O. Ruiz, A. Pessier, L.E. Brown, J.M. Levengood, C.A. Phillips, M.B. Wheeler, R.E. Warner, and V.R. Beasley. 2005. Intersexuality and the cricket frog decline: historic and geographic trends. *Environmental Health Perspectives* 113:261-265.
- Reeves, M.K. 2010. Multiple stressors and the cause of amphibian abnormalities. Ph.D. diss., University of California, Davis.
- Regan, G.T. 1972. Natural and man-made conditions determining the range of *Acrida*. Ph.D. diss. University of Kansas, Lawrence.
- Regosin, J.V., B.S. Windmiller, and J.M. Reed. 2003. Terrestrial habitat use and winter densities of the Wood Frog (*Rana sylvatica*). *Journal of Herpetology* 37:390-394.
- Reichert, M.S. 2011. Aggressive calling in Treefrogs. Ph.D. diss., University of Missouri, Columbia.
- Reichert, M.S., and H.C. Gerhardt. 2011. The role of body size on the outcome, escalation

- and duration of contests in the Grey Treefrog, *Hyla versicolor*. Animal Behaviour 82:1357-1366.
- Reichling, S.B. 2008. Reptiles & Amphibians of the Southern Pine Woods. University Press of Florida, Gainesville.
- Reilly, B.O., and P.T.K. Woo. 1982. The biology of *Trypanosoma andersoni* n. sp. and *Trypanosoma grylli* Nigrelli, 1944 (Kinoplastidia) from *Hyla versicolor* LeConte, 1825 (Anura). Canadian Journal of Zoology 60:116-123.
- Reimchen, T.E. 1990. Introduction and dispersal of the Pacific treefrog, *Hyla regilla*, on the Queen Charlotte Islands, British Columbia. Canadian Field-Naturalist 105:288-290.
- Relyea, R.A. 2000. Trait-mediated indirect effects in larval anurans: reversing competition with the threat of predation. Ecology 81:2278-2289.
- Relyea, R.A. 2001a. The relationship between predation risk and antipredator responses in larval anurans. Ecology 82:541-554.
- Relyea, R.A. 2001b. Morphological and behavioral plasticity of larval anurans in response to different predators. Ecology 82:523-540.
- Relyea, R.A. 2001c. The lasting effects of adaptive plasticity: predator-induced tadpoles become long-legged frogs. Ecology 82:1947-1953.
- Relyea, R.A. 2002a. Competitor-induced plasticity in tadpoles: consequences, cues, and connections to predator-induced plasticity. Ecological Monographs 72:523-540.
- Relyea, R.A. 2002b. Local population differences in phenotypic plasticity: predator-induced changes in Wood Frog populations. Ecological Monographs 72:77-93.
- Relyea, R. A. 2002c. Costs of phenotypic plasticity. American Naturalist 159:272-282.
- Relyea, R. A. 2002d. The many faces of predation: How selection, induction, and thinning combine to alter prey phenotypes. Ecology 83:1953-1964.
- Relyea, R. A. 2003a. How prey respond to combined predators: A review and an empirical test. Ecology 84:1827-1839.
- Relyea, R. A. 2003b. Predator cues and pesticides: A double dose of danger for amphibians. Ecological Applications 13:1515-1521.
- Relyea, R. A. 2003c. Predators come and predators go: The reversibility of predator-induced traits. Ecology 84:1840-1848.
- Relyea, R.A. 2004a. Fine-tuned phenotypes: tadpole plasticity under 16 combinations of predators and competitors. Ecology 85:172-179.
- Relyea, R.A. 2004b. Synergistic impacts of malathion and predatory stress on six species of North American tadpoles. Environmental Toxicology and Chemistry 23:1080-1084.
- Relyea, R. A. 2004c. The growth and survival of five amphibian species exposed to combinations of pesticides. Environmental Toxicology and Chemistry 23:1737-1742.
- Relyea, R.A. 2005a. The lethal impact of Roundup on aquatic and terrestrial amphibians. Ecological Applications 15:1118-1124.
- Relyea, R.A. 2005b. The impact of insecticides and herbicides on the biodiversity and productivity of aquatic communities. Ecological Applications 15:618-627.
- Relyea, R. A. 2005c. The heritability of inducible defenses in tadpoles. Journal of Evolutionary Biology 18:856-866.
- Relyea, R. A. 2005d. The lethal impacts of Roundup and predatory stress on six species of North American tadpoles. Archives of Environmental Contamination and Toxicology 48:351-357.
- Relyea, R. A. 2006. The effects of pesticides, pH and predatory stress in amphibians under mesocosm conditions. Ecotoxicology 15:503-511.
- Relyea, R.A. 2009. A cocktail of contaminants: how mixtures of pesticides at low concentrations affect aquatic communities. Oecologia 159:363-376.
- Relyea, R. A. 2012. New effects of Roundup® on amphibians: Predators reduce herbicide mortality while herbicides induce anti-predator morphology. Ecological Applications 22:634-647.
- Relyea, R.A., and E.E. Werner. 1999. Quantifying the relation between predator-induced behavior and growth performance in larval amphibians. Ecology 80:2117-2124.
- Relyea, R. A., and E. E. Werner. 2000. Morphological plasticity of four larval anurans distributed along an environmental gradient. Copeia 2000:178-190.
- Relyea, R.A., and N. Mills. 2001. Predator-induced stress makes the pesticide carbaryl more deadly to Gray Treefrog tadpoles (*Hyla versicolor*). Proceedings of the National Academy of Sciences, USA 98:2491-2496.

- Relyea, R. A., and K. L. Yurewicz. 2002. Predicting community outcomes from pairwise interactions: Integrating density- and trait-mediated effects. *Oecologia* 131:569-579.
- Relyea, R. A., and J. T. Hoverman. 2003. The impact of larval predators and competitors on the morphology and fitness of juvenile tree frogs. *Oecologia* 134:596-604.
- Relyea, R.A., and J.R. Auld. 2005. Predator- and competitor-induced plasticity: how changes in foraging morphology affect phenotypic trade-offs. *Ecology* 86:1723-1729.
- Relyea, R. A., and N. Diecks. 2008. An unforeseen chain of events: Lethal effects of pesticides at sublethal concentrations. *Ecological Applications* 18:1728-1742.
- Relyea, R. A., and D. K. Jones. 2009. The toxicity of Roundup Original MAX® to 13 species of larval amphibians. *Environmental Toxicology and Chemistry* 28:2004-2008.
- Relyea, R.A., and K. Edwards. 2010. What doesn't kill you makes you sluggish: how sublethal pesticides alter predator-prey interactions. *Copeia* 2010:558-567.
- Relyea, R.A., N.M. Schoeppner, and J.T. Hoverman. 2005. Pesticides and amphibians: the importance of community context. *Ecological Applications* 15:1125-1134.
- Renaud, M. 1977. Polymorphic and polytypic variation in the Arizona treefrog (*Hyla wrightorum*). Ph.D. diss., Arizona State University, Tempe.
- Resetarits, W.J., Jr. 2005. Habitat selection behaviour links local and regional scales in aquatic systems. *Ecology Letters* 8:480-486.
- Resetarits, W.J. Jr., and H.M. Wilbur. 1989. Choice of oviposition site by *Hyla chrysoscelis*: role of predators and competitors. *Ecology* 70:220-228.
- Resetarits, W.J. Jr., and H.M. Wilbur. 1991. Calling site choice by *Hyla chrysoscelis*: effects of predators, competitors, and oviposition sites. *Ecology* 72:778-786.
- Resetarits, W.J., Jr., and J.E. Fauth. 1998. From cattle tanks to Carolina Bays. The utility of model systems for understanding natural communities. Pp. 133-151 In W.J. Resetarits Jr. and J. Bernardo (eds.), *Experimental Ecology. Issues and Perspectives*. Oxford University Press, New York.
- Resnick, L.E., and D.L. Jameson. 1963. Color polymorphism in Pacific tree frogs. *Science* 142:1081-1083.
- Reynolds, T.D., and T.D. Stephens. 1984. Multiple ectopic limbs in a wild population of *Hyla regilla*. *Great Basin Naturalist* 44:166-169.
- Rheinlaender, J., H.C. Gerhardt, D.D. Yager and R.R. Capranica. 1979. Accuracy of phonotaxis by the Green Treefrog (*Hyla cinerea*). *Journal of Comparative Physiology* 133:247-255.
- Rhoads, S.N. 1895. Contributions to the zoology of Tennessee. 1. Reptiles and amphibians. *Proceedings of the Academy of Natural Sciences, Philadelphia* 47:376-407.
- Rhoden, R.H., and M. G. Bolek. 2011. Distribution and reproductive strategies of *Gyrinicola batrachiensis* (Oxyuroidea: Pharyngodonidae) in larvae of eight species of amphibians from Nebraska. *Journal of Parasitology* 97: 629-635.
- Rhoden, R.H., and M. G. Bolek. 2012. Helminth and leech community structure in tadpoles and caudatan larvae of two amphibian species from western Nebraska. *Journal of Parasitology* 98: 236-244.
- Rice, A.M., A.R. Leichty, and D.W. Pfennig. 2009. Parallel evolution and ecological selection: replicated character displacement in spadefoot toads. *Proceedings of the Royal Society, London B* 276:4189-4196.
- Rice, A.N., T.L. Roberts IV, J.G. Pritchard, and M.E. Dorcas. 2001. Historical trends and perceptions of amphibian and reptile diversity in the western Piedmont of North Carolina. *Journal of the Elisha Mitchell Scientific Society* 117:264-273.
- Rice, K.G., J.H. Waddle, M.W. Miller, M.E. Crockett, F.J. Mazzotti, and H.F. Percival. 2011. Recovery of native treefrogs after removal of nonindigenous Cuban treefrogs, *Osteopilus septentrionalis*. *Herpetologica* 67:105-117.
- Richards, C.M. 1958. The inhibition of growth in crowded *Rana pipiens* tadpoles. *Physiological Zoology* 31:138-151.
- Richards, C.M. 1962. The control of tadpole growth by alga-like cells. *Physiological Zoology* 35:285-296.
- Richards, C.M., and G.W. Nace. 1983. Dark pigment variants in anurans: classification, new descriptions, color changes and inheritance. *Copeia* 1983:979-990.
- Richards, C.M., D.T. Tartof, and G.W. Nace. 1969. A melanoid variant in *Rana pipiens*. *Copeia* 1969:850-852.
- Richards-Hrdlicka, K.L., J.L. Richardson, and L. Mohabir. 2012. First survey for the amphibian

- chytrid fungus *Batrachochytrium dendrobatidis* in Connecticut (USA) finds widespread prevalence. Diseases of Aquatic Organisms 102:169-180.
- Richardson, J. 2011. Movement, habitat use, and dispersal of juvenile Oregon Spotted Frogs (*Rana pretiosa*) on Joint Base Lewis McChord. M.E.S. thesis, The Evergreen State College, Olympia, WA.
- Richardson, J.L. 2012a. The evolutionary ecology of pond-breeding amphibians: From local populations to regional landscapes. Ph.D. diss., Yale University, New Haven, CT.
- Richardson, J.L. 2012b. Divergent landscape effects on population connectivity in two co-occurring amphibian species. Molecular Ecology 21: 4437-4451.
- Richardson, J.M.L. 2001. A comparative study of activity levels in larval anurans and response to the presence of different predators. Behavioral Ecology 12:51-58.
- Richmond, A.M., T. Tyning, and A.P. Summers. 1999. *Bufo americanus* (American Toad). Depth record. Herpetological Review 30:90-91.
- Richmond, N.D. 1947. Life history of *Scaphiopus holbrookii holbrookii* (Harlan). 1. Larval development and behavior. Ecology 28:53-67.
- Richmond, N.D. 1952. An addition to the herpetofauna of Nova Scotia, and other records of amphibians and reptiles on Cape Breton Island. Annals of the Carnegie Museum 32:331-332.
- Richmond, N.D. 1964. The Green Frog (*Rana clamitans melanota*) developing in one season. Herpetologica 20:132.
- Richmond, N.D., and C.J. Goin. 1938. Notes on a collection of amphibians and reptiles from New Kent County, Virginia. Annals of the Carnegie Museum 27:301-310.
- Richter, J., L. Martin, and C.K. Beachy. 2009. Increased larval density induces accelerated metamorphosis independently of growth rate in the frog *Rana sphenocephala*. Journal of Herpetology 43:551-554.
- Richter, K.O., and A.L. Azous. 1995. Amphibian occurrence and wetland characteristics in the Puget Sound Basin. Wetlands 15:305-312.
- Richter, S.C. 2000. Larval caddisfly predation on the eggs and embryos of *Rana capito* and *Rana sphenocephala*. Journal of Herpetology 34:590-593.
- Richter, S.C., and R.A. Seigel. 2002. Annual variation in the population ecology of the endangered Gopher Frog, *Rana sevosa* Goin and Netting. Copeia 2002:962-972.
- Richter, S.C., J.E. Young, R.A. Seigel, and G.N. Johnson. 2001. Postbreeding movements of the Dark Gopher Frog, *Rana sevosa* Goin and Netting: implications for conservation and Management. Journal of Herpetology 35:316-321.
- Richter, S.C., J.E. Young, G.N. Johnson, and R.A. Seigel. 2003. Stochastic variation in reproductive success of a rare frog, *Rana sevosa*: implications for conservation and for monitoring amphibian populations. Biological Conservation 111:171-177.
- Rickard, A., and E. Sonntag. 2006. Blanchard's Cricket Frog (*Acris crepitans blanchardi*) morphological abnormalities in southeast Michigan. Endangered Species Update 23:131-134.
- Rickard, A., E. Sonntag and K. Zippel. 2004. Amphibian conservation strategies: translocating an entire population of Blanchard's Cricket Frog (*Acris crepitans blanchardi*) in southeast Michigan. Endangered Species Update 21:128-131.
- Ricker, W.E., and E.B.S. Logier. 1935. Notes on the occurrence of the ribbed toad (*Ascaphus truei Stejnegeri*) in Canada. Copeia 1935:46.
- Rieger, J.F., C.A. Binckley and W.J. Resetarits, Jr. 2004. Larval performance and oviposition site preference along a predation gradient. Ecology 85:2094-2099.
- Riemer, W.J. 1958. Giant toads of Florida. Quarterly Journal of the Florida Academy of Sciences 21:207-211.
- Riha, V.F., and K.A. Berven. 1991. An analysis of latitudinal variation in the larval development of the Wood Frog (*Rana sylvatica*). Copeia 1991:209-221.
- Riley, E.E., and M.R. Weil. 1986. The effects of thiosemicarbazide on development in the Wood Frog, *Rana sylvatica*. 1. Concentration effects. Ecotoxicology and Environmental Safety 12:154-160.
- Riley, E.E., and M.R. Weil. 1987. The effects of thiosemicarbazide on development in the Wood Frog, *Rana sylvatica*. 2. Critical exposure length and age sensitivity. Ecotoxicology and Environmental Safety 13:202-207.
- Rimer, R.L., and J.T. Briggler. 2010. Occurrence of the amphibian chytrid fungus (*Batrachochytrium dendrobatidis*) in Ozark

- caves, Missouri, USA. *Herpetological Review* 41:175-177.
- Ripplinger, J.I., and R.S. Wagner. 2004. Phylogeography of northern populations of the Pacific Treefrog, *Pseudacris regilla*. *Northwestern Naturalist* 85:118-125.
- Ritke, M. E., and J. G. Babb. 1991. Behavior of the Gray Treefrog (*Hyla chrysoscelis*) during the nonbreeding season. *Herpetological Review* 22:5-8.
- Ritke, M.E., and R.D. Semlitsch. 1991. Mating behavior and determinants of male mating success in the Gray Treefrog, *Hyla chrysoscelis*. *Canadian Journal of Zoology* 69:246-250.
- Ritke, M.E., J.G. Rabb, and M.K. Ritke. 1990. Life history of the Gray Treefrog (*Hyla chrysoscelis*) in western Tennessee. *Journal of Herpetology* 24:135-141.
- Ritke, M.E., J.G. Rabb, and M.K. Ritke. 1991. Breeding-site specificity in the Gray Treefrog (*Hyla chrysoscelis*). *Journal of Herpetology* 25:123-125.
- Ritland, K., L.A. Dupuis, F.L. Bunnell, W.L.Y. Hung, and J.E. Carlson. 2000. Phylogeography of the Tailed Frog (*Ascaphus truei*) in British Columbia. *Canadian Journal of Zoology* 78:1749-1758.
- Rittenhouse, T.A.G. 2007. Behavioral choice and demographic consequences of Wood Frog habitat selection in response to land use. Ph.D. diss., University of Missouri, Columbia.
- Rittenhouse, T.A.G. 2011. Anuran larval habitat quality when Reed Canary Grass is present in wetlands. *Journal of Herpetology* 45:491-496.
- Rittenhouse, T.A.G., and R.D. Semlitsch. 2007a. Postbreeding habitat use of wood frogs in a Missouri oak-hickory forest. *Journal of Herpetology* 41:645-653.
- Rittenhouse, T.A.G., and R.D. Semlitsch. 2007b. Distribution of amphibians in terrestrial habitat surrounding wetlands. *Wetlands* 27:153-161.
- Rittenhouse, T.A.G., and R.D. Semlitsch. 2009. Behavioral response of migrating wood frogs to experimental timber harvest surrounding wetlands. *Canadian Journal of Zoology* 87:618-625.
- Rittenhouse, T.A.G., E.B. Harper, L.R. Rehard, and R.D. Semlitsch. 2008. The role of microhabitats in the desiccation and survival of amphibians in recently harvested oak-hickory forest. *Copeia* 2008:807-814.
- Rittenhouse, T.A.G., R.D. Semlitsch, and F.R. Thompson, III. 2009. Survival costs associated with Wood Frog breeding migrations: effects of timber harvest and drought. *Ecology* 90:1620-1630.
- Rittmann, S.E., E. Muths, and D.E. Green. 2003. *Pseudacris triseriata* (Western Chorus Frog) and *Rana sylvatica* (Wood Frog). Chytridiomycosis. *Herpetological Review* 34:53.
- Rittschof, D. 1975. Some aspects of the natural history and ecology of the leopard frog, *Rana pipiens*. Ph.D. diss., University of Michigan, Ann Arbor.
- Rizkalla, C.E. 2009. First reported detection of *Batrachochytrium dendrobatidis* in Florida, USA. *Herpetological Review* 40:189-190.
- Rizkalla, C.E. 2010. Increasing detections of *Batrachochytrium dendrobatidis* in central Florida, USA. *Herpetological Review* 41:180-181.
- Roberts, C.D., and T.E. Dickinson. 2012. *Ribeiroia ondatrae* causes limb abnormalities in a Canadian amphibian community. *Canadian Journal of Zoology* 90: 808-814.
- Roberts, W.R. 1998. The calliphorid fly (*Bufolucilia sylvarum*) parasitic on frogs in Alberta. *Alberta Naturalist* 28:48.
- Roberts, W., and V. Lewin. 1979. Habitat utilization and population densities of the amphibians of northeastern Alberta. *Canadian Field-Naturalist* 93:144-154.
- Robins, A., G. Lippolis, A. Bisazza, G. Vallortigara, and L.J. Rogers. 1998. Lateralized agonistic responses and hindlimb use in toads. *Animal Behaviour* 56:875-881.
- Robinson, M., M.P. Donovan and T.D. Schwaner. 1998. Western Toad, *Bufo boreas*, in southern Utah: notes on a single population along the east fork of the Sevier River. *Great Basin Naturalist* 58:87-89.
- Roble, S.M. 1979. Dispersal movements and plant associations of juvenile Gray Treefrogs, *Hyla versicolor*. *Transactions of the Kansas Academy of Science* 82:235-245.
- Roble, S.M. 1985a. A study of the reproductive and population ecology of two hylid frogs in northeastern Kansas. Ph.D. diss., University of Kansas, Lawrence.
- Roble, S.M. 1985b. Observations on satellite males in *Hyla chrysoscelis*, *Hyla picta*, and *Pseudacris triseriata*. *Journal of Herpetology* 19:432-436.
- Roble, S.M., A.C. Chazal and A.K. Foster. 2000. A preliminary survey of the amphibians and reptiles of Savage Neck Dunes Natural Area

- Preserve, Northampton County, Virginia. *Catesbeiana* 20:63-74.
- Roby-Thomas, P.L. 2006. Amphibian colonization of new habitat : "if you build it, they will come". M.S. thesis, University of Louisville, Louisville, KY.
- Rochester, C.J., C.S. Brehme, D.R. Clark, D.C. Stokes, S.A. Hathaway, and R.N. Fisher. 2010. Reptile and amphibian responses to large-scale wildfires in southern California. *Journal of Herpetology* 44:333-351.
- Rödder, D. 2009. "Sleepless in Hawaii": does anthropogenic climate change enhance ecological and socioeconomic impacts of the alien invasive *Eleutherodactylus coqui* Thomas 1966 (Anura: Eleutherodactylidae)? *North-Western Journal of Zoology* 5:16-25.
- Rodenhouse, N.L., L. M. Christenson, D. Parry, and L.E. Green. 2009. Climate change effects on native fauna of northeastern forests. *Canadian Journal of Forest Research* 39: 249-263.
- Rodgers, L.O. 1941. *Diplorchis scaphiopi*, a new polystomatid monogenean fluke from the spadefoot toad. *Journal of Parasitology* 27:153-157.
- Rodgers, L.O., and R.E. Kuntz. 1940. A new polystomatid monogenean fluke from a spadefoot. *Wasmann Collector* 4:37-40.
- Roe, J.H., W.A. Hopkins and B.P. Jackson. 2005. Species- and stage-specific differences in trace element tissue concentrations in amphibians: implications for the disposal of coal-combustion wastes. *Environmental Pollution* 136:353-363.
- Rogers, A.M. 1999. Ecology and natural history of *Rana clamitans melanota* in West Virginia. M.S. thesis, Marshall University, Huntington, WV.
- Rogers, C.D. 1996. *Rana catesbeiana* (Bullfrog). Predation. *Herpetological Review* 27:19.
- Rogers, J.S. 1972. Discriminant function analysis of morphological relationships within the *Bufo cognatus* species group. *Copeia* 1972:381-383.
- Rogers, J.S. 1973. Protein polymorphism, genic heterozygosity and divergence in the toads *Bufo cognatus* and *B. speciosus*. *Copeia* 1973:322-330.
- Rogers, J.S. 1976. Species density and taxonomic diversity of Texas amphibians and reptiles. *Systematic Zoology* 25:26-40.
- Rogers, K.L. 1987. Pleistocene high altitude amphibians and reptiles from Colorado (Alamosa Local Fauna; Pleistocene; Irvingtonian). *Journal of Vertebrate Paleontology* 7:82-95.
- Rogers, K.L., and L. Harvey. 1994. A skeletochronological assessment of fossil and recent *Bufo cognatus* from south-central Colorado. *Journal of Herpetology* 28:133-140.
- Rogers, K.L., C.A. Repenning, R.M. Forester, E.E. Larson, S.A. Hall, G.R. Smith, E. Anderson, and T.J. Brown. 1985. Middle Pleistocene (Late Irvingtonian: Nebraskan) climatic changes in south-central Colorado. *National Geographic Research* 1:535-563.
- Rogers, S.D., and M.M. Peacock. 2012. The disappearing Northern Leopard Frog (*Lithobates pipiens*): conservation genetics and implications for remnant populations in western Nevada. *Ecology and Evolution* 2:2040-2056.
- Rogers, T.N., and D.R. Chalcraft. 2008. Pond hydroperiod alters the effect of density-dependent processes on larval anurans. *Canadian Journal of Fisheries and Aquatic Sciences* 65: 2761-2768.
- Rohr, J.R., and P.W. Crumrine. 2005. Effects of an herbicide and an insecticide on pond community structure and processes. *Ecological Applications* 15:1135-1147.
- Rohr, J.R., A.M. Schotthoefer, T.R. Raffel, H.J. Carrick, N. Halstead, J.T. Hoverman, C.M. Johnson, L.B. Johnson, C. Lieske, M.D. Piwoni, P.K. Schoff, and V.R. Beasley. 2008a. Agrochemicals increase trematode infections in a declining amphibian species. *Nature* 455:1235-1239.
- Rohr, J. R., T. R. Raffel, S. K. Sessions, and P. J. Hudson. 2008b. Understanding the net effects of pesticides on amphibian trematode infections. *Ecological Applications* 18:1743-1753.
- Rollins-Smith, L.A., L.K. Reinert, V. Miera, and J.M. Conlon. 2002. Antimicrobial peptide defenses of the Tarahumara Frog, *Rana tarahumarae*. *Biochemical and Biophysical Research Communications* 297:361-367.
- Roloff, G.J., T.E. Grazia, K.F. Millenbah, and A.J. Kroll. 2011. Factors associated with amphibian occupancy in southern Michigan forests. *Journal of Herpetology* 45:15-22.
- Romano, M.A., D.B. Ralin, S.I. Guttman, and J.H. Skillings. 1987. Parallel electromorph variation in the diploid-tetraploid Gray Treefrog complex. *American Naturalist* 130:864-878.

- Romansic, J.M., K.A. Diez, E.M. Higashi and A.R. Blaustein. 2006. Effects of nitrate and the pathogenic water mould *Saprolegnia* on survival of amphibian larvae. Diseases of Aquatic Organisms 68:235-243.
- Romansic, J.M., E.M. Higashi, K.A. Diez and A.R. Blaustein. 2007. Susceptibility of newly-metamorphosed frogs to a pathogenic water mould (*Saprolegnia* sp.). Herpetological Journal 17:161-166.
- Romansic, J.M., A.A. Waggener, B.A. Bancroft, and A.R. Blaustein. 2009a. Influence of ultraviolet-B radiation on growth, prevalence of deformities, and susceptibility to predation in Cascades Frog (*Rana cascadae*) larvae. Hydrobiologia 624:219-233.
- Romansic, J.M., K.A. Diez, E.M. Higashi, J. Johnson and A.R. Blaustein. 2009b. Effects of the pathogenic water mold *Saprolegnia ferax* on survival of amphibian larvae. Diseases of Aquatic Organisms 83: 187-193.
- Romansic, J.M., P.T.J. Johnson, C.L. Searle, J.E. Johnson, T.S. Tunstall, B.A. Han, J.R. Rohr and A.R. Blaustein. 2011. Individual and combined effect of multiple pathogens on Pacific Treefrogs. Oecologia 166:1029-1041.
- Rombaugh, C.J., M.P. Hayes, and J.D. Engler. 2006. *Rana pretiosa* (Oregon Spotted Frog). Maximum size. Herpetological Review 37:210.
- Rombough, C.J. 2010. *Rana catesbeiana* (American Bullfrog). Predation. Herpetological Review 41:204.
- Rombough, C.J., and M.P. Hayes. 2005. Novel aspects of oviposition site preparation by Foothill Yellow-legged Frogs (*Rana boylii*). Northwestern Naturalist 86:157-160.
- Rombough, C.J., and M.P. Hayes. 2007. *Rana boylii* (Foothill Yellow-legged Frog). Reproduction. Herpetological Review 38:70-71.
- Rombough, C., and M. Bradley. 2010. *Pseudacris regilla* (Northern Pacific Treefrog). Predation. Herpetological Review 41:203.
- Rorabaugh, J. 2004. Barking Frogs (*Eleutherodactylus augusti*) of the Santa Rita Mountains. Sonoran Herpetologist 17:72-73.
- Rorabaugh, J.C. 2005a. *Rana pipiens* Screeber, 1782. Northern Leopard Frog. Pp. 570-577 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Rorabaugh, J.C. 2005b. *Rana berlandieri* Baird. Rio Grande Leopard Frog. Pp. 530-532 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Rorabaugh, J.C., and J. Humphrey. 2002. The Tarahumara frog: return of a native. Endangered Species Technical Bulletin 27(2):24-26.
- Rorabaugh, J.C., and S.F. Hale. 2005. *Rana tarahumarae* Boulenger, 1917. Tarahumara Frog. Pp. 593-595 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Rorabaugh, J.C., and L. Elliot. 2006. Tarahumara Frog (*Rana tarahumarae*) call types and characteristics. Sonoran Herpetologist 19:134-136.
- Rose, F.L., T.R. Simpson, M.R.J. Forstner, D.J. McHenry, and J. Williams. 2006. Taxonomic status of *Acrits gryllus paludicola*: in search of the pink frog. Journal of Herpetology 40:428-434.
- Rose, G.J., and E.A. Brenowitz. 1991. Aggressive thresholds of male Pacific Treefrogs for advertisement calls vary with amplitude of neighbors' calls. Ethology 89:244-252.
- Rose, G.J., and E.A. Brenowitz. 1997. Plasticity of aggressive thresholds in *Hyla regilla*: discrete accommodation to encounter calls. Animal Behaviour 53:353-361.
- Rose, G.J., and E.A. Brenowitz. 2002. Pacific Treefrogs use temporal integration to differentiate advertisement from encounter calls. Animal Behaviour 63:1183-1190.
- Rose, S.M. 1959. Failure of survival of slowly growing members of a population. Science 129:1026.
- Rose, S.M. 1960. A feedback mechanism of growth control in tadpoles. Ecology 41:188-199.
- Rose, S.M., and F.C. Rose. 1961. Growth-controlling exudates of tadpoles. Symposia of the Society for Experimental Biology 15:207-218.
- Rosen, M., and L.E. Lemon. 1974. The vocal behavior of Spring Peepers, *Hyla crucifer*. Copeia 1974:940-950.
- Rosen, P.C. 2011. *Rana yavapaiensis* (Lowland Leopard Frog). Larval cannibalism. Herpetological Review 42:589-590.
- Rosen, P.C., and C.R. Schwalbe. 2002. Widespread effects of introduced species on reptiles and amphibians in the Sonoran Desert

- region. Pp. 220-240 *In* B. Tellman (ed.), Invasive Exotic Species in the Sonoran Region. University of Arizona Press and the Arizona-Sonora Desert Museum, Tucson, AZ.
- Rosen, P.C., C.R. Schwalbe, D.A. Parizek Jr., P.A. Holm, and C.H. Lowe. 1995. Introduced aquatic vertebrates in the Chiricahua region: effects on declining native ranid frogs. Pp. 251-260 *In* L.F. DeBano, G.J. Gottfried, R.H. Hamre, C.B. Edminster, P.F. Ffoliot, and A. Ortega-Rubio (eds.), Madrean Archipelago: the Sky Islands of the Southwestern United States and Northwestern Mexico. U.S. Forest Service Rocky Mountain Station General Technical Report RM-GTR-264.
- Rosenberry, D.O. 2001. Malformed frogs in Minnesota: an update. USGS Fact Sheet 043-01, Mounds View, MN.
- Rosenfield, M.L., M.B. Jofré, and W.H. Karasov. 1999. Effects of polychlorinated biphenyl 126 on Green Frog (*Rana clamitans*) and leopard frog (*R. pipiens*) hatching success, development, and metamorphosis. Environmental Toxicology and Chemistry 18:2478-2486.
- Rosine, W.N. 1952. Notes on the occurrence of polydactylyism in a second species of Amphibia in Muskee Lake, Colorado. Journal of the Colorado-Wyoming Academy of Science 4:100.
- Ross, D.A., T.C. Esque, R.A. Fridell, and P. Hovingh. 1995. Historical distribution, current status, and a range extension of *Bufo boreas* in Utah. Herpetological Review 26:187-189.
- Ross, D.A., J.K. Reaser, P. Kleeman, and D.L. Drake. 1999. *Rana luteiventris* (Columbia Spotted Frog). Mortality and site fidelity. Herpetological Review 30:163.
- Rossi, J.V. 1981. *Bufo marinus* in Florida: some natural history and its impact on native vertebrates. M.A. thesis, University of South Florida, Tampa.
- Rossi, J.V. 1983. The use of olfactory cues by *Bufo marinus*. Journal of Herpetology 17:72-73.
- Rossmann, D.A. 1960. Herpetofaunal survey of the Pine Hills area of southern Illinois. Quarterly Journal of the Florida Academy of Science 22:207-225.
- Rothermel, B.B. 2004. Migratory success of juveniles: a potential constraint on connectivity for pond-breeding amphibians. Ecological Applications 14:1535-1546.
- Rothermel, B.B., and R.D. Semlitsch. 2002. An experimental investigation of landscape resistance of forest versus old-field habitats to emigrating juvenile amphibians. Conservation Biology 16:1324-1332.
- Rothermel, B.B., S.C. Walls, J.C. Mitchell, C.K. Dodd Jr., L.K. Irwin, D.E. Green, V.M. Vasquez, J.W. Petraska, and D.J. Stevenson. 2008. Widespread occurrence of the amphibian chytrid fungus (*Batrachochytrium dendrobatidis*) in the Southeastern United States. Diseases of Aquatic Organisms 82:3-18.
- Rot-Nikcevic, I., C.N. Taylor, and R.J. Wassersug. 2006. The role of images of conspecifics as visual cues in the development and behavior of larval amphibians. Behavioral Ecology and Sociobiology 60:19-25.
- Rouse, J.D., C.A. Bishop, and J. Struger. 1999. Nitrogen pollution: an assessment of its threat to amphibian survival. Environmental Health Perspectives 107:799-803.
- Rowe, C.F.B. 1899. Report on Zoology. Batrachians. Bulletin of the New Brunswick Natural History Society 17:169-170.
- Rowe, C.L., and W.A. Dunson. 1993. Relationships among abiotic parameters and breeding effort by three amphibians in temporary wetlands of central Pennsylvania. Wetlands 13:237-246.
- Rowe, C.L., and W.A. Dunson. 1995. Impacts of hydroperiod on growth and survival of larval amphibians in temporary ponds of central Pennsylvania, USA. Oecologia 102:397-403.
- Rowe, C.L., O.M. Kinney, A.P. Fiori, and J.D. Congdon. 1996. Oral deformities in tadpoles (*Rana catesbeiana*) associated with coal ash deposition: effects on grazing ability and growth. Freshwater Biology 36:723-730.
- Rowe, C.L., O.M. Kinney, R.D. Nagle, and J.D. Congdon. 1998. Elevated maintenance costs in an anuran (*Rana catesbeiana*) exposed to a mixture of trace elements during the embryonic and early larval periods. Physiological Zoology 71:27-35.
- Rowe, C.L., W.A. Hopkins, and V.R. Coffman. 2001. Failed recruitment of Southern Toads (*Bufo terrestris*) in a trace element-contaminated breeding habitat: direct and indirect effects that may lead to a local population sink. Archives of Environmental Contamination and Toxicology 40:399-405.
- Rowe, C.L., A. Heyes and W.A. Hopkins. 2009. Effects of dietary vanadium on growth and lipid storage in a larval anuran: Results from

- studies employing ad libitum and rationed feeding. *Aquatic Toxicology* 91:179-186.
- Rowe, C.L., A. Heyes, and J. Hilton. 2011. Differential patterns of accumulation and depuration of dietary selenium and vanadium during metamorphosis in the Gray Treefrog (*Hyla versicolor*). *Archives of Environmental Contamination and Toxicology* 60:336-342.
- Rowe, J.C., and T.S. Garcia. 2012. *Lithobates catesbeianus* (American Bullfrog). Diet. *Herpetological Review* 43:633-634.
- Roy, J.-S. 2009. Structure and dynamics of a natural hybrid zone between the toads, *Anaxyrus americanus* and *Anaxyrus hemiophrys*, in southeastern Manitoba. M.S. thesis, McGill University, Montreal.
- Roznik, E.A. 2007. Terrestrial ecology of juvenile and adult Gopher Frogs (*Rana capito*). M.S. thesis, University of Florida, Gainesville.
- Roznik, E.A., and S.A. Johnson. 2007. *Rana capito* (Gopher Frog). Refuge during fire. *Herpetological Review* 38:442.
- Roznik, E.A., and S.A. Johnson. 2009a. Canopy closure and emigration by juvenile Gopher Frogs. *Journal of Wildlife Management* 73:260-268.
- Roznik, E.A., and S.A. Johnson. 2009b. Burrow use and survival of newly metamorphosed Gopher Frogs (*Rana capito*). *Journal of Herpetology* 43:431-437.
- Roznik, E.A. and S.A. Johnson. 2009c. *Rana capito* (Gopher Frog). Burrow cohabitation. *Herpetological Review* 40:209.
- Roznik, E.A., S.A. Johnson, C.H. Greenberg and G.W. Tanner. 2009. Terrestrial movements and habitat use of Gopher Frogs in longleaf pine forests: a comparative study of juveniles and adults. *Forest Ecology and Management* 259:187-194.
- Rudolph, D.C., and J.G. Dickson. 1990. Streamside zone width and amphibian and reptile abundance. *Southwestern Naturalist* 35:472-476.
- Rugh, R. 1934. The space factor in the growth rate of tadpoles. *Ecology* 15:407-411.
- Rugh, R. 1941. Experimental studies on the reproductive physiology of the male Spring Peeper, *Hyla crucifer*. *Proceedings of the American Philosophical Society* 84:617-633.
- Ruibal, R. 1957. An altitudinal and latitudinal cline in *Rana pipiens*. *Copeia* 1957:212-221.
- Ruibal, R. 1959. The ecology of a brackish water population of *Rana pipiens*. *Copeia* 1959:315-322.
- Ruibal, R. 1962. The ecology and genetics of a desert population of *Rana pipiens*. *Copeia* 1962:189-195.
- Ruibal, R., and S. Hillman. 1981. Cocoon structure and function in the burrowing hylid frog, *Pternohyla fodiens*. *Journal of Herpetology* 15:403-408.
- Ruibal, R., L. Tevis Jr., and V. Roig. 1969. The terrestrial ecology of the spadefoot toad *Scaphiopus hammondii*. *Copeia* 1969:571-584.
- Rundquist, E.M. 1978. The Spring Peeper, *Hyla crucifer* Wied (Anura, Hylidae) in Kansas. *Transactions of the Kansas Academy of Science* 80:155-158.
- Runkle, L.S., K.D. Wells, C.C. Robb, and S.L. Lance. 1994. Individual, nightly, and seasonal variation in calling behavior of the gray tree frog, *Hyla versicolor*: implications for energy expenditure. *Behavioral Ecology* 5:318-325.
- Russell, A.P., and A.M. Bauer. 2000. *The Amphibians and Reptiles of Alberta. A Field Guide and Primer of Boreal Herpetology*. 2nd ed. University of Calgary Press, Calgary.
- Russell, D.M., C.S. Goldberg, L. Sprague, L.P. Waits, D.E. Green, K.L. Schuler and E.B. Rosenblum. 2011. Ranavirus outbreaks in amphibian populations of northern Idaho. *Herpetological Review* 42:223-225.
- Russell, K.R., D.H. Van Lear and D.C. Guynn, Jr. 1999. Prescribed fire effects on herpetofauna: review and management implications. *Wildlife Society Bulletin* 27:374-384.
- Russell, K.R., D.C. Guynn Jr., and H.G. Hanlin. 2002a. Importance of small isolated wetlands for herpetofaunal diversity in managed, young growth forests in the Coastal Plain of South Carolina. *Forest Ecology and Management* 163:43-59.
- Russell, K.R., H.G. Hanlin, T.B. Wigley, and D.C. Guynn Jr. 2002b. Responses of isolated wetland herpetofauna to upland forest management. *Journal of Wildlife Management* 66:603-617.
- Russell, R.W. 2008. Spring peepers and pitcher plants: a case of commensalism? *Herpetological Review* 39:154-155.
- Russell, R.W., S.J. Hecnar, and G.D. Haffner. 1995. Organochlorine pesticide residues in southern Ontario Spring Peepers. *Environmental Toxicology and Chemistry* 14:815-817.
- Ruthig, G.R. 2009. Water molds of the genera *Saprolegnia* and *Leptolegnia* are pathogenic to

- the North American frogs *Rana catesbeiana* and *Pseudacris crucifer*, respectively. Diseases of Aquatic Organisms 84:173-178.
- Ruthig, G.R. and K.N. Provost-Javier. 2012. Multihost saprobes are facultative pathogens of Bullfrog *Lithobates catesbeianus* eggs. Diseases of Aquatic Organisms 101:13-21.
- Ruthven, A.G. 1908. The cold-blooded vertebrates of Isle Royale. Ecology of Isle Royale, Michigan Survey 1908:329-333.
- Ruthven, A.G. 1910. A contribution to the herpetology of Iowa. Proceedings of the Iowa Academy of Science for 1910:198-209.
- #Ruthven, A.G. 1912. The herpetology of Michigan. Michigan Geological and Biological Survey Publication 10:11-166.
- Ruthven, A.G., and H.T. Gaige. 1915. The reptiles and amphibians collected in northeastern Nevada by the Walker-Newcomb expedition of the University of Michigan. Occasional Papers of the Museum of Zoology, University of Michigan 8:1-33.
- Ryan, M.J. 1978. A thermal property of the *Rana catesbeiana* (Amphibia, Anura, Ranidae) egg mass. Journal of Herpetology 12:247-248.
- Ryan, M.J. 1980. The reproductive behavior of the Bullfrog (*Rana catesbeiana*). Copeia 1980:108-114.
- Ryan, M.J., and W. Wilczynski. 1988. Coevolution of sender and receiver: effect on local mate preference in cricket frogs. Science 240:1786-1788.
- Ryan, M.J., and B.K. Sullivan. 1989. Transmission effects on the temporal structure of the advertisement call of two species of toads, *Bufo woodhousii* and *Bufo valliceps*. Ethology 80:182-185.
- Ryan, M.J., and W. Wilczynski. 1990 (1991). Evolution of intraspecific variation in the advertisement call of a cricket frog (*Acrida crepitans*, Hylidae). Biological Journal of the Linnean Society 44:249-271.
- Ryan, M.J., R.B. Crocroft, and W. Wilczynski. 1991. The role of environmental selection in intraspecific divergence of mate recognition signals in the cricket frog, *Acrida crepitans*. Evolution 44:1869-1872.
- Ryan, M.J., S.A. Perrill, and W. Wilczynski. 1992. Auditory tuning and call frequency predict population-based mating preferences in the cricket frog, *Acrida crepitans*. American Naturalist 139: 1370-1383.
- Ryan, M.J., K.M. Warkentin, B.E. McClelland, and W. Wilczynski. 1995. Fluctuating asymmetries and advertisement call variation in the cricket frog, *Acrida crepitans*. Behavioral Ecology 6:124-131.
- Ryan, R.A. 1953. Growth rates of some ranids under natural conditions. Copeia 1953:73-80.
- Ryan, T.J., and C.T. Winne. 2001. Effects of hydroperiod on metamorphosis in *Rana sphenocephala*. American Midland Naturalist 145:46-53.
- Ryder, J.A. 1878. A monstrous frog. American Naturalist 12:751-752.
- Ryder, J.A. 1891. Notes on the development of *Engystoma*. American Naturalist 25:838-840.
- Saber, P.A., and W.A. Dunson. 1978. Toxicity of bog water to embryonic and larval anuran amphibians. Journal of Experimental Zoology 204:33-42.
- Sacerdote, A.B. 2009. Reintroduction of extirpated flatwoods amphibians into restored forested wetlands of northern Illinois: feasibility assessment, implementation, habitat restoration, and conservation implications. Ph.D. diss., Northern Illinois University, DeKalb, IL.
- Sadinski, W.J., and W.A. Dunson. 1992. A multilevel study of effects of low pH on amphibians of temporary ponds. Journal of Herpetology 26:413-422.
- Sadinski, W.J., M. Roth, S. Treleven, J. Theyerl, and P. Dummer. 2010. Detection of the chytrid fungus, *Batrachochytrium dendrobatidis*, on recently metamorphosed amphibians in the north-central United States. Herpetological Review 41:170-175.
- Saenz, D., J.B. Johnson, C.K. Adams, and G.H. Dayton. 2003. Accelerated hatching of Southern Leopard Frog (*Rana sphenocephala*) eggs in response to the presence of a crayfish (*Procambarus nigrocinereus*) predator. Copeia 2003:646-649.
- Saenz, D., L.A. Fitzgerald, K.A. Baum and R.N. Connor. 2006. Abiotic correlates of anuran calling phenology: the importance of rain, temperature and season. Herpetological Monographs 20:64-82.
- Saenz, D., B.T. Kavanagh, and M.A. Kwiatkowski. 2010. *Batrachochytrium dendrobatidis* detected in amphibians from National Forests in eastern Texas, USA. Herpetological Review 41:47-49.
- Sage, R.D., and R.K. Selander. 1979. Hybridization between species of the *Rana pipiens* complex in central Texas. Evolution 33:1069-1088.

- Sagor, E.S., M. Ouellet, E. Barten, and D.M. Green. 1998. Skeletochronology and geographic variation in age structure in the Wood Frog, *Rana sylvatica*. Journal of Herpetology 32:469-474.
- Salice, C.J. 2012. Multiple stressors and amphibians: contributions of adverse health effects and altered hydroperiod to population decline and extinction. Journal of Herpetology 46:675-681.
- Salice, C.J., C.L. Rowe, J.H.K. Pechmann and W.A. Hopkins. 2011. Multiple stressors and complex life cycles: insights from a population-level assessment of breeding site contamination and terrestrial habitat loss in an amphibian. Environmental Toxicology and Chemistry 30:2874-2882.
- Salinas, C. 2009. The influence of environmental factors on the activity and movement of *Bufo nebulifer* (Coastal Plain Toad) in a disturbed area. M.S. thesis, University of Texas-Pan American, Edinburg, TX.
- Salt, J.R. 1979. Some elements of amphibian distribution and biology in the Alberta Rockies. Alberta Naturalist 9:125-136.
- Salthe, S.N. 1969. Geographic variation of the lactate dehydrogenase of *Rana pipiens* and *Rana palustris*. Biochemical Genetics 2:271-303.
- Salthe, S.N., and E. Nevo. 1969. Geographic variation in lactate dehydrogenase in the cricket frog, *Acris crepitans*. Biochemical Genetics 3:335-341.
- Salthe, S.N., and M.L. Crump. 1977. A Darwinian interpretation of hindlimb variability in frog populations. Evolution 31:737-749.
- Samollow, P.B. 1980. Selective mortality and reproduction in a natural population of *Bufo boreas*. Evolution 34:18-39.
- Samoray, S.T., and K.J. Regester. 2001. Geographic distribution: *Rana sylvatica* (Wood Frog). Herpetological Review 32:190.
- Sams, E., and M.D. Boone. 2010. Interactions between recently metamorphosed Green Frogs and American Toads under laboratory conditions. American Midland Naturalist 163:269-279.
- Sanabria, E.A., and L.B. Quiroga. 2010. *Lithobates catesbeianus* (American Bullfrog). Diet. Herpetological Review 41:339.
- Sanchiz, B. 1998. Handbuch der Paläoherpetologie. 4. Salientia. Verlag Dr. Friedrich Pfeil, Munich, Germany.
- Sanders, H.O. 1970. Pesticide toxicities to tadpoles of the Western Chorus Frog *Pseudacris triseriata* and Fowler's Toad *Bufo woodhousii fowleri*. Copeia 1970:246-251.
- Sanders, O. 1953. A new species of toad, with a discussion of morphology of the bufonid skull. Herpetologica 9:25-47.
- Sanders, O. 1986. The heritage of *Bufo woodhousei* Girard in Texas (Salientia: Bufonidae). Occasional Papers of the Strecker Museum (1):1-28.
- Sanders, O. 1987. Evolutionary hybridization and speciation in North American indigenous bufonids. Privately published, Dallas, TX.
- Sanders, O., and H.M. Smith. 1951. Geographic variation in toads of the *debilis* group of *Bufo*. Field & Laboratory 19:141-160.
- Sanders, O., and J.C. Cross. 1964. Relationships between certain North American toads as shown by cytological study. Herpetologica 19:248-255.
- Sanders, O., and H.S. Smith. 1971. Skin tags and ventral melanism in the Rio Grande Leopard Frog. Journal of Herpetology 5:31-38.
- Santana, F.E. 2012. Mountain Yellow-legged Frog (*Rana muscosa*) conservation: multiple approaches. M.S. thesis, San Diego State University, San Diego, CA.
- Sanzo, D., and S.J. Hecnar. 2006. Effects of road de-icing salt (NaCl) on larval Wood Frogs (*Rana sylvatica*). Environmental Pollution 140:247-256.
- Sargent, L.G. 2000. Frog and toad population monitoring in Michigan. Journal of the Iowa Academy of Science 107:195-199.
- Sartorius, S.S., and P.C. Rosen. 2000. Breeding phenology of the Lowland Leopard Frog (*Rana yavapaiensis*): implications for conservation and ecology. Southwestern Naturalist 45:267-273.
- Sattler, P.W. 1980. Genetic relationships among selected species of North American *Scaphiopus*. Copeia 1980:605-610.
- Sattler, P.W. 1985. Introgressive hybridization between spadefoot toads *Scaphiopus bombifrons* and *S. multiplicatus* (Salientia: Pelobatidae). Copeia 1985:324-332.
- Saumure, R.A. 1993. *Rana clamitans* (Green Frog). Albinism. Herpetological Review 24:31.
- Savage, A.E., and J.R. Jaeger. 2009. Isolation and characterization of microsatellite markers in the Lowland Leopard Frog (*Rana*

- yavapaiensis*) and the relict leopard frog (*Rana onca*), two declining frogs of the North American desert southwest. Molecular Ecology Resources 9:199-202.
- Savage, J.M. 1954. A revision of the toads of the *Bufo debilis* complex. Texas Journal of Science 6:83-112.
- Savage, J.M. 1959. A preliminary biosystematic analysis of the toads of the *Bufo boreas* group in Nevada and California. Yearbook of the American Philosophical Society 1959:251-254.
- Savage, J.M., and F.W. Schuierer. 1961. The eggs of toads of the *Bufo boreas* group, with descriptions of the eggs of *Bufo exsul* and *Bufo nelsoni*. Bulletin of the Southern California Academy of Sciences 60:93-99.
- Say, T. 1823. In E. James, Account of an expedition from Pittsburgh to the Rocky Mountains, performed in the years 1819 and '20, by order of the Honorable J.C. Calhoun, Secretary of War, under the command of Major Stephen H. Long. Vol. 2. H.C. Carey and I. Lea, Philadelphia.
- Schaaf, R.T., and J.S. Garton. 1970. Raccoon predation on the American Toad, *Bufo americanus*. Herpetologica 26:334-335.
- Schaaf, R.T. Jr., and P.W. Smith. 1970. Geographic variation in the Pickerel Frog. Herpetologica 26:240-254.
- Schalk, G. 1997. Single and interactive effects of low pH and leech predators on frog embryos and adults. M.S. thesis, Carleton University, Ottawa, Ontario.
- Schank, C.M.M. 2008. Assessing the effects of trout stocking on native amphibian communities in small boreal foothills lakes of Alberta. M.S. thesis, University of Alberta, Edmonton.
- Schank, C.M.M., C.A. Paszkowski, W.M. Tonn and G.J. Scrimgeour. 2011. Stocked trout do not significantly affect Wood Frog populations in boreal foothills lakes. Canadian Journal of Fisheries and Aquatic Sciences 68:1790-1801.
- Schardien, B.J., and J.A. Jackson. 1982. Killdeers feeding on frogs. Wilson Bulletin 94:85-87.
- Schaub, D.L., and J.H. Larsen Jr. 1978. The reproductive ecology of the Pacific Treefrog (*Hyla regilla*). Herpetologica 34:409-416.
- Schechtman, A.M., and J.B. Olson. 1941. Unusual temperature tolerance of an amphibian egg (*Hyla regilla*). Ecology 22:409-410.
- Schell, S.C. 1964. *Bunoderella metteri* gen. and sp. n. (Trematoda: Allocereadiidae) and other trematode parasites of *Ascaphus truei* Stejneger. Journal of Parasitology 50:652-655.
- Scherer, R.D. 2010. Monitoring amphibian populations and the status of Wood Frogs and Boreal Chorus Frogs in the Kawuneeche Valley of Rocky Mountain National Park. Ph.D. diss., Colorado State University, Fort Collins.
- Scherer, R.D., and J.A. Tracey. 2011. A power analysis for the use of counts of egg masses to monitor Wood Frog (*Lithobates sylvaticus*) populations. Herpetological Conservation and Biology 6:81-90.
- Scherer, R.D., E. Muths, B.R. Noon, and P.S. Corn. 2005. An evaluation of weather and disease as causes of decline in two populations of Boreal Toads. Ecological Applications 15:2150-2160.
- Scherer, R.D., E. Muths, B.R. Noon, and S. J. Oyler-McCance. 2012. The genetic structure of a relict population of Wood Frogs. Conservation Genetics 13:1521-1530.
- Schiesari, L. 2004. Performance tradeoffs across resource gradients in anuran larvae. Ph.D. diss., University of Michigan, Ann Arbor.
- Schiesari, L. 2006. Pond canopy cover: a resource gradient for anuran larvae. Freshwater Biology 51:412-423.
- Schiesari, L., S. D. Peacor and E. E. Werner. 2006. The growth-mortality tradeoff: evidence from anuran larvae and consequences for species distributions. Oecologia 149:194-202.
- Schlaepfer, M.A., M.J. Sredl, P.C. Rosen, and M.J. Ryan. 2007. High prevalence of *Batrachochytrium dendrobatis* in wild populations of Lowland Leopard Frogs *Rana yavapaiensis* in Arizona. EcoHealth 4:421-427.
- Schleifer, E.K., M.A. Romano, S.I. Guttman, and S.B. Ruth. 1986. Effects of twenty years of hybridization in a disturbed habitat on *Hyla cinerea* and *Hyla gratiosa*. Journal of Herpetology 20:210-221.
- Schlichter, L.C. 1981. Low pH affects the fertilization and development of *Rana pipiens* eggs. Canadian Journal of Zoology 59:1693-1699.
- Schloegel, L.M., A.M. Picco, A.M. Kilpatrick, A.J. Davies, and A.D. Hyatt. 2009. Magnitude of the US trade in amphibians and presence of *Batrachochytrium dendrobatis* and ranavirus infection in imported North America Bullfrogs

- (*Rana catesbeiana*). Biological Conservation 142:1420-1426.
- Schloegel, L.M., L.F. Toledo, J.E. Longcore, S.E. Greenspan, C.A. Vieira, M. Lee, S. Zhao, C. Wamgen, C.M. Ferreira, M. Hipolito, A.J. Davies, C.A. Cuomo, P. Daszak and T.Y. James. 2012. Novel, panzootic and hybrid genotypes of amphibian chytridiomycosis associated with the Bullfrog trade. Molecular Ecology 21:5162–5177.
- Schmetterling, D.A., and M.K. Young. 2008. Summer movements of Boreal Toads (*Bufo boreas*) in two western Montana basins. Journal of Herpetology 42:111-123.
- Schmid, W.D. 1965. Some aspects of the water economies of nine species of amphibians. Ecology 46:261-269.
- Schmid, W.D. 1982. Survival of frogs in low temperatures. Science 215:697-698.
- Schmid, W.D. 1986. Winter ecology. Ekologijaia (Soviet Journal of Ecology) 6:29-35.
- Schmidt, K.P. 1924. A list of amphibians and reptiles collected near Charleston, S.C. Copeia (132):67-69.
- Schmidt, K.P. 1929. The frogs and toads of the Chicago area. Field Museum of Natural History, Zoology Leaflet 11.
- Schmidt, K.P. 1938. A geographic variation gradient in frogs. Field Museum of Natural History, Zoology Series 20(29):377-382.
- Schmidt, K.P. 1946. How to make money from frog-farming. Turtox News 24:169-170.
- Schmidt, K.P., and W.L. Necker. 1935. Amphibians and reptiles of the Chicago region. Bulletin of the Chicago Academy of Sciences 5:57-77.
- Schmidt, K.P., and T.F. Smith. 1944. Amphibians and reptiles of the Big Bend region of Texas. Zoological Series of Field Museum of Natural History. 29:75-96.
- Schmidt, R.S. 1968. Chuckle calls of the leopard frog (*Rana pipiens*). Copeia 1968:561-569.
- Schmutz, A.C., M.J. Gray, E.C. Burton, and D.L. Miller. 2008. Impacts of cattle on amphibian larvae and the aquatic environment. Freshwater Biology 53:2613-2625.
- Schneider, E. 2011. Population genetics of the Illinois Chorus Frog (*Pseudacris illinoensis*). M.S. thesis, University of Illinois, Urbana-Champaign.
- Schneider, J.G. 1799. Historia Amphibiorum Naturalis et Literarariae. Fasciculus Primus. Continens Ranas, Calamitas, Bufones, Salamandras et Hydros in Genera et Species Descriptos Notisque suis Distinctos. Friederici Frommanni, Jena.
- Schoenherr, A.A., C.R. Feldmeth, and M.J. Emerson. 1999. Natural History of the Islands of California. University of California Press, Berkeley.
- Schoeppner, N. M., and R. A. Relyea. 2005. Damage, digestion, and defense: The roles of alarm cues and kairomones for inducing prey defenses. Ecology Letters 8:505-512.
- Schoeppner, N. M., and R. A. Relyea. 2008. Detecting small environmental differences: Risk-response curves for predator-induced behavior and morphology. Oecologia 154:743-754.
- Schoeppner, N.M., and R.A. Relyea. 2009a. When should prey respond to consumed heterospecifics? Testing hypotheses of perceived risk. Copeia 2009:190-194.
- Schoeppner, N. M., and R. A. Relyea. 2009b. Interpreting the smells of predation: How alarm cues and kairomones induce different prey defenses. Functional Ecology 23:1114-1121.
- Schoeppner, N. M., and R. A. Relyea. 2009c. Phenotypic plasticity in response to fine-grained environmental variation in predation. Functional Ecology 23:587-594.
- Schonberger, C.F. 1945. Food of some amphibians and reptiles of Oregon and Washington. Copeia 1945:120-121.
- Schooley, J.D., M.R. Schwemm, and J.M. Barkstedt. 2008. *Rana catesbeiana* (American Bullfrog): tadpole gigantism and deformity. Herpetological Review 39:339-340.
- Schotthoefer, A.M., A.V. Koehler, C.U. Meteyer, and R.A. Cole. 2003. Influence of *Ribeiroia ondatrae* (Trematoda: Digenea) infection on limb development and survival of Northern Leopard Frogs (*Rana pipiens*): effects of host stage and parasite-exposure level. Canadian Journal of Zoology 81:1144-1153.
- Schotthoefer, A.M., M. G. Bolek, R. A. Cole and V. R. Beasley. 2009. Parasites of the Mink Frog (*Rana septentrionalis*) from Minnesota, U.S.A. Comparative Parasitology 76:240-246.
- Schoville, S.D., T.S. Tustall, V.T. Vredenburg, A.R. Backlin, E. Gallegos, D.A. Wood, and R.N. Fisher. 2011. Conservation genetics of evolutionary lineages of the endangered mountain Yellow-legged Frog, *Rana muscosa* (Amphibia: Ranidae), in southern California. Biological Conservation 144:2031-2044.
- Schreber, H. 1782. Der Naturforscher. Vol. 18.

- Johann Jacob Gebaur, Halle.
- Schreiman, E., and R. Rugh. 1949. Effects of DDT on functional development of larvae of *Rana pipiens* and *Fundulus heteroclitus*. Proceedings of the Society for Experimental Biology and Medicine 70:431-435.
- Schriever, T.A. 2007. Salinity influences on larval *Hyla cinerea* (Green Treefrog) development and alteration to southeastern Louisiana wetlands and its effects on the herpetofauna. M.S. thesis, Southeastern Louisiana University, Hammond.
- Schriever, T.A., and D.D. Williams. 2013. Ontogenetic and individual diet variation in amphibian larvae across an environmental gradient. Freshwater Biology 58:223-236.
- Schriever, T.A., J. Ramspott, B.I. Crother, and C.L. Fontenot Jr. 2009. Effects of hurricanes Ivan, Katrina and Rita on a southeastern Louisiana herpetofauna. Wetlands 29:112-122.
- Schrode, K.M., J.L. Ward, A. Vélez and M.A. Bee. 2012. Female preferences for spectral call properties in the western genetic lineage of Cope's Gray Treefrog (*Hyla chrysoscelis*). Behavioral Ecology and Sociobiology 66:1595-1606.
- Schroeder, E.E. 1966. Age determination and population structure in Missouri Bullfrogs. Ph.D. diss., University of Missouri, Columbia.
- Schroeder, E.E. 1968. Aggressive behavior in *Rana clamitans*. Journal of Herpetology 1:95-96.
- Schroeder, E.E. 1976. Dispersal and movement of newly transformed Green Frogs, *Rana clamitans*. American Midland Naturalist 95:471-474.
- Schroeder, E.E., and T.S. Baskett. 1965. Frogs and toads of Missouri. Missouri Conservationist 26:15-18.
- Schroeder, E.E., and T.S. Baskett. 1968. Age estimation, growth rates, and population structure in Missouri Bullfrogs. Copeia 1968:583-592.
- Schueler, F.W. 1973. Frogs of the Ontario coast of Hudson Bay and James Bay. Canadian Field-Naturalist 87:409-418.
- Schueler, F.W. 1975. Geographic variation in the size of *Rana septentrionalis* in Quebec, Ontario, and Manitoba. Journal of Herpetology 9:177-185.
- Schueler, F.W. 1979. Geographic variation in skin pigmentation and dermal glands in the Northern Leopard Frog, *Rana pipiens*. Ph.D. diss., University of Toronto.
- Schueler, F.W. 1982a. Geographic variation in skin pigmentation and dermal glands in the Northern Leopard Frog, *Rana pipiens*. National Museums of Canada, Publications in Zoology No. 16.
- Schueler, F.W. 1982b. Sexual colour differences in Canadian Western Toads, *Bufo boreas*. Canadian Field-Naturalist 96:329-332.
- Schueler, F.W., and F.R. Cook. 1980. Distribution of the middorsal stripe dimorphism in the Wood Frog, *Rana sylvatica*, in eastern North America. Canadian Journal of Zoology 58:1643-1651.
- Schueler, F.W., and R.M. Rankin. 1982. Terrestrial amplexus in the Wood Frog, *Rana sylvatica*. Canadian Field-Naturalist 96:348-349.
- Schuierer, F.W. 1962. Remarks upon the natural history of *Bufo exsul* Myers, the endemic toad of Deep Springs Valley, Inyo County, California. Herpetologica 17:260-266.
- Schuierer, F.W. 1963. Notes on two populations of *Bufo exsul* Myers and a commentary on speciation within the *Bufo boreas* group. Herpetologica 18:262-267.
- Schuierer, F.W. 1972. The current status of the endangered species *Bufo exsul* Myers, Deep Springs Valley, Inyo County, California. Herpetological Review 4:81-82.
- Schuierer, F.W., and S.C. Anderson. 1990. Population status of *Bufo exsul* Myers, 1942. Herpetological Review 21:57.
- Schulte-Hostedde, A.I., and C.M.M. Schank. 2009. Secondary sexual traits and individual phenotype in male Green Frogs (*Rana clamitans*). Journal of Herpetology 43:89-95.
- Schurbon, J.M. 2000. Effects of prescribed burning on amphibian diversity in the Francis Marion National Forest, South Carolina. M.S. thesis, University of Charleston, Charleston, South Carolina.
- Schurbon, J.M., and J.E. Fauth. 2003. Effects of prescribed burning on amphibian diversity in a southeastern U.S. national forest. Conservation Biology 17:1338-1349.
- Schuytema, G.S., and A.V. Nebeker. 1999a. Effects of ammonium nitrate, sodium nitrate, and urea on Red-legged Frogs, Pacific Treefrogs, and African Clawed Frogs. Bulletin of Environmental Contamination and Toxicology 63:357-364.
- Schuytema, G.S., and A.V. Nebeker. 1999b. Comparative effects of ammonium and nitrate compounds on Pacific Treefrog and African

- Clawed Frog embryos. Archives of Environmental Contamination and Toxicology 36:200-206.
- Schuytema, G.S., A.V. Nebeker, and W.L. Griffis. 1995. Comparative toxicity of Guthion and Guthion 2S to *Xenopus laevis* and *Pseudacris regilla* tadpoles. Bulletin of Environmental Contamination and Toxicology 54:382-388.
- Schwalbe, C.R., and P.C. Rosen. 1988. Preliminary report on effect of Bullfrogs on wetland herpetofaunas in southeastern Arizona. Pp. 166-173 In R.C. Szaro, K.E. Severson, and D.R. Patton (eds.), Management of Amphibians, Reptiles, and Small Mammals in North America. USDA Forest Service General and Technical Report RM-166.
- Schwalbe, C.R., and B. Alberti. 1998. Ground-truthing a troll. Studying the Barking Frog at Coronado National Memorial. Park Science 18:26-27.
- Schwaner, T.D., and B.K. Sullivan. 2005. *Bufo microscaphus* Cope 1867 “1866.” Arizona Toad. Pp. 422-424 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Schwaner, T.D., and B.K. Sullivan. 2009. Fifty years of hybridization: introgression between the Arizona Toad (*Bufo microscaphus*) and Woodhouse’s Toad (*B. woodhousii*) along Beaver Dam Wash in Utah. Herpetological Conservation and Biology 4:198-206.
- Schwaner, T.D., D.R. Hadley, K.R. Jenkins, M.P. Donovan, and B. Al Tait. 1997. Population dynamics and life history studies of toads: short- and long-range needs for understanding amphibian populations in southern Utah. Pp. 197-202 In L.M. Hill (ed.), Learning from the Land. Grand Staircase-Escalante National Monument Science Symposium Proceedings, USDI Bureau of Land Management BLM/UT/GI-98/006+1220.
- Schwartz, A. 1952. *Hyla septentrionalis* Dumeril and Bibron on the Florida mainland. Copeia 1952:117-118.
- Schwartz, A. 1955. The chorus frog *Pseudacris brachyphona* in North Carolina. Copeia 1955:138.
- Schwartz, A. 1957. Chorus frogs (*Pseudacris nigrita* LeConte) in South Carolina. American Museum Novitates 1838:1-12.
- Schwartz, A., and J.R. Harrison III. 1956. A new subspecies of Gopher Frog (*Rana capito* Leconte). Proceedings of the Biological Society of Washington 69:135-144.
- Schwartz, J.J. 1989. Graded aggressive calls of the Spring Peeper, *Pseudacris crucifer*. Herpetologica 45:172-181.
- Schwartz, J.J., and H.C. Gerhardt. 1995. Directionality of the auditory system and call pattern recognition during acoustic interference in the Gray Tree Frog, *Hyla versicolor*. Auditory Neuroscience 1:195-206.
- Schwartz, J.J., and H.C. Gerhardt. 1998. The neuroethology of frequency preferences in the Spring Peeper. Animal Behaviour 56:55-69.
- Schwartz, J.J., and K.M. Rahmeyer. 2006. Calling behavior and the capacity for sustained locomotory exercise in the Gray Treefrog (*Hyla versicolor*). Journal of Herpetology 40:164-171.
- Schwartz, J.J., M.A. Bee, and S.D. Tanner. 2000. A behavioral and neurobiological study of the responses of Gray Treefrogs, *Hyla versicolor*, to the calls of a predator, *Rana catesbeiana*. Herpetologica 56:27-37.
- Schwartz, V., and D.M. Golden. 2002. Field Guide to Reptiles and Amphibians of New Jersey. New Jersey Division of Fish and Wildlife, Woodbine.
- Scott, A.F., and D.F. Harker. 1968. First records of the Barking Treefrog, *Hyla gratiosa* Le Conte, from Tennessee. Herpetologica 24:82-83.
- Scott, D.E., B.S. Metts, and J.W. Gibbons. 2008. Enhancing amphibian biodiversity on golf courses with seasonal wetlands. Pp. 285-292 In J.C. Mitchell, R.E. Jung Brown, and B. Bartholomew (eds.), Urban Herpetology. Herpetological Conservation 3. Society for the Study of Amphibians and Reptiles, Salt Lake City, UT.
- Scott, G.W., and C.C. Carpenter. 1956. Body temperatures of *Bufo w. woodhousei*. Proceedings of the Oklahoma Academy of Science 36:84-85.
- Scott, N.J. Jr., and R.D. Jennings. 1985. The tadpoles of five species of New Mexican leopard frogs. Occasional Papers, the Museum of Southwestern Biology 3:1-21.
- Seale, D.B. 1980. Influence of amphibian larvae on primary production, nutrient flux, and competition in a pond ecosystem. Ecology 61:1531-1550.
- Seale, D.B. 1982. Physical factors influencing oviposition by the Wood Frog, *Rana sylvatica*, in Pennsylvania. Copeia 1982:627-635.

- Seale, D.B., and R.J. Wassersug. 1979. Suspension feeding dynamics of anuran larvae related to their functional morphology. *Oecologia* 39:259-272.
- Seale, D.B., and N. Beckvar. 1980. The comparative ability of anuran larvae (genera: *Hyla*, *Bufo* and *Rana*) to ingest suspended blue-green algae. *Copeia* 1980:495-503.
- Searle, C.L. 2011. Host-pathogen dynamics in a changing environment: susceptibility of amphibians to an emerging infectious disease. Ph.D. diss., Oregon State University, Corvallis.
- Searle, C.L., L.K. Belden, B.A. Bancroft, B.A. Han, L.M. Biga, and A.R. Blaustein. 2010. Experimental examination of the effects of ultraviolet-B radiation in combination with other stressors on frog larvae. *Oecologia* 162:237-245.
- Searle, C.L., L.M. Biga, J.W. Spatafora and A.R. Blaustein. 2011a. A dilution effect in the emerging amphibian pathogen *Batrachochytrium dendrobatidis*. *Proceedings of the National Academy of Sciences, USA* 108: 16322-16326.
- Searle, C.L., S.S. Gervasi, J. Hua, J.L. Hammond, R.A. Relyea, D.H. Olson and A.R. Blaustein. 2011b. Differential host susceptibility to *Batrachochytrium dendrobatidis*, an emerging amphibian pathogen. *Conservation Biology* 25:965-974.
- Seba, A. 1734. *Locupletissimi Rerum Naturalium Thesauri Accurata Descriptio, et Iconibus Artificiosissimis Expressio, per Universam Physices Historiam*. Janssonio-Waesbergios, & J. Wetstenium, & Gul. Smith, Amsterdam.
- Seburn, C.N.L., D.C. Seburn, and C.A. Paszkowski. 1997. Northern Leopard Frog (*Rana pipiens*) dispersal in relation to habitat. *SSAR Herpetological Conservation* 1:64-72.
- Seburn, D.C., and K. Gunson. 2011. Has the Western Chorus Frog (*Pseudacris triseriata*) declined in western Ottawa, Ontario? *Canadian Field-Naturalist* 125:220-226.
- Seburn, D.C., C.N.L. Seburn, and W.F. Weller. 2008. A localized decline in the Western Chorus Frog, *Pseudacris triseriata*, in eastern Ontario. *Canadian Field-Naturalist* 122:158-161.
- Secor, S.M. 1988. Perch sites of calling male Bird-voiced Treefrogs, *Hyla avivoca*, in Oklahoma. *Proceedings of the Oklahoma Academy of Science* 68:71-73.
- Seeba, F., J.J. Schwartz, and M.A. Bee. 2010. Testing an auditory illusion in frogs: perceptual restoration or rule-based sensory biases? *Animal Behaviour* 79:1317-1328.
- Seib, G.W. 1977. Probable case of death-feigning by Wood Frog. *Blue Jay* 35:148.
- Seibel, R.V. 1970. Variables affecting the critical thermal maximum of the leopard frog, *Rana pipiens* Schreber. *Herpetologica* 26:208-213.
- Seigel, R.A. 1983. Natural survival of eggs and tadpoles of the Wood Frog, *Rana sylvatica*. *Copeia* 1983:1096-1098.
- Seigel, R.A., A. Dinsmore, and S.C. Richter. 2006. Using well water to increase hydroperiod as a management option for pond-breeding amphibians. *Wildlife Society Bulletin* 34:1022-1027.
- Semlitsch, R.D. 1990. Effects of body size, sibship, and tail injury on the susceptibility of tadpoles to dragonfly predation. *Canadian Journal of Zoology* 68:1027-1030.
- Semlitsch, R.D. 2003. *Amphibian Conservation*. Smithsonian Books, Washington, DC.
- Semlitsch, R.D. 2008. Differentiating migration and dispersal processes for pond-breeding amphibians. *Journal of Wildlife Management* 72:260-267.
- Semlitsch, R.D., and J.P. Caldwell. 1982. Effects of density on growth, metamorphosis, and survivorship in tadpoles of *Scaphiopus holbrookii*. *Ecology* 63:905-911.
- Semlitsch, R.D., and J.W. Gibbons. 1988. Fish predation in size-structured populations of treefrog tadpoles. *Oecologia* 75:321-326.
- Semlitsch, R.D., and J.R. Bodie. 2003. Biological criteria for buffer zones around wetlands and riparian habitats for amphibians and reptiles. *Conservation Biology* 17:1219-1228.
- Semlitsch, R.D., J.W. Gibbons, and T.D. Tuberville. 1995. Timing of reproduction and metamorphosis in the Carolina Gopher Frog (*Rana capito capito*) in South Carolina. *Journal of Herpetology* 29:612-614.
- Semlitsch, R.D., D.E. Scott, J.H.K. Pechmann, and J.W. Gibbons. 1996. Structure and dynamics of an amphibian community: evidence from a 16-year study of a natural pond. Pp. 217-248 *In* M.L. Cody and J.A. Smallwood (eds.), *Long-term Studies of Vertebrate Communities*. Academic Press, San Diego, CA.
- Semlitsch, R.D., C.M. Bridges, and A.M. Welch. 2000. Genetic variation and a fitness tradeoff in the tolerance of Gray Treefrog (*Hyla*

- versicolor*) tadpoles to the insecticide carbaryl. *Oecologia* 125:179-185.
- Semlitsch, R.D., C.A. Conner, D.J. Hocking, T.A.G. Rittenhouse, and E.B. Harper. 2008. Effects of timber harvesting on pond-breeding amphibian persistence: testing the evacuation hypothesis. *Ecological Applications* 18:283-289.
- Semlitsch, R.D., B.D. Todd, S.M. Blomquist, A.J.K. Calhoun, J.W. Gibbons, J.P. Gibbs, G.J. Graeter, E.B. Harper, D.J. Hocking, M.L. Hunter, D.A. Patrick, T.A.G. Rittenhouse and B.B. Rothermel. 2009. Effects of timber harvest on amphibian populations: understanding mechanisms from forest experiments. *Bioscience* 59:853-862.
- Semsar, K., K.F. Klomberg, and C. Marler. 1998. Arginine vasotocin increases calling-site acquisition by nonresident male Grey Treefrogs. *Animal Behaviour* 56:983-987.
- Sessions, S.K., and S.B. Ruth. 1990. Explanation for naturally occurring supernumerary limbs in amphibians. *Journal of Experimental Zoology* 254:38-47.
- Sever, D.M., E.C. Moriarty, L.C. Rania, and W.C. Hamlett. 2001. Sperm storage in the oviduct of an internally fertilizing frog, *Ascaphus truei*. *Journal of Morphology* 248:1-21.
- Sexton, O.J., and K.R. Marion. 1974. Probable predation by Swainson's Hawk on swimming spadefoot toads. *Wilson Bulletin* 86:167-168.
- Sexton, O.J., and C. Phillips. 1986. A qualitative study of fish-amphibian interactions in 3 Missouri ponds. *Transactions, Missouri Academy of Science* 20:25-35.
- Sexton, O.J., C.A. Phillips, T.J. Bergman, E.B. Wattenberg, and R.E. Preston. 1998. Abandon not hope: status of repatriated populations of Spotted Salamanders and Wood Frogs at the Tyson Research Center, St. Louis County, Missouri. Pp. 340-353 In M.J. Lannoo (ed.), *Status & Distribution of Midwestern Amphibians*. University of Iowa Press, Iowa City.
- Seyle, C.W. Jr., and S.E. Trauth. 1982. *Pseudacris ornata* (Ornate Chorus Frog). Reproduction. *Herpetological Review* 13:45.
- Seymour, R.S. 1995. Oxygen uptake by embryos in gelatinous egg masses of *Rana sylvatica*: the roles of diffusion and convection. *Copeia* 1995:626-635.
- Shaffer, H.B., G.M. Fellers, A. Magee, and S.R. Voss. 2000. The genetics of amphibian declines: population substructure and molecular differentiation in the Yosemite Toad, *Bufo canorus* (Anura, Bufonidae), based on single-stranded conformation polymorphism analysis (SSCP) and mitochondrial DNA sequence data. *Molecular Ecology* 9:245-257.
- Shaffer, H.B., G.M. Fellers, S.R. Voss, J.C. Oliver, and G.B. Pauly. 2004. Species boundaries, phylogeography and conservation genetics of the Red-legged Frog (*Rana aurora/draytonii*) complex. *Molecular Ecology* 13:2667-2677.
- Shah, A.A., M.J. Ryan, E. Bevilacqua, and M.L. Schlaepfer. 2010. Prior experience alters the behavioral responses of prey to a nonnative predator. *Journal of Herpetology* 44:185-192.
- Shannon, F.A. 1949. A western subspecies of *Bufo woodhousii* hitherto erroneously associated with *Bufo compactilis*. *Bulletin of the Chicago Academy of Science* 8:301-312.
- Shannon, F.A., and C.H. Lowe Jr. 1955. A new subspecies of *Bufo woodhousei* from the inland Southwest. *Herpetologica* 11:185-190.
- Shannon, P.R. 1988. The parasites of breeding male eastern gray treefrogs, *Hyla versicolor* LeConte, 1825, from the Ashland Wildlife Research Area, Boone County, Missouri. M.S. thesis, University of Missouri, Columbia.
- Sharp, C.C.R. 2008. Effects of copper and light exposure on the development and survival of the Wood Frog tadpole (*Rana sylvatica*). M.S. thesis, University of Akron, Akron, OH.
- Shaw, G. 1802. *General Zoology, or Systematic Natural History*. Vol 3, Part I. *Amphibia*. Thomas Davison, London.
- Sheldon, A.B. 2006. *Amphibians & Reptiles of the North Woods*. Kollath+Stensaas Publishing, Duluth, Minnesota.
- Shelford, V.E. 1913. The reactions of certain animals to gradients of evaporating power of air: a study in experimental ecology. *Biological Bulletin* 25:79-120.
- Shepard, D.B. 2000. Aggressive behavior and potential of territoriality in the Green Frog *Rana clamitans*. M.S. thesis, Illinois State University, Normal.
- Shepard, D.B. 2002. Spatial relationships of male green frogs (*Rana clamitans*) throughout the activity season. *American Midland Naturalist* 148:394-400.
- Shepard, D.B. 2004. Seasonal differences in aggression and site tenacity in male green frogs, *Rana clamitans*. *Copeia* 2004:159-164.
- Shepard, D.B., and A.R. Kuhns. 2000.

- Pseudacris triseriata* (Western Chorus Frog): calling sites after drought. Herpetological Review 31:235-236.
- Shepard, D.B., and L.E. Brown. 2005. *Bufo houstonensis* Sanders, 1953: Houston Toad. Pp. 415-417 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Shinn, E.A., and J.W. Dole. 1978. Evidence for a role for olfactory cues in the feeding response of leopard frogs, *Rana pipiens*. Herpetologica 34:167-172.
- Shinn, E.A., and J.W. Dole. 1979a. Lipid components of prey odors elicit feeding responses in Western Toads (*Bufo boreas*). Copeia 1979:275-278.
- Shinn, E.A., and J.W. Dole. 1979b. Evidence for a role for olfactory cues in the feeding response of Western Toads (*Bufo boreas*). Copeia 1979:163-165.
- Shirer, H.W., and H.S. Fitch. 1970. Comparison from radiotracking of movements and denning habits of the Raccoon, Striped Skunk, and Opossum in northeastern Kansas. Journal of Mammalogy 51:491-503.
- Shirose, L.J., and R.J. Brooks. 1997. Fluctuations in abundance and age structure in three species of frogs (Anura: Ranidae) in Algonquin Park, Canada, from 1985 to 1993. SSAR Herpetological Conservation 1:16-26.
- Shirose, L.J., R.J. Brooks, J.R. Barta, and S.S. Desser. 1993. Intersexual differences in growth, mortality, and size at maturity in Bullfrogs in central Ontario. Canadian Journal of Zoology 71:2363-2369.
- Shively, J.N., J.G. Songer, S. Prchal, M.S. Keasey III, and C.O. Thoen. 1981. *Mycobacterium marinum* infection in Bufonidae. Journal of Wildlife Diseases 17:3-7.
- Shoop, C.R., and C. Ruckdeschel. 2003. Herpetological biogeography of the Georgia Barrier islands: an alternative interpretation. Florida Scientist 66:43-51.
- Shoop, C.R., and C. Ruckdeschel. 2006. Amphibians and reptiles of Cumberland Island, Georgia. Occasional Publications of the Cumberland Island Museum No. 2, St. Marys, GA.
- Shovlain, A.M. 2006. Oregon Spotted Frog (*Rana pretiosa*) habitat use and herbage (or biomass) removal from grazing at Jack Creek, Klamath County, Oregon. M.S. thesis, Oregon State University, Corvallis.
- Shubin, N.H., and F.A. Jenkins Jr. 1995. An Early Jurassic jumping frog. Nature 377:49-52.
- Shulse, C.D. 2011. Building better wetlands for amphibians: investigating the roles of engineered wetland features and Mosquitofish (*Gambusia affinis*) on amphibian abundance and reproductive success. Ph.D. diss., University of Missouri, Columbia.
- Shulse, C.D., R.D. Semlitsch and K.M. Trauth. 2009. Development of an amphibian biotic index to evaluate wetland health in northern Missouri. World Environmental and Water Resources Congress, ASCE. 342:2657-2667.
- Shulse, C.D., R.D. Semlitsch, K.M. Trauth, and A.D. Williams. 2010. Influences of design and landscape placement parameters on amphibian abundance in constructed wetlands. Wetlands 30:915-928.
- Shulse, C.D., R.D. Semlitsch, K.M. Trauth and J.E. Gardner. 2012a. Testing wetland features to increase amphibian reproductive success and species richness for mitigation and restoration. Ecological Applications 22:1675-1688.
- Shulse, C.D., R.D. Semlitsch, K.M. Trauth, and J.E. Gardner. 2012b. Amphibian reproductive success in wetlands. Bulletin of the Ecological Society of America 93:236-237.
- Shutler, D. and D.J. Marcogliese. 2011. Leukocyte profiles of Northern Leopard Frogs, *Lithobates pipiens*, exposed to pesticides and hematozoa in agricultural wetlands. Copeia 2011:301-307.
- Shutler, D., T.G. Smith and S.R. Robinson. 2009. Relationships between leucocytes and *Hepatozoon* spp. in Green Frogs, *Rana clamitans*. Journal of Wildlife Diseases 45:67-72.
- Sias, J. 2006. Natural history and distribution of the Upland Chorus Frog, *Pseudacris feriarum* Baird, in West Virginia. M.S. thesis, Marshall University, Huntington.
- Siebler, H.R. 1962. New Hampshire Nature Notes. Equity Publishing Corporation, Orford, New Hampshire.
- Siekmann, J.M. 1949. A survey of the tadpoles of Louisiana. M.S. thesis, Louisiana State University, Baton Rouge.
- Sielecki, L.E. 2010. Wildlife Identification Field Guide. Red and Blue Listed Amphibians and Reptiles in British Columbia. Ministry of Transportation and Infrastructure, Victoria.
- Sievert, G., and L. Sievert. 2006. A Field Guide

- to Oklahoma's Amphibians and Reptiles. Oklahoma Department of Wildlife Conservation, Oklahoma City.
- Sievert, L. 1991. Thermoregulatory behaviour in the toads *Bufo marinus* and *Bufo cognatus*. *Journal of Thermal Biology* 16:309-312.
- Sievert, L.M., and J.L. Poore. 1995. Thermoregulatory behavior of *Bufo americanus*: effects of melatonin, chlorpromazine, and time of day. *Copeia* 1995:490-494.
- Sievert, L.M., and J.K. Bailey. 2000. Specific dynamic action in the toad, *Bufo woodhousii*. *Copeia* 2000:1076-1078.
- Simandle, E.T. 2006. Population structure and conservation of two rare toad species (*Bufo exsul* and *Bufo nelsoni*) in the Great Basin, USA. Ph.D. diss., University of Nevada, Reno.
- Simmons, R., and J.D. Hardy Jr. 1959. The River-swamp Frog, *Rana heckscheri* Wright, in North Carolina. *Herpetologica* 15:36-37.
- Simon, J.A., J.W. Snodgrass, R.E. Casey, and D.W. Sparling. 2009. Spatial correlates of amphibian use of constructed wetlands in an urban landscape. *Landscape Ecology* 24:361-373.
- Simovich, M.A. 1985. Analysis of a hybrid zone between the spadefoot toads *Scaphiopus multiplicatus* and *Scaphiopus bombifrons*. Ph.D. diss., University of California-Riverside.
- Simovich, M.A. 1994. The dynamics of a spadefoot toad (*Spea multiplicata* and *S. bombifrons*) hybridization system. Pp. 167-182 In P.R. Brown and J.W. Wright (eds.), *Herpetology of the North American Deserts. Proceedings of a Symposium*. Southwestern Herpetologists Society, Special Publication No. 5.
- Simovich, M.A., C.A. Sassaman, and A. Chovnick. 1991. Post-mating selection of hybrid toads (*Scaphiopus multiplicatus* and *Scaphiopus bombifrons*). *Proceedings of the San Diego Society of Natural History* No. 5:1-6.
- Sin, H., K.H. Beard, and W.C. Pitt. 2008. An invasive frog, *Eleutherodactylus coqui*, increases new leaf production and leaf litter decomposition rates through nutrient cycling in Hawaii. *Biological Invasions* 10:335-345.
- Singer, S.R., and S. Grismajer. 2005. Panic in Paradise. *Invasive Species Hysteria and the Hawaiian Coqui Frog War*. ISCD Press, Pahoa, HI.
- Skelly, D.K. 1992a. Larval distributions of Spring Peepers and chorus frogs: regulating factors and the role of larval behavior. Ph.D. diss., University of Michigan, Ann Arbor.
- Skelly, D.K. 1992b. Field evidence for a cost of behavioral antipredator response in a larval amphibian. *Ecology* 73:704-708.
- Skelly, D.K. 1994. Activity level and the susceptibility of anuran larvae to predation. *Animal Behaviour* 47:465-468.
- Skelly, D.K. 1995a. A behavioral tradeoff and its consequences for the distribution of *Pseudacris* treefrog larvae. *Ecology* 76:150-164.
- Skelly, D.K. 1995b. Competition and the distribution of Spring Peeper larvae. *Oecologia* 103:203-207.
- Skelly, D.K. 2001. Distributions of pond-breeding anurans: an overview of mechanisms. *Israel Journal of Zoology* 47:313-332.
- Skelly, D.K. 2004. Microgeographic countergradient variation in the Wood Frog, *Rana sylvatica*. *Evolution* 58:160-165.
- Skelly, D.K., and E.E. Werner. 1990. Behavioral and life-historical responses of larval American toads to an odonate predator. *Ecology* 71:2313-2322.
- Skelly, D.K., and L.K. Freidenburg. 2000. Effects of beaver on the thermal biology of an amphibian. *Ecology Letters* 3:483-486.
- Skelly, D.K., E.E. Werner, and S.A. Cortwright. 1999. Long-term distributional dynamics of a Michigan amphibian assemblage. *Ecology* 80:2326-2337.
- Skelly, D.K., L.K. Freidenburg, and J.M. Kiesecker. 2002. Forest canopy and the performance of larval amphibians. *Ecology* 83:983-992.
- Skelly, D.K., K.L. Yurewicz, E.E. Werner, and R.A. Relyea. 2003. Estimating decline and distributional change in amphibians. *Conservation Biology* 17:744-751.
- Skelly, D. K., M. A. Halverson, L. K. Freidenburg and M. C. Urban. 2005. Canopy closure and amphibian diversity in forested wetlands. *Wetlands Ecology and Management* 13:261- 268.
- Skelly, D. K., S. R. Bolden, L. K. Freidenburg, N. A. Freidenfelds, and R. Levey. 2007. *Ribeiroia* infection is not responsible for Vermont amphibian deformities. *EcoHealth* 4:156-163.
- Skelly, D.K., S.R. Bolden, and K.B. Dion. 2010a. Intersex frogs concentrated in suburban and urban landscapes. *EcoHealth* 7:374-379.

- Skelly, D. K., and M. F. Benard. 2010b. Mystery unsolved: missing limbs in deformed amphibians. *Journal of Experimental Zoology B: Molecular and Developmental Evolution* 314B:179-181.
- Skidds, D.E., F.C. Golet, P.W.C. Paton, and J.C. Mitchell. 2007. Habitat correlates of reproductive effort in Wood Frogs and Spotted Salamanders in an urbanizing watershed. *Journal of Herpetology* 41:439-450.
- Slater, J.R. 1931. The mating of *Ascaphus truei* Stejneger. *Copeia* 1931:62-63.
- Slater, J.R. 1939a. Description and life-history of a new *Rana* from Washington. *Herpetologica* 1:145-149.
- ±Slater, J.R. 1939b. Some species of amphibians new to the state of Washington. *Occasional Papers, Department of Biology, College of Puget Sound No. 2*:4-5.
- Slater, J.R. 1941a. Island records of amphibians and reptiles for Washington. *Occasional Papers, Department of Biology, College of Puget Sound No. 13*:74-77.
- Slater, J.R. 1941b. The distribution of amphibians and reptiles in Idaho. *Occasional Papers, Department of Biology, College of Puget Sound No. 14*:78-109.
- Slater, J.R. 1955. Distribution of Washington amphibians. *Occasional Papers, Department of Biology, College of Puget Sound No. 16*:120-154.
- Slater, J.R. 1964a. A key to adult amphibians of Washington State. *Occasional Papers, Department of Biology, College of Puget Sound No. 25*:235-236.
- Slater, J.R. 1964b. County records of amphibians for Washington. *Occasional Papers, Department of Biology, College of Puget Sound No. 26*:237-242.
- Slevin, J.R. 1928. The amphibians of western North America. An account of the species known to inhabit California, Alaska, British Columbia, Washington, Oregon, Idaho, Utah, Nevada, Arizona, Sonora, and Lower California. *Occasional Papers of the California Academy of Sciences* 16:1-144.
- Sloan, A.J. 1964. Amphibians of San Diego County. *Occasional Papers of the San Diego Natural History Society No. 13*.
- Smith, A.K. 1973. Feeding strategies and population dynamics of the Bullfrog (*Rana catesbeiana*). Ph.D. diss., University of Kansas, Lawrence.
- Smith, A.K. 1977. Attraction of Bullfrogs (Amphibia, Anura, Ranidae) to distress calls of immature frogs. *Journal of Herpetology* 11:234-235.
- Smith, B.E. 2003. Conservation assessment for the Northern Leopard Frog in the Black Hills National Forest, South Dakota and Wyoming. USDA Forest Service, Black Hills National Forest, Custer, South Dakota. http://www.fs.fed.us/r2/blackhills/projects/planning/assessments/leopard_frog.pdf
- Smith, B.E., and D.A. Keinath. 2007. Northern leopard frog (*Rana pipiens*): a technical conservation assessment. USDA Forest Service, Rocky Mountain Region, Species Conservation Project. <http://www.fs.fed.us/r2/projects/scp/assessments/northernleopardfrog.pdf>
- Smith, C.C., and A.N. Bragg. 1949. Observations on the ecology and natural history of anura, 7. Food and feeding habits of the common species of toads in Oklahoma. *Ecology* 30:333-349.
- Smith, D.A. 1953. Northern Swamp Tree Frog, *Pseudacris nigrita septentrionalis* (Boulenger) from Churchill, Manitoba. *Canadian Field-Naturalist* 67:181-182.
- Smith, D.C. 1983. Factors controlling tadpole populations of the chorus frog (*Pseudacris triseriata*) on Isle Royale, Michigan. *Ecology* 64:501-510.
- Smith, D.C. 1987. Adult recruitment in chorus frogs: effects of size and date at metamorphosis. *Ecology* 68:344-350.
- Smith, D.C. 1990. Population structure and competition among kin in the chorus frog (*Pseudacris triseriata*). *Evolution* 44:1529-1541.
- Smith, D.D., and R. Powell. 1983. *Acris crepitans blanchardi* (Blanchard's Cricket Frog). Anomalies. *Herpetological Review* 14:118-119.
- Smith, G.R. 1999. Microhabitat preferences of Bullfrog tadpoles (*Rana catesbeiana*) of different ages. *Transactions of the Nebraska Academy of Sciences* 25:73-76.
- Smith, G.R. 2002. *Pseudacris crucifer* (Spring Peeper). Predation. *Herpetological Review* 33:48.
- Smith, G.R. 2007. Lack of effect of nitrate, nitrite, and phosphorus on Wood Frog (*Rana sylvatica*) tadpoles. *Applied Herpetology* 4:287-291.
- Smith, G.R., and A.K. Jennings. 2004. Spacing of the tadpoles of *Hyla versicolor* and *Rana*

- clamitans*. Journal of Herpetology 38:616-618.
- Smith, G.R., and B.L. Doupenik. 2005. Habitat use and activity level of large American Bullfrog tadpoles: choices and repeatability. *Amphibia-Reptilia* 26:549-552.
- Smith, G.R., and J.J. Schulte. 2008. Conservation management implications of substrate choice in recently metamorphosed American toads (*Bufo americanus*). *Applied Herpetology* 5:87-92.
- Smith, G.R., and A.R. Awan. 2009. The roles of predator identity and group size in the antipredator responses of American Toad (*Bufo americanus*) and Bullfrog (*Rana catesbeiana*) tadpoles. *Behaviour* 146:225-243.
- Smith, G.R., and D.T. Fortune. 2009. Hatching plasticity of Wood Frog (*Rana sylvatica*) eggs in response to Mosquitofish (*Gambusia affinis*) cues. *Herpetological Conservation and Biology* 4:43-47.
- Smith, G.R., and A.A. Burgett. 2012a. Effects of nutrient enrichment and changes in the background tadpole community on American Bullfrog tadpoles. *Herpetological Journal* 22:173-178.
- Smith, G.R., and A.A. Burgett. 2012b. Interaction between two species of tadpoles mediated by nutrient enrichment. *Herpetologica* 68:174-183.
- Smith, G.R. and C.J. Dibble. 2012. Effects of an invasive fish (*Gambusia affinis*) and anthropogenic nutrient enrichment on American Toad (*Anaxyrus americanus*) tadpoles. *Journal of Herpetology* 46:198-202.
- Smith, G.R., J.E. Rettig, G.G. Mittelbach, J.L. Valiulis, and S.R. Schaack. 1999. The effects of fish on assemblages of amphibians in ponds: a field experiment. *Freshwater Biology* 41:829-837.
- Smith, G.R., M.A. Waters, and J.E. Rettig. 2000. Consequences of embryonic UV-B exposure for embryos and tadpoles of the Plains Leopard Frog. *Conservation Biology* 14:1903-1907.
- Smith, G.R., A. Todd, J.E. Rettig, and F. Nelson. 2003. Microhabitat selection by Northern Cricket Frogs (*Acrida crepitans*) along a west-central Missouri creek: field and experimental observations. *Journal of Herpetology* 37:383-385.
- Smith, G.R., H.A. Dingfelder and D.A. Vaala. 2004. Asymmetric competition between *Rana clamitans* and *Hyla versicolor* tadpoles. *Oikos* 105:626-632.
- Smith, G.R., A. Boyd, C.B. Dayer, and K.E. Winter. 2008. Behavioral responses of American Toad and Bullfrog tadpoles to the presence of cues from the invasive fish, *Gambusia affinis*. *Biological Invasions* 10:743-748.
- Smith, G.R., A. Boyd, C.B. Dayer, M.E. Ogle, and A.J. Terleky. 2009. Responses of Gray Treefrog and American Toad tadpoles to the presence of cues from multiple predators. *Herpetological Journal* 19:79-83.
- Smith, G.R., A. Boyd, C.B. Dayer, M.E. Ogle, A.J. Terleky, and C.J. Dibble. 2010. Effects of sibship and the presence of multiple predators on the behavior of Green Frog (*Rana clamitans*) tadpoles. *Ethology* 116:217-225.
- Smith, G.R., S.V. Krishnamurthy, A.C. Burger, and L.B. Mills. 2011a. Differential effects of malathion and nitrate exposure on American Toad and Wood Frog tadpoles. *Archives of Environmental Contamination and Toxicology* 60:327-335.
- Smith, G.R., A.J. Terleky, C.B. Dayer, A. Boyd, M.E. Ogle and C.J. Dibble. 2011b. Effects of Mosquitofish and ammonium nitrate on activity of Green Frog (*Lithobates clamitans*) tadpoles: a mesocosm experiment. *Journal of Freshwater Ecology* 26:59-63.
- Smith, G.R., A.A. Burgett and J.E. Rettig. 2012. Effects of the anuran tadpole assemblage and nutrient enrichment on freshwater snail abundance (*Physella* sp.). *American Midland Naturalist* 168:341-351.
- Smith, H.C. 1975. Reproductive cycles of *Bufo woodhousii* and *Acrida gryllus* in northern Mississippi, with additional notes on *Pseudacris triseriata* and *Hyla chrysoscelis*. Ph.D. diss., Mississippi State University, Mississippi State.
- Smith, H.M. 1932a. A report upon amphibians hitherto unknown from Kansas. *Transactions of the Kansas Academy of Science* 35:93-96.
- Smith, H.M. 1932b. *Ascaphus truei* Stejneger in Montana. *Copeia* 1932:100.
- Smith, H.M. 1933. On the proper name for the brevicipitid frog *Gastrophryne texensis* (Girard). *Copeia* 1933: 217.
- Smith, H.M. 1934. The amphibians of Kansas. *American Midland Naturalist* 15:377-528.
- Smith, H.M. 1937. Notes on *Scaphiopus hurterii* Strecker. *Herpetologica* 1:104-108.
- Smith, H.M. 1947. Subspecies of the Sonoran Toad (*Bufo compactilis* Wiegmann). *Herpetologica* 4:7-13.
- Smith, H.M. 1950. Handbook of amphibians and

- reptiles of Kansas. Miscellaneous Publications of the Museum of Natural History, University of Kansas (2):1-336. [2nd edition 1956]
- Smith, H.M., and B.C. Brown. 1947. The Texan subspecies of the treefrog, *Hyla versicolor*. Proceedings of the Biological Society of Washington 60:47-50.
- Smith, H.M., and H.K. Buechner. 1947. The influence of the Balcones Escarpment on the distribution of amphibians and reptiles in Texas. Bulletin of the Chicago Academy of Sciences 8:1-16.
- Smith, H.M., and D.A. Langebartel. 1949. The toad *Bufo valliceps* in Arkansas. Copeia 1949:230.
- Smith, H.M., and J.C. List. 1951. The occurrence of digital pads as an anomaly in the Bullfrog. Turtox News 29:118-119.
- Smith, H.M., and O. Sanders. 1952. Distributional data on Texan amphibians and reptiles. Texas Journal of Science 4:204-219.
- Smith, H.M., C.W. Nixon, and P.E. Smith. 1948. A partial description of the tadpole of *Rana areolata circulosa* and notes on the natural history of the race. American Midland Naturalist 39:608-614.
- Smith, H.M., T.P. Maslin, and R.L. Brown. 1965. Summary of the distribution of the herpetofauna of Colorado. University of Colorado Studies, Series in Biology No. 15:1-52.
- Smith, H.M., D. Chiszar, J.T. Collins, and F. van Breukelen. 1998. The taxonomic status of the Wyoming Toad, *Bufo baxteri* Porter. Contemporary Herpetology 1. http://www.contemporaryherpetology.org/ch/1998/1/CH_1998_1.pdf
- Smith, K.G. 2005a. Effects of nonindigenous tadpoles on native tadpoles in Florida: evidence of competition. Biological Conservation 123:433-441.
- Smith, K.G. 2005b. An exploratory assessment of Cuban Treefrog (*Osteopilus septentrionalis*) tadpoles as predators of native and nonindigenous tadpoles in Florida. Amphibia-Reptilia 26:571-575.
- Smith, L.L., and C.K. Dodd Jr. 2003. Wildlife mortality on U.S. Highway 441 across Paynes Prairie, Alachua County, Florida. Florida Scientist 66:128-140.
- Smith, L.L., K.G. Smith, W.J. Barichivich, C.K. Dodd Jr., and K. Sorensen. 2005. Roads and Florida's herpetofauna: a review and mitigation case study. Pp. 32-40 In W.E. Meshaka Jr. and K.J. Babbitt (eds.), *Amphibians and Reptiles. Status and Conservation in Florida*. Krieger Publishing, Malabar, FL.
- Smith, L.L., W.J. Barichivich, J.S. Staiger, K.G. Smith, and C.K. Dodd Jr. 2006a. Detection probabilities and site occupancy estimates for amphibians at Okefenokee National Wildlife Refuge. American Midland Naturalist 155:149-161.
- Smith, L.L., D.A. Steen, J.M. Stober, M.C. Freeman, S.W. Golladay, L.M. Conner and J. Cochrane. 2006b. The vertebrate fauna of Ichauway, Baker County, GA. Southeastern Naturalist 5:599-620.
- Smith, L.M., M.J. Gray, and A. Quarles. 2004. Diets of newly metamorphosed amphibians in west Texas playas. Southwestern Naturalist 49:257-263.
- Smith, M.A., and D.M. Green. 2005. Dispersal and the metapopulation paradigm in amphibian ecology and conservation: are all amphibian populations metapopulations? Ecography 28:110-128.
- Smith, P.W. 1947. The reptiles and amphibians of eastern central Illinois. Bulletin of the Chicago Academy of Sciences 8:21-40.
- Smith, P.W. 1951. A new frog and a new turtle from the western Illinois sand prairies. Bulletin of the Chicago Academy of Sciences 9:189-199.
- Smith, P.W. 1955. *Pseudacris streckeri illinoensis* in Missouri. Transactions of the Kansas Academy of Science 58:411.
- Smith, P.W. 1956. The status, correct name, and geographic range of the Boreal Chorus Frog. Proceedings of the Biological Society of Washington 69:169-176.
- Smith, P.W. 1957. An analysis of post-Wisconsin biogeography of the Prairie Peninsula region based on distributional phenomena among terrestrial vertebrate populations. Ecology 38:205-218.
- Smith, P.W. 1961. The amphibians and reptiles of Illinois. Illinois Natural History Survey Bulletin 28:1-298.
- Smith, P.W., and D.M. Smith. 1952. The relationship of the chorus frogs, *Pseudacris nigrita feriarum* and *Pseudacris n. triseriata*. American Midland Naturalist 48:165-180.
- Smith, R.E. 1940. Mating and oviposition in the Pacific Coast Tree Toad. Science 92:379-380.
- Smith, W.H. 2011. Ecological determinants of herpetofaunal assemblage structure in the

- longleaf pine ecosystem. Ph.D. diss., University of Alabama, Tuscaloosa.
- Smithberger, S.I., and C.W. Swarth. 1993. Reptiles and amphibians of the Jug Bay Wetlands Sanctuary. *The Maryland Naturalist* 37(3-4):28-46.
- Smits, A.W. 1984. Activity patterns and thermal biology of the toad *Bufo boreas halophilus*. *Copeia* 1984:689-696.
- Smits, J.E.G., B.D. Hersikorn, R.F. Young, and P.M. Fedorak. 2012. Physiological effects and tissue residues from exposure of leopard frogs to commercial naphthenic acids. *Science of the Total Environment* 437:36-41.
- Snider, A.T., and J.K. Bowler. 1992. Longevity of reptiles and amphibians in North American collections. 2nd ed. SSAR Herpetological Circular No. 21.
- Snodgrass, J.W., W.A. Hopkins, and J.H. Roe. 2003. Relationships among developmental stage, metamorphic timing, and concentrations of elements in Bullfrogs (*Rana catesbeiana*). *Environmental Toxicology and Chemistry* 22:1597-1604.
- Snodgrass, J.W., W.A. Hopkins, J. Broughton, D. Gwinn, J.A. Baionno, and J. Burger. 2004. Species-specific responses of developing anurans to coal combustion waste. *Aquatic Toxicology* 66:171-182.
- Snodgrass, J.W., W.A. Hopkins, B.P. Jackson, J.A. Baionno and J. Broughton. 2005. Influence of larval period on responses of overwintering Green Frog (*Rana clamitans*) larvae exposed to contaminated sediments. *Environmental Toxicology and Chemistry* 24:1508-1514.
- Snodgrass, J.W., R.E. Casey, D. Joseph and J.A. Simon. 2008. Mesocosm investigations of stormwater pond sediment toxicity to embryonic and larval amphibians: variation in sensitivity among species. *Environmental Pollution* 154:291-297.
- Synder, D.F. 1972. *Amphibians and Reptiles of Land Between the Lakes*. Tennessee Valley Authority. [no place of publication given]
- Snyder, W.F., and D.L. Jameson. 1965. Multivariate geographic variation of mating call in populations of the Pacific Tree Frog (*Hyla regilla*). *Copeia* 1965:129-142.
- Sodhi, N.S., D. Bickford, A.C. Diesmos, T.M. Lee, L.P. Koh, B.W. Brook, C.H. Sekercioglu, and C.J.A. Bradshaw. 2008. Measuring the meltdown: drivers of global amphibian extinction and decline. *PLoS One* 2(2):e1636.
- Sonnini, C.S., and P.A. Latreille. 1801. *Histoire naturelle des reptiles, avec figures designées d'après nature*, 2. Chez Deterville, Paris.
- Souder, W. 2000. *A Plague of Frogs. The Horrifying True Story*. Hyperion, New York.
- Sours, G.N., J.W. Petraska and S.F. Fox. 2007. Intraguild predation and competition mediate stage-structured interactions between Wood Frog (*Rana sylvatica*) and Upland Chorus Frog (*Pseudacris feriarum*) larvae. *Copeia* 2007:131-139.
- Southworth, G.C., G. Mason and J.R. Seed. 1968. Studies on frog trypanosomiasis. I. A 24-hour cycle in the parasitemia level of *Trypanosoma rotatorium* in *Rana clamitans* from Louisiana. *Journal of Parasitology* 54:255-258.
- Sowers, A.D. 2009. The effects of wastewater effluents on a fish and amphibian species. Ph.D. diss. Clemson University, Clemson, SC.
- Sparling, D.W. 2003. A review of the role of contaminants in amphibian declines. Pp. 1099-1128 *In* D.J. Hoffman, B.A. Rattner, G.A. Burton Jr., and J. Cairns Jr. (eds.), *Handbook of Ecotoxicology*. Lewis Publishers, Boca Raton, FL.
- Sparling, D.W., and T.P. Lowe. 1996. Metal concentrations of tadpoles in experimental ponds. *Environmental Pollution* 91:149-159.
- Sparling, D.W., and G. Fellers. 2007. Comparative toxicity of chlorpyrifos, diazinon, malathion and their oxon derivatives to larval *Rana boylii*. *Environmental Pollution* 147:535-539.
- Sparling, D.W., T.P. Lowe, D. Day, and K. Dolan. 1995. Responses of amphibian populations to water and soil factors in experimentally-treated aquatic mesocosms. *Archives of Environmental Contamination and Toxicology* 29:455-461.
- Sparling, D.W., T.P. Lowe, and A.E. Pinkney. 1997. Toxicity of Abate™ to Green Frog tadpoles. *Bulletin of Environmental Contamination and Toxicology* 58:475-481.
- Sparling, D.W., G.M. Fellers, and L.L. McConnell. 2001. Pesticides and amphibian population declines in California, USA. *Environmental Toxicology and Chemistry* 20:1591-1595.
- Sparling, D.W., G. Linder, C.A. Bishop and S. Krest. (eds.), 2010. *Ecotoxicology of Amphibians and Reptiles*. Second edition, SETAC Press, Pensacola, FL.
- Spear, P.A., M. Boily, I. Giroux, C. DeBlois,

- M.H. Leclair, M. Levasseur, and R. Leclair. 2009. Study design, water quality, morphometrics and age of the Bullfrog, *Rana catesbeiana*, in sub-watersheds of the Yamaska River drainage basin, Québec, Canada. *Aquatic Toxicology* 91:110-117.
- Spear, S.F., and A. Storfer. 2008. Landscape genetic structure of Coastal Tailed Frogs (*Ascaphus truei*) in protected vs. managed forests. *Molecular Ecology* 17:4642-4656.
- Spear, S.F., and A. Storfer. 2010. Anthropogenic and natural disturbance lead to differing patterns of gene flow in the Rocky Mountain tailed frog, *Ascaphus montanus*. *Biological Conservation*. 143:778-786.
- Spear, S.F., C.M. Chrisafulli and A. Storfer. 2012. Genetic structure among coastal tailed frog populations at Mount St. Helens is moderated by post-disturbance management. *Ecological Applications* 22: 856-869.
- Speck, F.G. 1925. *Bufo americanus* in the Labrador Peninsula. *Copeia* (138):5-6.
- Spencer, W.A. 1964a. The relationship of dispersal and migration to gene flow in the Boreal Chorus Frog. Ph.D. diss., Colorado State University, Fort Collins.
- Spencer, W.A. 1964b. An unusual phoretic host for the clam, *Pisidium*. *Journal of the Colorado-Wyoming Academy of Science* 5(5):43-44.
- Spencer, W.A. 1964c. Movement in a population of *Pseudacris triseriata*. *Journal of the Colorado-Wyoming Academy of Science* 5(5):44.
- Spencer, W.A. 1971. Boreal Chorus Frogs (*Pseudacris triseriata*) breeding in the alpine in southwestern Colorado. *Arctic and Alpine Research* 3:353.
- Spriggs, A.N. 2009. Distribution and status of the Northern Leopard Frog, *Rana pipiens*, in West Virginia. M.S. thesis, Marshall University, Huntington, WV.
- Squire, T., and R.A. Newman. 2002. Fine-scale population structure in the Wood Frog (*Rana sylvatica*) in a northern woodland. *Herpetologica* 58:119-130.
- Squires, W.A. 1950. *Hyla versicolor* from northern New Brunswick. *New Brunswick Museum Nature News* 1950(3):2.
- Sredl, M.J. 1998. Arizona leopard frogs: balanced on the brink? Pp.573-574 In M.J. Mac, P.A. Opler, C.E. Puckett, and P.D. Doran (eds.), *Status and Trends of the Nation's Biological Resources*. Vol. 2. U.S. Geological Survey, Washington, DC.
- Sredl, M.J. 2005a. *Rana yavapaiensis* Platz and Frost, 1984: Lowland Leopard Frog. Pp. 596-599 In M.J. Lannoo (ed.), *Amphibian Declines. The Conservation Status of United States Species*. University of California Press, Berkeley.
- Sredl, M.J. 2005b. *Pternohyla fodiens* Boulenger, 1882: Lowland Burrowing Treefrog. Pp. 488-489 In M.J. Lannoo (ed.), *Amphibian Declines. The Conservation Status of United States Species*. University of California Press, Berkeley.
- Sredl, M.J., and J.P. Collins. 1991. The effect of ontogeny on interspecific interactions in larval amphibians. *Ecology* 72:2232-2239.
- Sredl, M.J., and J.P. Collins. 1992. The interaction of predation, competition, and habitat complexity in structuring an amphibian community. *Copeia* 1992:607-614.
- Sredl, M.J., and J.M. Howland. 1995. Conservation and management of Madrean populations of the Chiricahua Leopard Frog. Pp. 379-385 In L.F. DeBano, G.J. Gottfried, R.H. Hamre, C.B. Edminster, P.F. Ffoliot, and A. Ortega-Rubio (eds.), *Madrean Archipelago. The Sky Islands of the Southwestern United States and Northwestern Mexico*. U.S. Forest Service Rocky Mountain Station General Technical Report RM-GTR-264.
- Sredl, M.J., and R.D. Jennings. 2005. *Rana chiricahuensis* Platz and Mecham, 1979. Chiricahua Leopard Frog. Pp.546-549 In M.J. Lannoo (ed.), *Amphibian Declines. The Conservation Status of United States Species*. University of California Press, Berkeley.
- Stabler, R.M. 1948. Prairie rattlesnake eats spadefoot toad. *Herpetologica* 4:168.
- St. Amant, J.A., and F.G. Hoover. 1969. Addition of *Misgurnus anguillicaudatus* (Cantor) to the California fauna. *California Fish and Game* 55:330-331.
- St. Amant, J.A., F.G. Hoover, and G.R. Stewart. 1973. African Clawed Frog, *Xenopus laevis* (Daudin), established in California. *California Fish and Game* 59:151-153.
- St.-Amour, V., T.W.J. Garner, A.I. Schulte-Hostedde, and D. Lesbarères. 2010. Effects of two amphibian pathogens on the developmental stability of Green Frogs. *Conservation Biology* 24:788-794.
- Stanback, M. 2010. *Gambusia holbrooki* predation on *Pseudacris feriarum* tadpoles. *Herpetological Conservation and Biology*

- 5:486-489.
- Standaert, W.F. 1967. Growth, maturation, and population ecology of the Carpenter Frog (*Rana virgatipes* Cope). Ph.D. diss., Rutgers University, New Brunswick, NJ.
- Stangel, P.W. 1983. Least sandpiper predation on *Bufo americanus* and *Ambystoma maculatum* larvae. *Herpetological Review* 14:112.
- Starnes, S.M., C.A. Kennedy, and J.W. Petranka. 2000. Sensitivity of embryos of Southern Appalachian amphibians to ambient solar UV- β radiation. *Conservation Biology* 14:277-282.
- Stebbins, R.C. 1951. *Amphibians of Western North America*. 1st ed. University of California Press, Berkeley.
- Stebbins, R.C. 1954. *Amphibians and Reptiles of Western North America*. McGraw-Hill Book Company, New York.
- Stebbins, R.C. 1962. *Amphibians of Western North America*. 2nd printing. University of California Press, Berkeley.
- Stebbins, R.C. 1972. *Amphibians and Reptiles of California*. California Natural History Guides No. 31. University of California Press, Berkeley.
- Stebbins, R.C. 2003. *A Field Guide to Western Amphibians and Reptiles*. 3rd ed. Houghton Mifflin Co., Boston. [first edition, 1966]
- Stebbins, R.C., and N.W. Cohen. 1995. *A Natural History of Amphibians*. Princeton University Press, Princeton.
- Stebbins, R.C. and S.M. McGuiness. 2012. *Field Guide to Amphibians and Reptiles of California*. University of California Press, Berkeley.
- Steele, C.W., S. Strickler-Shaw, and D.H. Taylor. 1991. Failure of *Bufo americanus* tadpoles to avoid lead-enriched water. *Journal of Herpetology* 25:241-243.
- Steelman, C.K., and M.E. Dorcas. 2010. Anuran calling survey optimization: developing and testing predictive models of anuran calling activity. *Journal of Herpetology* 44:61-68.
- Steen, D.A. 2011. Wildlife restoration via forest management in fire-suppressed longleaf pine sandhills. Ph.D. diss., Auburn University, Auburn, AL.
- Steen, D.A., A.E.R. McGee, S.M. Hermann, J.A. Stiles, S.H. Stiles, and C. Guyer. 2010. Effects of forest management on amphibians and reptiles: generalist species obscure trends among native forest associates. *Open Environmental Sciences* 4:24-30.
- Stein, R.J. 1985. *Rana sylvatica* (Wood Frog). Predation. *Herpetological Review* 16:109-110.
- Steinwascher, K. 1978a. The effect of coprophagy on the growth of *Rana catesbeiana* tadpoles. *Copeia* 1978:130-134.
- Steinwascher, K. 1978b. Interference and exploitation competition among tadpoles of *Rana utricularia*. *Ecology* 59:1039-1046.
- Steinwascher, K. 1981. Competition for two resources. *Oecologia* 49:415-418.
- Stejneger, L. 1893. Annotated list of the reptiles and batrachians collected by the Death Valley Expedition in 1891, with descriptions of new species. *North American Fauna* 7:159-228.
- Stejneger, L. 1899. Description of a new genus and species of discoglossid toad from North America. *Proceedings of the United States National Museum* 21:899-901 + 1 plate.
- Stejneger, L. 1901. A new species of Bullfrog from Florida and the Gulf Coast. *Proceedings of the United States National Museum* 24:211-215.
- Stejneger, L. 1915. A new species of tailless batrachian from North America. *Proceedings of the Biological Society of Washington* 28:131-132.
- Stephens, M.R. 2001. Phylogeography of the *Bufo boreas* (Anura, Bufonidae) species complex and the biogeography of California. M.A. thesis, Sonoma State University, Sonoma, CA.
- Stevens, C.E., and C.A. Paszkowski. 2004. Using chorus-size ranks from call surveys to estimate reproductive activity of the wood frog (*Rana sylvatica*). *Journal of Herpetology* 38:404-410.
- Stevens, C.E., A.W. Diamond, and T.S. Gabor. 2002. Anuran call surveys on small wetlands in Prince Edward Island, Canada, restored by dredging of sediments. *Wetlands* 22:90-99.
- Stevens, C.E., C.A. Paszkowski, and G.J. Scrimgeour. 2006a. Older is better: beaver ponds on boreal streams as breeding habitat for the Wood Frog. *Journal of Wildlife Management* 70:1360-1371.
- Stevens, C.E., C.A. Paszkowski, and D. Stringer. 2006b. Occurrence of the Western Toad and its use of “borrow pits” in west-central Alberta. *Northwestern Naturalist* 87:107-117.
- Stevenson, D.J. 2007. *Rana catesbeiana* (American Bullfrog). Mortality. *Herpetological Review* 38:71.
- Stevenson, D.J. 2009. Born of new water. *South Carolina Wildlife* 56(1):16-23.
- Stevenson, D., and D. Crowe. 1992. Geographic

- distribution: *Pseudacris crucifer bartramiana* (Southern Spring Peeper). Herpetological Review 23:86.
- Stevenson, D.J., and J. Stackhouse. 2012. The amphibians and reptiles of the Altamaha River, Georgia. ICRF Reptiles & Amphibians 19:170-186.
- Stevenson, H.M. 1959. Some altitude records of reptiles and amphibians. Herpetologica 15:118.
- Stevenson, H.M. 1969. Occurrence of the Carpenter Frog in Florida. Quarterly Journal of the Florida Academy of Sciences 32:233-235.
- Stewart, M.M. 1984. Redescription of the type of *Rana clamitans*. Copeia 1984:210-213.
- Stewart, M.M., and P. Sandison. 1972. Comparative food habits of sympatric Mink Frogs, Bull Frogs, and Green Frogs. Journal of Herpetology 6:241-244.
- Stewart, M.M., and J. Rossi. 1981. The Albany Pine Bush: a northern outpost for southern species of amphibians and reptiles in New York. American Midland Naturalist 106:282-292.
- Stewart, P.A., and E.L. Hart. 1967. Incidental capture of vertebrate wildlife in blacklight insect traps. American Midland Naturalist 78:235-240.
- Stille, W.T. 1952. The nocturnal amphibian fauna of the southern Lake Michigan beach. Ecology 33:149-162.
- Stille, W.T., Jr., and R.A. Edgren, Jr. 1942. The Spring Peeper in the Palos Hills area, Cook County, Ill. The Chicago Naturalist 5(3):63.
- Stinner, J., N. Zarlinga, and S. Orcutt. 1994. Overwintering behavior of adult Bullfrogs, *Rana catesbeiana*, in northeastern Ohio. Ohio Journal of Science 94:8-13.
- Stitt, E.W., and C.P. Seltenrich. 2010. *Rana draytonii* (California Red-legged Frog). Prey. Herpetological Review 41:206.
- Stitt, E.W., and P.S. Balfour. 2011. *Spea hammondii* (Western Spadefoot). Predation. Herpetological Review 42:91-92.
- Stockwell, S., and M.L. Hunter Jr. 1989. Relative abundance of herpetofauna among eight types of Maine peatland vegetation. Journal of Herpetology 23:409-414.
- Stone, P.A., and D.B. Ligon. 2011. *Bufo punctatus* (Red-spotted Toad) and *Thamnophis cyrtopsis* (Black-necked Garter Snake). Prey-predator. Herpetological Review 42:82-83.
- Stone, W.B., and R.D. Manwell. 1969. Toxoplasmosis in cold blooded hosts. Journal of Protozoology 16:99-102.
- Storer, T.I. 1914. The California toad, an economic asset. University of California Journal of Agriculture 2:89-91.
- Storer, T.I. 1922. The Eastern Bullfrog in California. California Fish and Game 8:219-224.
- Storer, T.I. 1925. A synopsis of the amphibia of California. University of California Publications in Zoology 27:1-342.
- Storer, T.I. 1933. Frogs and their commercial use. California Fish and Game 19:203-213.
- Storey, J.M., and K.B. Storey. 1985. Adaptations of metabolism for freeze tolerance in the Gray Tree Frog, *Hyla versicolor*. Canadian Journal of Zoology 63:49-54.
- Storey, K.B., and J.M. Storey. 1986. Freeze tolerance and intolerance as strategies of winter survival in terrestrially hibernating amphibians. Comparative Biochemistry and Physiology 83A:613-617.
- Storey, K.B., and J.M. Storey. 1987. Persistence of freeze tolerance in terrestrially hibernating frogs after spring emergence. Copeia 1987:720-726.
- Storey, K.B., and J.M. Storey. 1989. Freeze tolerance and freeze avoidance in ectotherms. Pp. 51-82 In L.C.H. Wang (ed.), Advances in Comparative and Environmental Physiology. Springer-Verlag, Berlin.
- Storey, K.B., J. Bischof, and B. Rubinsky. 1992. Cryomicroscopic analysis of freezing in liver of the freeze-tolerant Wood Frog. American Journal of Physiology 263:R185-R194.
- Storm, R.M. 1952. Interspecific mating behaviour in *Rana aurora* and *Rana catesbeiana*. Herpetologica 8:108.
- Storm, R.M. 1960. Notes on the breeding biology of the Red-legged Frog (*Rana aurora aurora*). Herpetologica 16:251-259.
- Storrs, S.I., and J.M. Kiesecker. 2004. Survivorship patterns of larval amphibians exposed to low concentrations of atrazine. Environmental Health Perspectives 112:1054-1057.
- Storrs, S.I., and R.D. Semlitsch. 2008. Species variation in somatic and ovarian development: predicting susceptibility of amphibians to estrogenic contaminants. General and Comparative Endocrinology 156:524-530.
- Storrs-Méndez, S.I., and R.D. Semlitsch. 2009. Intersex gonads in frogs: understanding the time course of natural development and the role of endocrine disruptors. Journal of Experimental Zoology 314B:57-66.

- Storrs-Méndez, S.I., D.E. Tillitt, T.A.G. Rittenhouse, and R.D. Semlitsch. 2009. Behavioral response and kinetics of terrestrial atrazine exposure in American Toads (*Bufo americanus*). *Archives of Environmental Contamination and Toxicology* 57:590-597.
- Stoutamire, R. 1932. Bullfrog farming and frogging in Florida. State of Florida, Department of Agriculture Bulletin (new series) No. 56.
- Straughan, I.R. 1975. An analysis of the mechanisms of mating call discrimination in the frogs *Hyla regilla* and *H. cadaverina*. *Copeia* 1975:415-424.
- Straw, R.M. 1958. Experimental notes on the Deep Springs Toad *Bufo exsul*. *Ecology* 39:552-553.
- Strecker, J.K., Jr. 1908a. Notes on the life history of *Scaphiopus couchii* Baird. *Proceedings of the Biological Society of Washington* 21:199-206.
- Strecker, J.K., Jr. 1908b. A preliminary annotated list of the Batrachia of Texas. *Proceedings of the Biological Society of Washington* 21:53-62.
- Strecker, J.K., Jr. 1909. Notes on the narrow-mouthed toads (*Engystoma*) and the description of a new species from southeastern Texas. *Proceedings of the Biological Society of Washington* 22:115-120.
- Strecker, J.K., Jr. 1910a. Description of a new solitary spadefoot (*Scaphiopus hurterii*) from Texas, with other herpetological notes. *Proceedings of the Biological Society of Washington* 23:115-122.
- Strecker, J.K., Jr. 1910b. Studies in North American batrachology. Notes on the Robber Frog (*Lithobates latrans* Cope). *Transactions of the Academy of Science of St. Louis* 19:73-82.
- Strecker, J.K., Jr. 1915. Reptiles and amphibians of Texas. *Baylor University Bulletin* 18:1-82.
- Strecker, J.K., Jr. 1926a. Chapters from the life-histories of Texas reptiles and amphibians: part one. *Contributions from the Baylor University Museum* 8:1-12.
- Strecker, J.K., Jr. 1926b. On the habits and variations of *Pseudacris ornata* (Holbrook). *Contributions of the Baylor University Museum* 7:8-11.
- Strecker, J.K., Jr. 1927. Chapters from the life-histories of Texas reptiles and amphibians: part two. *Contributions from the Baylor University Museum* 10:1-14.
- Strecker, J.K., Jr., and W.J. Williams. 1927. Herpetological records from the vicinity of San Marcos, Texas, with distributional data on the amphibians and reptiles of the Edwards Plateau region and central Texas. *Contributions of the Baylor University Museum* 12:1-16.
- Strickland, D., and R.J. Rutter. 1986. *Reptiles and Amphibians of Algonquin Provincial Park*. Friends of Algonquin Park, Whitney, Ontario.
- Strojny, C.A., and M. L. Hunter, Jr. 2010. Relative abundance of amphibians in forest canopy gaps of natural origin vs. timber harvest origin. *Animal Biodiversity and Conservation* 33:1-13.
- Stroud, C.P. 1949. A white spade-foot toad from the New Mexico white sands. *Copeia* 1949:232.
- Stuart, J.N. 1991. Partial albinism in a New Mexico population of *Bufo woodhousei*. *Bulletin of the Maryland Herpetological Society* 27:33.
- Stuart, J.N. 1995. *Rana catesbeiana* (Bullfrog). Diet. *Herpetological Review* 26:33.
- Stuart, J.N., and C.W. Painter. 1993. *Rana catesbeiana* (Bullfrog). Cannibalism. *Herpetological Review* 24:103.
- Stuart, J.N., and C.W. Painter. 1994. A review of the distribution and status of the Boreal Toad, *Bufo boreas boreas*, in New Mexico. *Bulletin of the Chicago Herpetological Society* 29:113-116.
- Stuart, S., J.S. Chanson, N.A. Cox, B.E. Young, A.S.L. Rodrigues, D.L. Fishman, and R.W. Waller. 2004. Status and trends of amphibian declines and extinctions worldwide. *Science* 306:1783-1786.
- Suhre, D.O. 2010. Dispersal and demography of the American Bullfrog (*Rana catesbeiana*) in a semi-arid grassland. M.S. thesis, University of Arizona, Tucson.
- Sullivan, B.K. 1982a. Sexual selection in Woodhouse's Toad (*Bufo woodhousei*). 1. Chorus organization. *Animal Behaviour* 30:680-686.
- Sullivan, B.K. 1982b. Male mating behavior in the Great Plains Toad (*Bufo cognatus*). *Animal Behaviour* 30:939-940.
- Sullivan, B.K. 1983. Sexual selection in Woodhouse's Toad (*Bufo woodhousei*). 2. Female choice. *Animal Behaviour* 31:1011-1017.
- Sullivan, B.K. 1984. Advertisement call variation and observations on breeding

- behavior of *Bufo debilis* and *B. punctatus*. Journal of Herpetology 18:406-411.
- Sullivan, B.K. 1985a. Sexual selection and mating system variation in anuran amphibians of the Arizona-Sonora Desert. Great Basin Naturalist 45:688-696.
- Sullivan, B.K. 1985b. Male calling behavior in response to playback of conspecific advertisement call in two bufonids. Journal of Herpetology 19:78-83.
- Sullivan, B.K. 1986a. Hybridization between the toads *Bufo microscaphus* and *Bufo woodhousei* in Arizona: morphological variation. Journal of Herpetology 20:11-21.
- Sullivan, B.K. 1986b. Intra-population variation in the intensity of sexual selection in breeding aggregations of Woodhouse's Toad (*Bufo woodhousei*). Journal of Herpetology 20:88-90.
- Sullivan, B.K. 1986c. Advertisement call variation in the Arizona tree frog, *Hyla wrightorum* Taylor, 1938. Great Basin Naturalist 46:378-381.
- Sullivan, B.K. 1987. Sexual selection in Woodhouse's Toad (*Bufo woodhousei*). 3. Seasonal variation in male mating success. Animal Behaviour 35:912-919.
- Sullivan, B.K. 1989. Desert environments and the structure of anuran mating systems. Journal of Arid Environments 17:175-183.
- Sullivan, B.K. 1992a. Sexual selection and calling behavior in the American Toad (*Bufo americanus*). Copeia 1992:1-7.
- Sullivan, B.K. 1992b. Calling behavior of the Southwestern Toad (*Bufo microscaphus*). Herpetologica 48:383-389.
- Sullivan, B.K. 1993. Distribution of the Southwestern Toad (*Bufo microscaphus*) in Arizona. Great Basin Naturalist 53:402-406.
- Sullivan, B.K. 1995. Temporal stability in hybridization between *Bufo microscaphus* and *Bufo woodhousii* (Anura:Bufonidae): behavior and morphology. Journal of Evolutionary Biology 8:233-247.
- Sullivan, B.K., and G.E. Walsberg. 1985. Call rate and aerobic capacity in Woodhouse's Toad (*Bufo woodhousei*). Herpetologica 41:404-407.
- Sullivan, B.K., and E.A. Sullivan. 1985. Size-related variation in advertisement calls and breeding behavior of spadefoot toads (*Scaphiopus bombifrons*, *S. couchi* and *S. multiplicatus*). Southwestern Naturalist 30:349-355.
- Sullivan, B.K., and M.K. Leek. 1986. Acoustic communication in Woodhouse's Toad (*Bufo woodhousei*). 1. Response of calling males to variation in spectral and temporal components of advertisement calls. Behaviour 98:305-319.
- Sullivan, B.K., and T. Lamb. 1988. Hybridization between the toads *Bufo microscaphus* and *Bufo woodhousii* in Arizona: variation in release calls and allozymes. Herpetologica 44:325-333.
- Sullivan, B.K., and S.H. Hinshaw. 1990. Variation in advertisement calls and male calling behavior in the Spring Peeper (*Pseudacris crucifer*). Copeia 1990:1146-1150.
- Sullivan, B.K., and S.H. Hinshaw. 1992. Female choice and selection on male calling behaviour in the Grey Treefrog *Hyla versicolor*. Animal Behaviour 44:733-744.
- Sullivan, B.K., and K.B. Malmos. 1994. Call variation in the Colorado River Toad (*Bufo alvarius*): behavioral and phylogenetic implications. Herpetologica 50:146-156.
- Sullivan, B.K., and P.J. Fernandez. 1999. Breeding activity, estimated age-structure, and growth in Sonoran Desert anurans. Herpetologica 55:334-343.
- Sullivan, B.K., K.B. Malmos, and M.F. Given. 1996a. Systematics of the *Bufo woodhousii* complex (Anura: Bufonidae): advertisement call variation. Copeia 1996:274-280.
- Sullivan, B.K., R.W. Bowker, K.B. Malmos, and E.W.A. Gergus. 1996b. Arizona distribution of three Sonoran Desert anurans: *Bufo retiformis*, *Gastrophryne olivacea*, and *Pternohyla fodiens*. Great Basin Naturalist 56:38-47.
- Sullivan, B.K., K.B. Malmos, E.W.A. Gergus, and R.W. Bowker. 2000. Evolutionary implications of advertisement call variation in *Bufo debilis*, *B. punctatus*, and *B. retiformis*. Journal of Herpetology 34:368-374.
- Sullivan, J.J., and E.E. Byrd. 1970. *Choledocystus pennsylvaniensis*: life history. Transactions of the American Microscopical Society 89:384-396.
- Sullivan, S.R., P.E. Bartelt, and C.R. Peterson. 2008. Midsummer ground surface activity patterns of Western Toads (*Bufo boreas*) in southeastern Idaho. Herpetological Review 39:35-40.
- Sun, L.-X., W. Wilczynski, A.S. Rand and M.J. Ryan. 2000. Trade-off in short- and long-distance communication in Túngara (*Physalaemus pustulosus*) and cricket (*Acrida crepitans*) frogs. Behavioral Ecology 11:102-

- 109.
- Surdick, J.A. Jr. 2005. Amphibian and avian species composition of forested depressional wetlands and circumjacent habitat: the influence of land use type and intensity. Ph.D. diss., University of Florida, Gainesville.
- Surface, H.A. 1913. First report on the economic features of the amphibians of Pennsylvania. Zoological Bulletin, Division of Zoology, Pennsylvania Department of Agriculture 3:66-152.
- Sutherland, D. 2005. Parasites of North American frogs. Pp. 109-123 In M.J. Lannoo (ed.), *Amphibian Declines*. The Conservation Status of United States Species. University of California Press, Berkeley.
- Sutherland, G.D. 2000. Risk assessment for conservation under ecological uncertainty: a case study with a stream-dwelling amphibian in managed forests. Ph.D. diss., University of British Columbia, Vancouver.
- Sutherland, G.D. and F.L. Bunnell. 2001. Cross-scale classification trees for assessing risks of forest practices to headwater stream amphibians. Pp. 550-555 In D.H. Johnson and T.A. O'Neil (Managing Directors), *Wildlife-Habitat Relationships in Oregon and Washington*. Oregon State University Press, Corvallis.
- Sutherland, M.A.B., G.M. Gouchie, and R.J. Wassersug. 2009. Can visual stimulation alone induce phenotypically plastic responses in *Rana sylvatica* tadpole oral structures? *Journal of Herpetology* 43:165-168.
- Sutherland, R.W., P.R. Dunning, and W.M. Baker. 2010. Amphibian encounter rates on roads with different amounts of traffic and urbanization. *Conservation Biology* 24:1626-1635.
- Sutton, W.B. 2004. The ecology and natural history of the Northern Leopard Frog, *Rana pipiens* Schreber, in West Virginia. M.S. thesis, Marshall University, Huntington, WV.
- Sutton, W.B. 2010. Herpetofaunal response to thinning and prescribed burning in pine-hardwood forests. Ph.D. diss., Alabama A&M University, Huntsville.
- Sutton, W.B., K.E. Rastall, and T.K. Pauley. 2006. Diet analysis and feeding strategies of *Rana pipiens* in a West Virginia wetland. *Herpetological Review* 37:152-153.
- Suzuki, H.K. 1951. Recent additions to the records of the distribution of the amphibians in Wisconsin. *Wisconsin Academy of Sciences, Arts and Letters* 40:215-234.
- Suzuki, H.K. 1957. A study of leg length variations in the Wood Frog, *Rana sylvatica* Le Conte. *Wisconsin Academy of Sciences, Arts and Letters* 46:299-303.
- Svhla, A. 1935. Notes on the Western Spotted Frog, *Rana pretiosa pretiosa*. *Copeia* 1935:119-122.
- Svhla, A. 1936. *Rana rugosa* Schelegel. Notes on the life history of this interesting frog. *Mid-Pacific Magazine* (April-June):124-125.
- Svhla, A. 1953. Diurnal retreats of the spadefoot toad *Scaphiopus hammondii*. *Copeia* 1953:186.
- Swann, D. 2005. Rock star: canyon treefrog (*Hyla arenicolor* Cope, 1866). *Sonoran Herpetologist* 18(4):39-42.
- Swannack, T.M. 2007. Modeling aspects of the ecological and evolutionary dynamics of the endangered Houston toad. Ph.D. diss., Texas A&M University, College Station.
- Swannack, T.M., and M.R.J. Forstner. 2007. Possible cause for the sex-ratio disparity of the endangered Houston Toad (*Bufo houstonensis*). *Southwestern Naturalist* 52:386-392.
- Swannack, T.M., J.T. Jackson, and M.R.J. Forstner. 2006. *Bufo houstonensis* (Houston Toad). Juvenile dispersal. *Herpetological Review* 37:199-200.
- Swannack [sic], T.M., W.E. Grant, and M.R.J. Forstner. 2009. Projecting population trends of endangered amphibian species in the face of uncertainty: a pattern-oriented approach. *Ecological Modelling* 220:148-159.
- Swanson, D.L., and B.M. Graves. 1995. Supercooling and freeze intolerance in overwintering juvenile spadefoot toads (*Scaphiopus bombifrons*). *Journal of Herpetology* 29:280-285.
- Swanson, D.L., and S.L. Burdick. 2010. Overwintering physiology and hibernacula microclimates of Blanchard's cricket frogs at their northwestern range boundary. *Copeia* 2010:247-253.
- Swanson, D.L., B.M. Graves, and K.L. Koster. 1996. Freezing tolerance/intolerance and cryoprotectant synthesis in terrestrially overwintering anurans in the Great Plains, USA. *Journal of Comparative Physiology* 166B:110-119.
- Swanson, E.M., S.M. Tekmen and M.A. Bee. 2007. Do female frogs exploit inadvertent social information to locate breeding

- aggregations? Canadian Journal of Zoology 85: 921-932.
- Swanson, P.L. 1939. Herpetological notes from Indiana. American Midland Naturalist 22:684-695.
- Swarth, H.S. 1936. Origins of the fauna of the Sitkan District, Alaska. Proceedings of the California Academy of Sciences 23:59-78.
- Sweet, S.S., and B.K. Sullivan. 2005. *Bufo californicus* Camp, 1915. Arroyo Toad. Pp. 396-400 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Sweetman, H.L. 1944. Food habits and molting of the common tree frog. American Midland Naturalist 32:499-501.
- Swierk, L. 2012. *Rana sylvatica* (Wood Frog): Larval duration. Herpetological Bulletin (119):39.
- Sype, W.E. 1975. Breeding habits, embryonic thermal requirements and embryonic and larval development of the Cascade Frog, *Rana cascadae* (Slater). Ph.D. diss., Oregon State University, Corvallis.
- Szafoni, R.E., C.A. Phillips, and M. Redmer. 1999. Translocations of amphibian species outside their native range: a comment on Thurow (1994-1997). Transactions of the Illinois State Academy of Science 92:277-283.
- Szuroczki, D., and J.M.L. Richardson. 2011. Palatability of the larvae of three species of *Lithobates*. Herpetologica 67:213-221.
- Taigen, T.L., and F.H. Pough. 1981. Activity metabolism of the toad (*Bufo americanus*): ecological consequences of ontogenetic change. Journal of Comparative Physiology 144:247-252.
- Taigen, T.L., and K.D. Wells. 1985. Energetics of vocalization by an anuran amphibian (*Hyla versicolor*). Journal of Comparative Physiology 155B:163-170.
- Taigen, T.L., S.B. Emerson, and F.H. Pough. 1982. Ecological correlates of anuran exercise physiology. Oecologia 52: 49-56.
- Talley, H.J. 1937. The annual ovarian cycle of *Acris gryllus*. M.S. thesis, University of Oklahoma, Norman.
- Tamsitt, J.R. 1962. Notes on a population of the Manitoba toad (*Bufo hemiophrys*) in the Delta Marsh region of Lake Manitoba, Canada. Ecology 43:147-150.
- Tanner, V.M. 1931. A synoptical study of Utah amphibia. Utah Academy of Sciences 8:159-198.
- Tanner, V.M. 1939. A study of the genus *Scaphiopus*, the spade-foot toads. Great Basin Naturalist 1:3-20.
- Tanner, W.W. 1941. The reptiles and amphibians of Idaho No. 1. Great Basin Naturalist 2:87-97.
- Tanner, W.W. 1950. Notes on the habits of *Microhyla carolinensis olivacea* (Hallowell). Herpetologica 6:47-48.
- Tanner, W.W. 1989. Status of *Spea starnalis* Cope (1875), *Spea intermontanus* Cope (1889), and a systematic review of *Spea hammondii* Baird (1839) (Amphibia: Anura). Great Basin Naturalist 49:503-510.
- Tardell, J.H., R.C. Yates, and D.H. Schiller. 1981. New records and habitat observations of *Hyla andersoni* Baird (Anura: Hylidae) in Chesterfield and Marlboro counties, South Carolina. Brimleyana 6:153-158.
- Tatarian, P.J. 2008. Movement patterns of California Red-legged Frogs (*Rana draytonii*) in an inland California environment. Herpetological Conservation and Biology 3:155-169.
- Tatarian, P., and G. Tatarian. 2010. Chytrid infection of *Rana draytonii* in the Sierra Nevada, California, USA. Herpetological Review 41:325-327.
- Tattersall, G.J., and G.R. Ultsch. 2008. Physiological ecology of aquatic overwintering in Ranid frogs. Biological Review 83:119-140.
- Tavares, K. 2008. Coqui control, monitoring and outreach program. 2008 Annual Report. Hawaii Volcanoes National Park. http://www.hawaiifishes.com/coqui/2008%20HAVO%20Report/2008_Coqui_Seas_on-lo-res.pdf
- Tavera-Mendoza, L., S. Ruby, P. Brousseau, M. Fournier, D. Cyr, and D. Marcogliese. 2002. Response of the amphibian tadpole (*Xenopus laevis*) to atrazine during sexual differentiation of the testis. Environmental Toxicology and Chemistry 21:527-531.
- Taylor, B., D. K. Skelly, L. K. Demarchis, M. D. Slade, D. Galusha and P. M. Rabinowitz. 2005. Proximity to pollution sources and risk of amphibian limb malformation. Environmental Health Perspectives 113:1497-1501.
- Taylor, C.L., R. Altig, and C.R. Boyle. 1995. Can anuran tadpoles choose among foods that vary in quality? Alytes 13:81-86.
- Taylor, C.N., K.L. Oseen, and R.J. Wassersug. 2004. On the behavioral response of *Rana* and

- Bufo* tadpoles to echinostomatoid cercariae: implications to synergistic factors influencing trematode infections in anurans. Canadian Journal of Zoology 82:701-706.
- Taylor, D.H., and D.E. Ferguson. 1970. Extraoptic celestial orientation in the Southern Cricket Frog *Acris gryllus*. Science 168:390-392.
- Taylor, E.H. 1929. List of reptiles and batrachians of Morton County, Kansas, reporting species new to the state fauna. University of Kansas Science Bulletin 19:63-65.
- Taylor, E.H. 1938. Frogs of the *Hyla eximia* group in Mexico, with descriptions of two new species. University of Kansas Science Bulletin 25:421-445.
- Taylor, E.H. 1940. Herpetological miscellany. University of Kansas Science Bulletin 26:489-571.
- Taylor, E.H., and J.S. Wright. 1932. The toad *Bufo marinus* (Linnaeus) in Texas. University of Kansas Science Bulletin 20:247-249.
- Taylor, J. 1993. The Amphibians & Reptiles of New Hampshire. New Hampshire Fish and Game Department, Concord.
- Taylor, P. 2009. An extension of Gray Treefrog range in Manitoba and into Saskatchewan. Blue Jay 67:235-241.
- Taylor, R.J., and E.D. Michael. 1971. Habitat effects on monthly foods of Bullfrogs in eastern Texas. Proceedings of the Annual Conference of the Southeast Association of Game and Fish Commissioners 25:176-186.
- Taylor, S.K. 1998. Investigation of mortality of Wyoming Toads and the effect of malathion on amphibian disease susceptibility. Ph.D. diss., University of Wyoming, Laramie.
- Taylor, S.K., E.S. Williams, and K.W. Mills. 1999a. Effects of malathion on disease susceptibility in Woodhouse's Toads. Journal of Wildlife Diseases 35:536-541.
- Taylor, S.K., E.S. Williams, and K.W. Mills. 1999b. Mortality of captive Canadian Toads from *Basidiobolus ranarum* mycotic dermatitis. Journal of Wildlife Diseases 35:64-69.
- Taylor, S.K., E.S. Williams, E.T. Thorne, K.W. Mills, D.I. Withers, and A.C. Pier. 1999c. Causes of mortality of the Wyoming Toad. Journal of Wildlife Diseases 35:49-57.
- Taylor, S.K., E.S. Williams, A.C. Pier, K.W. Mills, and M.D. Bock. 1999d. Mucormycotic dermatitis in captive adult Wyoming Toads. Journal of Wildlife Diseases 35:70-74.
- Taylor, S.K., E.S. Williams, and K.W. Mills. 1999e. Experimental exposure of Canadian Toads to *Basidiobolus ranarum*. Journal of Wildlife Diseases 35:58-63.
- Tekiela, S. 2003. Reptiles & Amphibians of Minnesota Field Guide. Adventure Publications, Cambridge, Minnesota.
- Tekiela, S. 2004a. Reptiles & Amphibians of Michigan Field Guide. Adventure Publications, Cambridge, Minnesota.
- Tekiela, S. 2004b. Reptiles & Amphibians of Wisconsin Field Guide. Adventure Publications, Cambridge, Minnesota.
- Telford, S.R. Jr. 1952. A herpetological survey in the vicinity of Lake Shipp, Polk County, Florida. Quarterly Journal of the Florida Academy of Science 15:175-185.
- Temminck, C.J., and H. Schlegel. 1838. In P.F. Von Siebold (ed.), Fauna Japonica sive Descriptio animalium, quae in itinere per Japonianum, jussu et auspiciis superiorum, qui sumnum in India Batava Imperium tenent, suscepto, annis 1823-1830 collegit, notis observationibus et adumbrationibus illustratis. Vol. 3 (Chelonia, Ophidia, Sauria, Batrachia). J.G. Lalau, Leiden, Germany.
- Tenneson, M.G. 1983. Behavioral ecology and population decline of the mink frog, *Rana septentrionalis*. M.S. thesis, University of North Dakota, Grand Forks.
- Test, F.C. 1898. A contribution to the knowledge of the variations of the tree frog *Hyla regilla*. Proceedings of the United States National Museum 21:477-492.
- Test, F.H. 1958. Butler's Garter Snake eats amphibian. Copeia 1958:151-152.
- Test, F.H., and R.C. McCann. 1976. Foraging behavior of *Bufo americanus* tadpoles in response to high densities of micro-organisms. Copeia 1976:576-578.
- Tester, J.R., and W.J. Breckenridge. 1964a. Population dynamics of the Manitoba toad, *Bufo hemiophrys*, in northwestern Minnesota. Ecology 45:592-601.
- Tester, J.R., and W.J. Breckenridge. 1964b. Winter behavior patterns of the Manitoba toad, *Bufo hemiophrys*, in northwestern Minnesota. Annals Academiae Scientiarum Fennicae (Biologica) 71:421-431.
- Tester, J.R., A. Parker, and D.B. Siniff. 1965. Experimental studies on habitat preferences and thermoregulation of *Bufo americanus*, *B. hemiophrys*, and *B. cognatus*. Journal of the

- Minnesota Academy of Science 33:27-32.
- Tevis, L. Jr. 1966. Unsuccessful breeding by Desert Toads (*Bufo punctatus*) at the limit of their ecological tolerance. *Ecology* 47:766-775.
- Theodorakis, C.W., J. Rinchard, J.A. Carr, J.-W. Park, L. McDaniel, F. Liu, and M. Wages. 2006. Thyroid endocrine disruption in Stonerollers and cricket frogs from perchlorate-contaminated streams in east-central Texas. *Ecotoxicology* 15:31-50.
- Thomas, L.A., and J. Allen. 1997. *Bufo houstonensis* (Houston Toad). *Behavior Herpetological Review* 28:40-41.
- Thomas, R. 1966. New species of Antillean *Eleutherodactylus*. *Quarterly Journal of the Florida Academy of Sciences* 28:375-391.
- Thomas, R.A., S.A. Nadler, and W.L. Jagers. 1984. Helminth parasites of the endangered Houston toad, *Bufo houstonensis* Sanders, 1953 (Amphibia, Bufonidae). *Journal of Parasitology* 70:1012-1013.
- Thompson, C. 1912. The status of *Rana palustris* LeConte in Michigan. Fourteenth Report of the Michigan Academy of Science, p. 190.
- Thompson, C. 1915. Notes on the habits of *Rana areolata* Baird and Girard. *Occasional Papers of the Museum of Zoology University of Michigan* 9:1-7 + 3 plates.
- Thompson, D.G., B.F. Wojtaszek, B. Staznik, D.T. Chartrand, and G.R. Stephenson. 2004. Chemical and biomonitoring to assess potential acute effects of Vision™ herbicide on native amphibian larvae in forest wetlands. *Environmental Toxicology and Chemistry* 23:843-849.
- Thompson, E.F., Jr. 1982. A Guide to the Amphibians, Reptiles and Mammals of South Carolina. Privately published, Columbia, SC.
- Thompson, E.F. Jr., and B.S. Martof. 1957. A comparison of the physical characteristics of frog calls (*Pseudacris*). *Physiological Zoology* 30:328-341.
- Thompson, H.B. 1913. Description of a new subspecies of *Rana pretiosa* from Nevada. *Proceedings of the Biological Society of Washington* 26:53-56.
- Thompson, P.D. 2004. Observations of Boreal Toad (*Bufo boreas*) breeding populations in northwestern Utah. *Herpetological Review* 35:342-344.
- Thompson, P.D., R.A. Fridell, K.K. Wheeler, and C.L. Bailey. 2004. Distribution of *Bufo boreas* in Utah. *Herpetological Review* 35:255-257.
- Thompson, Z. 1842. History of Vermont, Natural, Civil and Statistical, in Three Parts with a New Map of the State, and 200 Engravings. Chauncey Goodrich, Burlington.
- Thornton, W.A. 1955. Interspecific hybridization in *Bufo woodhousei* and *Bufo valliceps*. *Evolution* 9:455-468.
- Thornton, W.A. 1960. Population dynamics in *Bufo woodhousei* and *Bufo valliceps*. *Texas Journal of Science* 12:176-200.
- Thorson, T.B. 1955. The relationship of water economy to terrestrialism in amphibians. *Ecology* 36:100-116.
- Thorson, T.B., and A. Svhla. 1943. Correlation of habitats of amphibians with their ability to survive loss of body water. *Ecology* 24:374-381.
- Thrall, J. 1971. Excavation of pits by juvenile *Rana catesbeiana*. *Copeia* 1971:751-752.
- Thrall, J. 1972. Food, feeding, and digestive physiology of the larval Bullfrog, *Rana catesbeiana* Shaw. Ph.D. diss., Illinois State University, Normal.
- Thurgate, N.Y. 2006. The ecology of the endangered Dusky Gopher Frog (*Rana sevosa*) and a common congener, the Southern Leopard Frog (*Rana sphenocephala*). Ph.D. diss., University of New Orleans, New Orleans, LA.
- Thurgate, N.Y., and J.H.K. Pechmann. 2007. Canopy closure, competition, and the endangered Dusky Gopher Frog. *Journal of Wildlife Management* 71:1845-1852.
- Thurow, G.R. 1994. Experimental return of Wood Frogs to west-central Illinois. *Transactions of the Illinois State Academy of Science* 87:83-97.
- Thurston, R.V., T.A. Gilfoil, E.L. Meyn, R.K. Zajdel, T.I. Aoki, and G.D. Veith. 1985. Comparative toxicity of 10 organic chemicals to 10 common aquatic species. *Water Research* 19:1145-1155.
- Tierney, D., and M.M. Stewart. 2001. Geographic distribution: *Scaphiopus holbrookii holbrookii* (Eastern Spadefoot). *Herpetological Review* 32:56.
- Tietge, J.E., S.A. Diamond, G.T. Ankley, D.L. DeFoe, G.W. Holcombe, K.M. Jensen, S.J. Degitz, G.E. Elonen, and E. Hammer. 2001. Ambient solar UV radiation causes mortality in larvae of three species of *Rana* under controlled exposure conditions. *Photochemistry and Photobiology* 74:261-268.
- Tihen, J.A. 1937. Additional distributional records of amphibians and reptiles in Kansas

- counties. *Transactions of the Kansas Academy of Science* 40:401-409.
- Tihen, J.A. 1962a. Osteological observations on New World *Bufo*. *American Midland Naturalist* 67:157-183.
- Tihen, J.A. 1962b. A review of New World fossil bufonids. *American Midland Naturalist* 68:1-50.
- Tilley, S.G., and J.E. Huheey. 2001. *Reptiles & Amphibians of the Smokies*. Great Smoky Mountain Natural History Association, Gatlinburg, TN.
- Timken, R.L., and D.G. Dunlap. 1965. Ecological distribution of two species of *Bufo* in southeastern South Dakota. *Proceedings of the South Dakota Academy of Science* 44:113-117.
- Timm, B.C., and K. McGarigal. 2010a. The diets of subadult Fowler's Toads (*Bufo fowleri*) and Eastern Spadefoot Toads (*Scaphiopus h. holbrookii*) at Cape Cod National Seashore. *Herpetological Review* 41:154-156.
- Timm, B.C., and K. McGarigal. 2010b. *Scaphiopus holbrookii* (Eastern Spadefoot). Predation. *Herpetological Review* 41:207.
- Timm, B.C., and K. McGarigal. 2012. *Scaphiopus holbrookii* (Eastern Spadefoot). Possible transmitter expulsion. *Herpetological Review* 43:636.
- Timm, B.C., K. McGarigal, and L.R. Gamble. 2007a. Emigration timing of juvenile pond-breeding amphibians in western Massachusetts. *Journal of Herpetology* 41:243-250.
- Timm, B.C., K. McGarigal, and B.W. Compton. 2007b. Timing of large movement events of pond-breeding amphibians in western Massachusetts, USA. *Biological Conservation* 136:442-454.
- Timm, B.C., K. McGarigal, and C.L. Jenkins. 2007c. Emigration orientation of juvenile pond-breeding amphibians in western Massachusetts. *Copeia* 2007:685-698.
- Timoney, K.P. 1996. Canadian Toads near their northern limit in Canada: observations and recommendations. *Alberta Naturalist* 26:49-50.
- Timpe, E.K., S.P. Graham, R.W. Gagliardo, R.T. Hill, and M.G. Levy. 2008. Occurrence of the fungal pathogen *Batrachochytrium dendrobatidis* in Georgia's amphibian populations. *Herpetological Review* 39:447-449.
- Ting, H.-P. 1951. Duration of the tadpole stage of the Greenfrog, *Rana clamitans*. *Copeia* 1951:82.
- Tinkham, E.R. 1962. Notes on the occurrence of *Scaphiopus couchii* in California. *Herpetologica* 18:204.
- Tinkle, D.W. 1959. Observations of reptiles and amphibians in a Louisiana swamp. *American Midland Naturalist* 62:189-205.
- Tinsley, R.C. 1990. The influence of parasite infection on mating success in spadefoot toads, *Scaphiopus couchii*. *American Zoologist* 30:313-324.
- Tinsley, R.C., and K. Tocque. 1995. The population dynamics of a desert anuran, *Scaphiopus couchii*. *Australian Journal of Ecology* 20:376-384.
- Tinsley, R.C., and H.R. Kobel (eds.). 1996. *The Biology of Xenopus*. Oxford Science Publications, Oxford.
- Tipton, B.L., T.L. Hibbitts, T.D. Hibbitts, T.J. Hibbitts and T.J. LaDuc. 2012. *Texas Amphibians. A Field Guide*. University of Texas Press, Austin.
- Tobey, F.J. 1979. Amphibians and reptiles. Pp. 375-414 In D.W. Linzey (ed.), *Endangered and Threatened Plants and Animals of Virginia*. Center for Environmental Studies, Virginia Polytechnic and State University, Blacksburg, VA.
- Tobey, F.J. 1985. *Virginia's Amphibians and Reptiles. A Distributional Survey*. Virginia Herpetological Society, Purcellville.
- Tobey, F.J., and O. Fanning. 1986. Reptiles and amphibians around the Beltway: a survey. Audubon Naturalist Society of the Central Atlantic States, Chevy Chase, MD. 4 pp.
- Tobias, M.L., C. Barnard, R. O'Hagan, S.H. Horng, M. Rand, and D.B. Kelley. 2004. Vocal communication between male *Xenopus laevis*. *Animal Behaviour* 67:353-365.
- Tocque, K. 1993. The relationship between parasite burden and host resources in the desert toad (*Scaphiopus couchii*), under natural environmental conditions. *Journal of Animal Ecology* 62:683-693.
- Tocque, K., and R.C. Tinsley. 1994. The relationship between *Pseudodiplochoris americanus* (Monogenea) density and host resources under controlled environmental conditions. *Parasitology* 108:175-183.
- Tocque, K., R. Tinsley, and T. Lamb. 1995. Ecological constraints on feeding and growth of *Scaphiopus couchii*. *Herpetological Journal* 5:257-265.
- Todd, B.D., and B.B. Rothermel. 2006.

- Assessing the quality of clearcut habitats for amphibians: effects on abundances versus vital rates in the Southern Toad (*Bufo terrestris*). *Biological Conservation* 133:178-185.
- Todd, B.D., and C.T. Winne. 2006. Ontogenetic and interspecific variation in timing of movement and responses to climatic factors during migrations by pond-breeding amphibians. *Canadian Journal of Zoology* 84:715-722.
- Todd, B.D., T.M. Luhring, B.B. Rothermel and J.W. Gibbons. 2009. Effects of forest removal on amphibian migrations: implications for habitat and landscape connectivity. *Journal of Applied Ecology* 46:554-561.
- Todd, B.D., D.E. Scott, J.H.K. Pechmann, and J.W. Gibbons. 2011a. Climate change correlates with rapid delays and advancements in reproductive timing in an amphibian community. *Proceedings of the Royal Society B* 278:2191-2197.
- Todd, B.D., C.M. Bergeron, M.J. Hepner and W.A. Hopkins. 2011b. Aquatic and terrestrial stressors in amphibians: a test of the double jeopardy hypothesis using maternally and trophically derived mercury. *Environmental Toxicology and Chemistry* 30:2277-2284.
- Todd, B.D., C.M. Bergeron, M.J. Hepner, J.N. Burke and W.A. Hopkins. 2011c. Does maternal exposure to an environmental stressor affect offspring response to predators? *Oecologia* 166:283-290.
- Todd, B.D., C.M. Bergeron and W.A. Hopkins. 2012. Use of toe clips as a nonlethal index of mercury accumulation and maternal transfer in amphibians. *Ecotoxicology* 21:882-887.
- Todd, B.D., J.D. Willson, C.M. Bergeron, and W.A. Hopkins. 2012. Do effects of mercury in larval amphibians persist after metamorphosis? *Ecotoxicology* 21:87-95.
- Todd, M.J., R.R. Cocklin, and M.E. Dorcas. 2003. Temporal and spatial variation in anuran calling activity in the western Piedmont of North Carolina. *Journal of the North Carolina Academy of Science* 119:103-110.
- Todd-Thompson, M. 2010. Seasonality, variation in species prevalence, and localized disease for ranavirus in Cades Cove (Great Smoky Mountains National Park) amphibians. M.S. thesis, University of Tennessee, Knoxville.
- Todd-Thompson, M., D.L. Miller, P.E. Super, and M.J. Gray. 2009. Chytridiomycosis-associated mortality in a *Rana palustris* collected in Great Smoky Mountains National Park, Tennessee, USA. *Herpetological Review* 40:321-323.
- Tomko, D.S. 1975. The reptiles and amphibians of the Grand Canyon. *Plateau* 47:161-166.
- Toner, G.C. and N. de St. Remy. 1941. Amphibians of eastern Ontario. *Copeia* 1941:10-13.
- Tordoff, W. III. 1980. Selective predation of Gray Jays, *Perisoreus canadensis*, upon Boreal Chorus Frogs, *Pseudacris triseriata*. *Evolution* 34:1004-1008.
- Tordoff, W. III., and D. Pettus. 1977. Temporal stability of phenotypic frequencies in *Pseudacris triseriata* (Amphibia, Anura, Hylidae). *Journal of Herpetology* 11:161-168.
- Tordoff, W. III., D. Pettus, and T.C. Matthews. 1976. Microgeographic variation in gene frequencies in *Pseudacris triseriata* (Amphibia, Anura, Hylidae). *Journal of Herpetology* 10:35-40.
- Tóth, A. 2012. A tale of two species – species distribution models for two cryptic cricket frog (*Acridis*) species in syntopy. B.S. honors thesis, College of William and Mary, Williamsburg, VA.
- Touchon, J.C., I. Gomez-Mestre, and K.M. Warkentin. 2006. Hatching plasticity in two temperate anurans: responses to a pathogen and predation cues. *Canadian Journal of Zoology* 84:556-563.
- Touré, T.A., and G.A. Middendorf. 2002. Colonization of herpetofauna to a created wetland. *Bulletin of the Maryland Herpetological Society* 38:99-117.
- Townsend, D.S., and M.M. Stewart. 1994. Reproductive ecology of the Puerto Rican frog *Eleutherodactylus coqui*. *Journal of Herpetology* 28:34-40.
- Townsend, S.C. 1964. A life history study of the chorus frog, *Pseudacris triseriata*, in Marion County. M.A. thesis, Ball State University, Muncie, IN.
- Tracy, C.R., K.A. Christian, M.P. O'Connor, and C.R. Tracy. 1993. Behavioral thermoregulation by *Bufo americanus*: the importance of the hydric environment. *Herpetologica* 49:375-382.
- Trapido, H. 1947. Range extension of *Hyla septentrionalis* in Florida. *Herpetologica* 3:190.
- Trapido, H., and R.T. Clausen. 1938. Amphibians and reptiles of eastern Quebec. *Copeia* 1938:117-125.
- Trauth, J.B., S.E. Trauth, and R.L. Johnson.

2006. Best management practices and drought combine to silence the Illinois Chorus Frog in Arkansas. *Wildlife Society Bulletin* 34:514-518.
- Trauth, J.B., R.L. Johnson, and S.E. Trauth. 2007. Conservation implications of a morphometric comparison between the Illinois Chorus Frog (*Pseudacris streckeri illinoensis*) and Strecker's Chorus Frog (*P. s. streckeri*) (Anura: Hylidae) from Arkansas, Illinois, Missouri, Oklahoma, and Texas. *Zootaxa* 1589:23-32.
- Trauth, S.E. 1989. Female reproductive traits of the Southern Leopard Frog, *Rana sphenocephala* (Anura: Ranidae), from Arkansas. *Proceedings of the Arkansas Academy of Science* 43:105-108.
- Trauth, S.E. 1992. Distributional survey of the Bird-voiced Treefrog, *Hyla avivoca* (Anura: Hylidae), in Arkansas. *Proceedings of the Arkansas Academy of Science* 46:80-82.
- Trauth, S.E., and C.T. McAllister. 1983. Geographic Distribution. *Rana clamitans melanota*. *Herpetological Review* 14:83.
- Trauth, S.E., and A.Holt. 1993. Notes on the breeding biology of Hurter's Spadefoot toad, *Scaphiopus holbrookii hurterii*, in Arkansas. *Bulletin of the Chicago Herpetological Society* 28:236-239.
- Trauth, S.E., and J.W. Robinette. 1990. Notes on distribution, mating activity, and reproduction in the Bird-voiced Treefrog, *Hyla avivoca*, in Arkansas. *Bulletin of the Chicago Herpetological Society* 25:218-219.
- Trauth, S.E., and R.G. Neal. 2004. Geographic range extension and feeding response by the leech *Macrobdella diplostria* (Annelida: Hirudinea) to Wood Frog and Spotted Salamander egg masses. *Journal of the Arkansas Academy of Science* 58:139-141.
- Trauth, S.E., M.E. Cartwright, and W.E. Meshaka. 1989. Reproduction in the Wood Frog, *Rana sylvatica* (Anura: Ranidae), from Arkansas. *Proceedings of the Arkansas Academy of Science* 43:114-116.
- Trauth, S.E., R.L. Cox, B. Butterfield, D.A. Saugey, and W.E. Meshaka. 1990. Reproductive phenophases and clutch characteristics of selected Arkansas amphibians. *Proceedings of the Arkansas Academy of Science* 44:107-113.
- Trauth, S.E., A. Holt, J. Davis, and P. Daniel. 1992. A new state record for the Plains Leopard Frog, *Rana blairi*, in Arkansas. *Bulletin of the Chicago Herpetological Society* 27:255.
- Trauth, S.E., W.E. Meshaka Jr., and R.L. Cox. 1999. Post-metamorphic growth and reproduction in the Eastern Narrow-mouthed Toad (*Gastrophryne carolinensis*) from northeastern Arkansas. *Journal of the Arkansas Academy of Science* 53:120-124.
- Trauth, S.E., M.L. McCallum, and M.E. Cartwright. 2000. Breeding mortality in the Wood Frog, *Rana sylvatica* (Anura: Ranidae), from northcentral Arkansas. *Journal of the Arkansas Academy of Science* 54:154-156.
- Trauth, S.E., H.W. Robison, and M.V. Plummer. 2004. *The Amphibians and Reptiles of Arkansas*. University of Arkansas Press, Fayetteville.
- Travis, J. 1980. Phenotypic variation and the outcome of interspecific competition in hylid tadpoles. *Evolution* 34:40-50.
- Travis, J. 1981. Control of larval growth variation in a population of *Pseudacris triseriata* (Anura: Hylidae). *Evolution* 35:423-432.
- Travis, J. 1983. Variation in development patterns of larval anurans in temporary ponds. 1. Persistent variation within a *Hyla gratiosa* population. *Evolution* 37:496-512.
- Travis, J. 1984. Anuran size at metamorphosis: experimental test of a model based on intraspecific competition. *Ecology* 65:1155-1160.
- Travis, J., and J.C. Trexler. 1986. Interactions among factors affecting growth, development and survival in experimental populations of *Bufo terrestris* (Anura: Bufonidae). *Oecologia* 69:110-116.
- Travis, J., W.H. Keen and J. Juilianna. 1985a. The role of relative body size in a predator-prey relationship between dragonfly naiads and larval anurans. *Oikos* 45:59-65.
- Travis, J., W.H. Keen, and J. Juilianna. 1985b. The effects of multiple factors on viability selection in *Hyla gratiosa* tadpoles. *Evolution* 39:1087-1099.
- Travis, J., S.B. Emerson, and M. Blouin. 1987. A quantitative-genetic analysis of larval life-history traits in *Hyla crucifer*. *Evolution* 41:145-156.
- Treanor, R.R., and S.J. Nicola. 1972. A preliminary study of the commercial and sporting utilization of the Bullfrog, *R. catesbeiana* Shaw in California. California Department of Fish and Game, Inland

- Fisheries Administrative Report 72-4.
- Treat, D.A. 1948. Frogs and toads. Audubon Nature Bulletin, Series 18, No. 8.
- Trowbridge, A.H., and H.M. Hefley. 1934. Preliminary studies on the parasite fauna of Oklahoma anurans. Proceedings of the Oklahoma Academy of Science 14:16-19.
- Trowbridge, A.H., and M.S. Trowbridge. 1937. Notes on the cleavage rate of *Scaphiopus bombifrons* Cope, with additional remarks on certain aspects of its life history. American Naturalist 71:460-480.
- Trowbridge, M.S. 1941. Studies on the normal development of *Scaphiopus bombifrons* Cope. 1. The cleavage period. Transactions of the American Microscopical Society 60:508-526.
- Troyer, D. R. 1968. Growth rate and movements of the bullfrog, *Rana catesbeiana*, in Kansas. M.A. thesis, University of Kansas, Lawrence.
- Trueb, L., and C. Gans. 1983. Feeding specializations of the Mexican burrowing toad, *Rhinophryne dorsalis* (Anura: Rhinophrynidae). Journal of Zoology 199:189-208.
- Trumbo, D.R., A.A. Burgett and J.H. Knouft. 2011. Testing climate-based species distribution models with recent field surveys of pond-breeding amphibians in eastern Missouri. Canadian Journal of Zoology 89: 1074-1083.
- Tucker, J.K. 1977. Notes on the food habits of Kirtland's water snake, *Clonophis kirtlandi*. Bulletin of the Maryland Herpetological Society 13:193-195.
- Tucker, J.K. 1995. Early post-transformational growth in the Illinois Chorus Frog (*Pseudacris streckeri illinoensis*). Journal of Herpetology 29:314-316.
- Tucker, J.K. 1997. Food habits of the fossorial frog *Pseudacris streckeri illinoensis*. Herpetological Natural History 5:83-87.
- Tucker, J.K. 1998. Status of Illinois Chorus Frogs in Madison County, Illinois. Pp. 94-101 In M.J. Lannoo (ed.), Status & Conservation of Midwestern Amphibians. University of Iowa Press, Iowa City.
- Tucker, J.K. 2000. Growth and survivorship in the Illinois chorus frog (*Pseudacris streckeri illinoensis*). Transactions of the Illinois State Academy of Science 93:63-68.
- Tucker, J.K., and M.E. Sullivan. 1975. Unsuccessful attempts by Bullfrogs to eat toads. Transactions of the Illinois State Academy of Science 68:167.
- Tucker, J.K., D.W. Soergel, and J.B. Hatcher. 1995. Flood-associated activities of some reptiles and amphibians at Carlyle Lake, Fayette County, Illinois. Transactions of the Illinois State Academy of Science 88:73-81.
- Tuckerman, F. 1886. Supernumerary leg in a male frog (*Rana palustris*). Journal of Anatomy and Physiology 20:516-519.
- Tumlinson, R., and S.E. Trauth. 2006. A novel facultative mutualistic relationship between bufonid tadpoles and flagellated green algae. Herpetological Conservation and Biology 1:51-54.
- Tupper, T.A., and R.P. Cook. 2008. Habitat variables influencing breeding effort in northern clade *Bufo fowleri*: implications for conservation. Applied Herpetology 5:101-119.
- Tupper, T.A., J.W. Streicher, S.E. Greenspan, B.C. Timm, and R.P. Cook. 2011. Detection of *Batrachochytrium dendrobatidis* in anurans of Cape Cod National Seashore, Barnstable County, Massachusetts. Herpetological Review 42:62-65.
- Tupy, J.A. 2012. Terrestrial habitat selection by the Dusky Gopher Frog (*Rana sevosa*). M.S. thesis, Western Carolina University, Cullowhee, NC.
- Turner, F.B. 1952. Peculiar aggregations of toadlets on Alum Creek. Yellowstone Nature Notes 26(5):57-58.
- Turner, F.B. 1955. Reptiles and amphibians of Yellowstone National Park. Yellowstone Interpretive Series No. 5, Yellowstone National Park, WY.
- Turner, F.B. 1958a. Some parasites of the Western Spotted Frog, *Rana p. pretiosa*, in Yellowstone National Park. Journal of Parasitology 44:182.
- Turner, F.B. 1958b. Life-history of the western spotted frog in Yellowstone National Park. Herpetologica 14:96-100.
- Turner, F.B. 1959a. Pigmentation of the Western Spotted Frog, *Rana pretiosa pretiosa*, in Yellowstone Park, Wyoming. American Midland Naturalist 61:162-176.
- Turner, F.B. 1959b. An analysis of the feeding habits of *Rana p. pretiosa* in Yellowstone Park, Wyoming. American Midland Naturalist 61:403-413.
- Turner, F.B. 1959c. Some features of the ecology of *Bufo punctatus* in Death Valley, California. Ecology 40:175-181.
- Turner, F.B. 1960a. Size and dispersion of a Louisiana population of the cricket frog, *Acris*

- gryllus*. Ecology 41:258-268.
- Turner, F.B. 1960b. Population structure and dynamics of the Western Spotted Frog, *Rana p. pretiosa* Baird and Girard, in Yellowstone Park, Wyoming. Ecological Monographs 30:251-278.
- Turner, F.B. 1960c. Postmetamorphic growth in amphibians. American Midland Naturalist 64:327-338.
- Turner, F.B., and R.H. Wauer. 1963. A survey of the herpetofauna of the Death Valley area. Great Basin Naturalist 23:119-128.
- Turner, L.J., and D.K. Fowler. 1981. Utilization of surface mine ponds in east Tennessee by breeding amphibians. U.S. Fish and Wildlife Service, Biological Services Program, FWS/OBS-81/08.
- Turner, P.S. 2009. The Frog Scientist. Houghton Mifflin Harcourt, Boston, MA.
- Twedt, B. 1993. A comparative ecology of *Rana aurora* Baird and Girard and *Rana catesbeiana* Shaw at Freshwater Lagoon, Humboldt County, California. M.A. thesis, Humboldt State University, Arcata.
- Twitty, V., D. Grant, and O. Anderson. 1967. Amphibian orientation: an unexpected observation. Science 155:352-353.
- Tyler, J.D. 1969. Distribution and vertebrate associates of the Black-tailed Prairie Dog in Oklahoma. Ph.D. diss., University of Oklahoma, Norman.
- Tyler, J.D. 1970. Vertebrates in a prairie dog town. Proceedings of the Oklahoma Academy of Science 50:110-113.
- Tyler, J.D. 1982. Cyanistic Bullfrog from southwestern Oklahoma. Southwestern Naturalist 27:218.
- Tyler, J.D., and R.D. Hoestenbach, Jr. 1979. Differences in food of Bullfrogs (*Rana catesbeiana*) from pond and stream habitats in southwestern Oklahoma. Southwestern Naturalist 24:33-38.
- Tyler, M.S. 1994. Stalking amphibians. Maine Naturalist 2:33-44.
- Tynning, T. F. 1990. A Guide to Amphibians and Reptiles. Little, Brown & Co., Boston.
- Ubelaker, J.E., D.W. Duszynski, and D.L. Beaver. 1967. Occurrence of the trematode, *Glypthelmins pennsylvaniensis* Cheng, 1961, in chorus frogs, *Pseudacris triseriata*, in Colorado. Bulletin of the Wildlife Disease Association 3:177.
- Ugarte, C.A. 2004. Human impacts on Pig Frog (*Rana grylio*) populations in south Florida wetlands: harvest, water management and mercury contamination. Ph.D. diss., Florida International University, Miami.
- Ugarte, C.A., K.G. Rice, and M.A. Donnelly. 2005. Variation of total mercury concentrations in Pig Frogs (*Rana grylio*) across the Florida Everglades, USA. Science of the Total Environment 345:51-59.
- Ulmer, M.J. 1970. Studies on the helminth fauna of Iowa. 1. Trematodes of amphibians. American Midland Naturalist 83:38-64.
- Ulmer, M.J., and H.A. James. 1976a. Studies on the helminth fauna of Iowa. 2. Cestodes of amphibians. Proceedings of the Helminthological Society of Washington 43:191-200.
- Ulmer, M.J., and H.A. James. 1976b. *Nematotaenoides ranae* gen. et sp. n. (Cyclophyllidea: Nematotaeniidae), from the leopard frog (*Rana pipiens*) in Iowa. Proceedings of the Helminthological Society of Washington 43:185-191.
- Ultsch, G.R., S.A. Reese, M. Nie, J.D. Crim, W.H. Smith, and C.M. LeBerte. 1999. Influences of temperature and oxygen upon habitat selection by Bullfrog tadpoles and three species of freshwater fishes in two Alabama strip mine ponds. Hydrobiologia 416:149-162.
- Ultsch, G.R., T.E. Graham, and C.E. Crocker. 2000. An aggregation of overwintering leopard frogs, *Rana pipiens*, and common map turtles, *Graptemys geographica*, in northern Vermont. Canadian Field-Naturalist 114:314-315.
- Ultsch, G.R., S.A. Reese, and E.R. Stewart. 2004. Physiology of hibernation in *Rana pipiens*: metabolic rate, critical oxygen tension, and the effects of hypoxia on several plasma variables. Journal of Experimental Zoology 301A:169-176.
- Underhill, J.C. 1961. Intraspecific variation in the Dakota toad, *Bufo hemiophrys*, from northeastern South Dakota. Herpetologica 17:220-227.
- Unrine, J.M., C.H. Jagoe, W.A. Hopkins and H.A. Brant. 2004. Adverse effects of ecologically relevant dietary mercury exposure in Southern Leopard Frog (*Rana sphenocephala*) larvae. Environmental Toxicology and Chemistry 23:2964-2970.
- Unrine, J.M., C.H. Jagoe, A.C. Briton, H.A. Brant and N.T. Garvin. 2005. Dietary mercury exposure and bioaccumulation in amphibian larva inhabiting Carolina bay wetlands. Environmental Pollution 135:245-253.

- Unrine, J.M., W.A. Hopkins, C.S. Romanek, and B.P. Jackson. 2007. Bioaccumulation of trace elements in omnivorous amphibian larvae: implications for amphibian health and contaminant transport. *Environmental Pollution* 149:182-192.
- Upton, S.J., and C.T. McAllister. 1988. The Coccidia (Apicomplexa: Eimeriidae) of Anura, with descriptions of four new species. *Canadian Journal of Zoology* 66:1822-1830.
- USDI (U.S. Department of Interior). 1965. Commercial possibilities and limitations in frog raising. *Fishery Leaflet* 436.
- USDI (U.S. Department of Interior). 1973. Threatened Wildlife of the United States. U.S. Fish and Wildlife Service Resource Publication 114. U.S. Government Printing Office, Washington, D.C.
- USFWS (U.S. Fish and Wildlife Service). 1977a. Proposed endangered status and critical habitat for the Pine Barrens Treefrog in Florida. *Federal Register* 42(65):18109-18111.
- USFWS. 1977b. Proposed determination of critical habitat for the Houston toad. *Federal Register* 42(102):27009-27011.
- USFWS. 1977c. Review of status of 10 species of amphibians. *Federal Register* 42(148):39119-39120.
- USFWS. 1977d. Final endangered status and critical habitat for the Florida population of the Pine Barrens Treefrog. *Federal Register* 42(218):58754-58756.
- USFWS. 1978. Determination of critical habitat for the Houston toad. *Federal Register* 43(21): 4022-4026.
- USFWS. 1982. Proposal to remove the Florida population of the Pine Barrens Treefrog (*Hyla andersonii*) from the list of Endangered and Threatened Wildlife and Plants and to rescind previously determined Critical Habitat. *Federal Register* 47(179):40673-40675.
- USFWS. 1983a. Proposed Endangered status for *Bufo hemiophrys baxteri* (Wyoming Toad). *Federal Register* 48(19):3794-3796.
- USFWS. 1983b. Final rule to remove the Florida population of the Pine Barrens Treefrog from the list of Endangered and Threatened Wildlife and to rescind previously determined Critical Habitat. *Federal Register* 48(226):52740-52743.
- USFWS. 1984. Determination that *Bufo hemiophrys baxteri* (Wyoming Toad) is an Endangered species. *Federal Register* 49(11):1992-1994.
- USFWS. 1994a. Proposed Endangered status for the California Red-legged Frog. *Federal Register* 59(22).
- USFWS. 1994b. Determination of Endangered status for the Arroyo Southwestern Toad. *Federal Register* 59(241):64859-64866.
- USFWS. 1996. Determination of Threatened status for the California Red Legged Frog. *Federal Register* 61(101):25813-25833.
- USFWS. 1999a. Arroyo Southwestern Toad (*Bufo microscaphus californicus*) recovery plan. U.S. Fish and Wildlife Service, Portland, OR.
- USFWS. 1999b. Proposed Endangered status for the Southern California distinct vertebrate population segment of the Mountain Yellow-legged Frog. *Federal Register* 64(245):71714-71722.
- USFWS. 2000a. Proposed rule to list the Mississippi Gopher Frog distinct population segment of Dusky Gopher Frog. *Federal Register* 65(1000):33283-33291.
- USFWS. 2000b. Proposal to list the Chiricahua Leopard Frog as Threatened with a special rule. *Federal Register* 65(115):37343-37357.
- USFWS. 2000c. Proposed designation of Critical Habitat for the California Red-legged Frog (*Rana aurora draytonii*). *Federal Register* 65(176):54892-54932.
- USFWS. 2000d. 90-day finding on a petition to list the Mountain Yellow-legged Frog as Endangered. *Federal Register* 65(198):60603-60605.
- USFWS. 2000e. 90-day finding on a petition to list the Yosemite Toad as Endangered. *Federal Register* 65(198):60607-60609.
- USFWS. 2001a. Final designation of Critical Habitat for the Arroyo Toad. *Federal Register* 66(26):9414-9474.
- USFWS. 2001b. Final designation of Critical Habitat for the Arroyo Toad. *Federal Register* 66(45):13656-13671.
- USFWS. 2001c. Final rule to list the Mississippi Gopher Frog distinct population segment of Dusky Gopher Frog as Endangered. *Federal Register* 66(233):62993-63002.
- USFWS. 2002a. Listing the Chiricahua Leopard Frog (*Rana chiricahuensis*). *Federal Register* 67(114):40790-40811.
- USFWS. 2002b. Determination of Endangered status for the Southern California distinct vertebrate population segment of the Mountain Yellow-legged Frog. *Federal Register* 67(127):44382-44392.

- USFWS. 2002c. 12-Month finding for a petition to list the Wasatch Front Columbia Spotted Frog as Threatened throughout its range. *Federal Register* 67(169):55758-55767.
- USFWS. 2003. 12-month finding for a petition to list the Sierra Nevada distinct population segment of the Mountain Yellow-legged Frog (*Rana muscosa*). *Federal Register* 68(11):2283-2303.
- USFWS. 2004. Proposed designation of Critical Habitat for the California Red-legged Frog (*Rana aurora draytonii*). *Federal Register* 69(71):19620-19642.
- USFWS. 2005a. Proposed designation of Critical Habitat for the Southern California distinct vertebrate population segment of the Mountain Yellow-legged Frog (*Rana muscosa*). *Federal Register* 70(176):54106-54143.
- USFWS. 2005b. Revised 12-month finding for the southern Rocky Mountain distinct population segment of the Boreal Toad (*Bufo boreas boreas*). *Federal Register* 70(188):56880-56884.
- USFWS. 2006a. Designation of Critical Habitat for the California Red-legged Frog, and special rule exemption associated with final listing for existing routine ranching activities. *Federal Register* 71(71):19244-19345.
- USFWS. 2006b. Designation of Critical Habitat for the Southern California distinct population segment of the Mountain Yellow-legged Frog (*Rana muscosa*). *Federal Register* 71(178):54344-54386.
- USFWS. 2006c. Proposed designation of Critical Habitat for the Southern California distinct vertebrate population segment of the Mountain Yellow-legged Frog (*Rana muscosa*). *Federal Register* 71(127):37881-37886.
- USFWS. 2007. 12-Month finding on a petition to list the Sierra Nevada distinct population segment of the Mountain Yellow-legged Frog (*Rana muscosa*). *Federal Register* 72(121):34657-34661.
- USFWS. 2008. Revised Critical Habitat for the California Red-legged Frog (*Rana aurora draytonii*). *Federal Register* 73(180):53492-53680.
- USFWS. 2009. 90-day finding on a petition to list the Northern Leopard Frog (*Lithobates* [=*Rana*] *pipiens*) in the western United States as Threatened. *Federal Register* 74(125):31389-31401.
- USFWS. 2010a. Revised designation of Critical Habitat for the California Red-legged Frog. *Federal Register* 75(51):12815-12959.
- USFWS. 2010b. Designation of Critical Habitat for Mississippi Gopher Frog. *Federal Register* 75(106):31387-31411.
- USFWS. 2011a. Listing and designation of Critical Habitat for the Chiricahua Leopard Frog. *Federal Register* 76(50):14125-14207.
- USFWS. 2011b. Designation of Critical Habitat for Mississippi Gopher Frog. *Federal Register* 76(187):59733-59802.
- USFWS. 2011c. 12-Month finding on a petition to list the Northern Leopard Frog in the western United States as Threatened. *Federal Register* 76(193):61896-61931.
- USFWS. 2012a. Listing and designation of Critical Habitat for the Chiricahua Leopard Frog. *Federal Register* 77(54):16324-16424.
- USFWS. 2012b. Designation of Critical Habitat for Dusky Gopher Frog (previously Mississippi Gopher Frog). *Federal Register* 77(113):35117-35161.
- Uyehara, I.K., T. Gamble, and S. Cotner. 2010. The presence of *Ranavirus* in anuran populations at Itasca State Park, Minnesota, USA. *Herpetological Review* 41:177-179.
- Vaala, D.A. 2010. The use of mobile phones for conducting acoustic surveys of calling amphibians. M.S. thesis, Rochester Institute of Technology, Rochester, NY.
- Vaala, D.A., G.R. Smith, K.G. Temple, and H.A. Dingfelder. 2004. No effect of nitrate on Gray Treefrog (*Hyla versicolor*) tadpoles. *Applied Herpetology* 1:265-269.
- Vallinoto, M., F. Sequeira, D. Sodré, J.A.R. Bernardi, I. Sampaio, and H. Schneider. 2010. Phylogeny and biogeography of the *Rhinella marina* species complex (Amphibia, Bufonidae) revisited: implications for Neotropical diversification hypotheses. *Zoologica Scripta* 39:128-140.
- Van Allen, B.G., V.S. Briggs, M.W. McCoy, and J.R. Vonesh. 2010. Carry-over effects of the larval environment on post-metamorphic performance in two hylid frogs. *Oecologia* 164:891-898.
- Van Buskirk, J. 2000. The costs of an inducible defense in anuran larvae. *Ecology* 81:2813-2821.
- Van Buskirk, J., and R.A. Relyea. 1998. Selection for phenotypic plasticity in *Rana sylvatica* tadpoles. *Biological Journal of the Linnaean Society* 65:301-328.
- Van Buskirk, J., S.A. McCollum, and E.E. Werner. 1997. Natural selection for

- environmentally induced phenotypes in tadpoles. *Evolution* 51:1983-1992.
- Vance, T., and G. Talpin. 1977. Another yellow albino amphibian. *Herpetological Review* 8:4-5.
- Van Denburgh, J. 1898. Herpetological notes. 1. *Bufo boreas* in Alaska. *Proceedings of the American Philosophical Society* 37:139.
- Van Denburgh, J. 1905. The reptiles and amphibians of the islands of the Pacific Coast of North America from the Farallons to Cape San Lucas and the Revilla Gigedos. *Proceedings of the California Academy of Sciences, Series 3, Zoology* 4:1-40.
- Van Denburgh, J. 1912. Notes on *Ascaphus*, the discoglossid toad of North America. *Proceedings of the California Academy of Sciences, Series 4*, 3:259-264.
- Van Denburgh, J. 1913. A list of the amphibians and reptiles of Arizona, with notes on the species in the collection of the academy. *Proceedings of the California Academy of Sciences*. 3: 391-454.
- Van Denburgh, J. 1924. Notes on the herpetology of New Mexico, with a list of species known from that state. *Proceedings of the California Academy of Sciences, Series 4*, 13:189-230.
- Van Denburgh, J., and J.R. Slevin. 1914. Reptiles and amphibians of the islands of the West Coast of North America. *Proceedings of the California Academy of Sciences, Series 4*, 4:129-152.
- Van Denburgh, J. and J.R. Slevin. 1915. A list of the amphibians and reptiles of Utah, with notes on the species in the collection of the Academy. *Proceedings of the California Academy of Sciences, Series 4*, 5:99-110.
- Van Denburgh, J. and J.R. Slevin. 1921a. A list of the amphibians and reptiles of Nevada, with notes on the species in the collection of the Academy. *Proceedings of the California Academy of Sciences, Series 4*, 11:27-38.
- Van Denburgh, J. and J.R. Slevin. 1921b. A list of the amphibians and reptiles of Idaho, with notes on the species in the collection of the Academy. *Proceedings of the California Academy of Sciences, Series 4*, 11:39-47.
- Vanderburgh, D.J., and R.C. Anderson. 1987a. The relationship between nematodes of the genus *Cosmocercoides* Wilkie, 1930 (Nematoda: Cosmoceroidea) in toads (*Bufo americanus*) and slugs (*Deroceras laeve*). *Canadian Journal of Zoology* 65:1650-1661.
- Vanderburgh, D.J., and R.C. Anderson. 1987b. Preliminary observations on seasonal changes in prevalence and intensity of *Cosmocercoides variabilis* (Nematoda: Cosmoceroidea) in *Bufo americanus* (Amphibia). *Canadian Journal of Zoology* 65:1666-1667.
- Van Devender, T.R. 1969. A record of albinism in the Canyon Tree Frog, *Hyla arenicolor* Cope. *Herpetologica* 25:69.
- Vandewalle, T.J., K.K. Sutton, and J.L. Christiansen. 1996. *Pseudacris crucifer*: an Iowa case history study of an amphibian call survey. *Herpetological Review* 27:183-185.
- Vandewege, M.W., D.J. Brown and M.R.J. Forstner. 2012. *Bufo (=Anaxyrus) houstonensis* (Houston Toad). Headstart juvenile dispersal. *Herpetological Review* 43:117-118.
- Van Hyning, O.C. 1933. Batrachia and reptilia of Alachua County, Florida. *Copeia* 1933:3-7.
- Varhegyi, G., S.M. Mavroidis, B.M. Walton, C.A. Conaway, and A.R. Gibson. 1998. Amphibian surveys in the Cuyahoga Valley National Recreation Area. Pp.137-154 In M.J. Lannoo (ed.), *Status & Conservation of Midwestern Amphibians*. University of Iowa Press, Iowa City.
- Van Meter, R.J., C. M. Swan, and C. A. Trossen. 2012. Effects of road deicer (NaCl) and amphibian grazers on detritus processing in pond mesocosms. *Environmental Toxicology and Chemistry* 31:2306-2310.
- Van Schmidt, N.D., T. L. Cary, M. E. Ortiz-Santaliestra, and W.H. Karasov. 2012. Effects of chronic polybrominated diphenyl ether exposure on gonadal development in the Northern Leopard Frog, *Rana pipiens*. *Environmental Toxicology and Chemistry* 31:347-354.
- Vasconcelos, D. 2003. Amphibian and vegetation dynamics in a restored wetland in Maine. M.S. thesis, University of Maine, Orono.
- Vasconcelos, D., and A.J.K. Calhoun. 2004. Movement patterns of adult and juvenile *Rana sylvatica* (LeConte) and *Ambystoma maculatum* (Shaw) in three restored seasonal pools in Maine. *Journal of Herpetology* 38:551-561.
- Vatnick, I., M.A. Brodkin, M.P. Simon, B.W. Grant, C.R. Conte, M. Gleave, R. Myers, and M.M. Sadoff. 1999. The effects of exposure to mild acidic conditions on adult frogs (*Rana pipiens* and *Rana clamitans*): mortality rates and pH preferences. *Journal of Herpetology* 33:370-374.
- Vélez A., and M.A. Bee. 2010. Signal

- recognition by frogs in the presence of temporally fluctuating chorus-shaped noise. *Behavioral Ecology and Sociobiology* 64:1695-1709.
- Vélez, A., and M.A. Bee. 2011. Dip listening and the cocktail party problem in Grey Treefrogs: signal recognition in temporally fluctuating noise. *Animal Behaviour* 82: 1319-1327.
- Vélez, A., G. Höbel, N.M. Gordon, and M.A. Bee. 2012. Dip listening or modulation masking? Call recognition by green treefrogs (*Hyla cinerea*) in temporally fluctuating noise. *Journal of Comparative Physiology* 198A:891-904.
- Velo-Antón, G., P.A. Burrowes, R.L. Joglar, I. Martínez-Solano, K.H. Beard, and G. Parra-Olea. 2007. Phylogenetic study of *Eleutherodactylus coqui* (Anura: Leptodactylidae) reveals deep genetic fragmentation in Puerto Rico and pinpoints origins of Hawaiian populations. *Molecular Phylogenetics and Evolution* 45:716-728.
- Venable, N.J. 2001. Scales, skinks, scutes & newts. West Virginia University Extension Service, Morgantown.
- Venesky, M.D. 2011. Dynamics of an emerging infectious disease of amphibians: From individuals to communities. Ph.D. diss., University of Memphis, Memphis, TN.
- Venesky, M.D., M. J. Parris and A. Storfer. 2009. Impacts of *Batrachochytrium dendrobatidis* infection on tadpole foraging performance. *Ecohealth* 6:565-576.
- Venesky, M.D., R.J. Wassersug, and M.J. Parris. 2010. The impact of variation in labial tooth number on the feeding kinematics of tadpoles of Southern Leopard Frog (*Lithobates sphenocephalus*). *Copeia* 2010:481-486.
- Venesky, M.D., T.E. Wilcoxen, M.A. Rensel, L. Rollins-Smith, J.L. Kerby and M.J. Parris. 2012. Dietary protein restriction impairs growth, immunity, and disease resistance in Southern Leopard Frog tadpoles. *Oecologia* 169:23-31.
- Vergeer, T. 1948. Frog catches mouse in natural environment. *Turtox News* 26:91.
- Verrill, A.E. 1865. Catalogue of the reptiles and batrachians found in the vicinity of Norway, Oxford Co., Maine. *Proceedings of the Boston Society of Natural History* 9:195-199.
- Vertucci, F.A., and P.S. Corn. 1996. Evaluation of episodic acidification and amphibian declines in the Rocky Mountains. *Ecological Applications* 6:449-457.
- Vestal, E.H. 1941. Defensive inflation of the body in *Bufo boreas halophilus*. *Copeia* 1941:183.
- Veysey, J.S., S.D. Mattfeldt, and K.J. Babbitt. 2011. Comparative influence of isolation, landscape, and wetland characteristics on egg-mass abundance of two pool-breeding amphibian species. *Landscape Ecology* 26:661-672.
- Vhora, M.S. 2012. A seasonal and comparative study of helminth parasites in some anurans from Oklahoma. M.S. thesis, Oklahoma State University, Stillwater.
- Vickers, C.R. 1980. Effects of pond ditching on cypress pond herpetofauna in north Florida. M.S. thesis, University of Florida, Gainesville.
- Vickers, C.R., L.D. Harris, and B.F. Swindel. 1985. Changes in herpetofauna resulting from ditching of cypress ponds in Coastal Plains flatwoods. *Forest Ecology and Management* 11:17-29.
- Viets, B.E. 1993. An annotated list of the herpetofauna of the F.B. and Rena G. Ross Natural History Reservation. *Transactions of the Kansas Academy of Science* 96:103-113.
- Villard, M.-A., M.J. Mazerolle and S. Haché. 2012. L'impact des routes, au-delà des collisions: le cas des oiseaux forestiers et des amphibiens. *Le naturaliste canadien* 136:61-65.
- Villella, J., and A. Mims. n.d. A field guide to amphibians of Opal Creek. Opal Creek Ancient Forest Center, Jawbone Flats, Oregon.
- Viosca, P. Jr. 1923. An ecological study of the cold blooded vertebrates of southeastern Louisiana. *Copeia* (115):35-44.
- Viosca, P. Jr. 1928. A new species of *Hyla* from Louisiana. *Proceedings of the Biological Society of Washington* 41:89-92.
- Viosca, P. Jr. 1931. Principles of Bullfrog (*Rana catesbeiana*) culture. *Transactions of the American Fisheries Society* 61:262-269.
- Viosca, P. Jr. 1934. Principles of bullfrog culture. Southern Biological Supply Company, New Orleans, LA.
- Viosca, P. Jr. 1944. Distribution of certain cold-blooded animals in Louisiana in relationship to the geology and physiography of the state. *Proceedings of the Louisiana Academy of Science* 8:47-62.
- Viparina, S., and J.J. Just. 1975. The life period, growth and differentiation of *Rana catesbeiana* larvae occurring in nature. *Copeia* 1975:103-109.

- Vitt, L.J., and R.D. Ohmart. 1978. Herpetofauna of the lower Colorado River: Davis Dam to the Mexican border. Proceedings of the Western Foundation of Vertebrate Zoology 2:35-71.
- Vladykov, V.D. 1941. A preliminary list of Amphibia from the Laurentides Park in Province of Quebec. Canadian Field-Naturalist 55:83-84.
- Vogel, L.S. 2007. The decline of Fowler's Toad (*Bufo fowleri*) in southern Louisiana: molecular genetics, field experiments and landscape studies. Ph.D. diss., University of New Orleans, New Orleans, LA.
- Vogel, L.S. and S.G. Johnson. 2008. Estimation of hybridization and introgression frequency in toads (Genus: *Bufo*) using DNA sequence variation at mitochondrial and nuclear loci. Journal of Herpetology 42:61-75.
- Vogel, L.S., and J.H.K. Pechmann. 2010. Response of Fowler's Toad (*Anaxyrus fowleri*) to competition and hydroperiod in the presence of the invasive Coastal Plain Toad (*Incilius nebulifer*). Journal of Herpetology 44:382-389.
- Vogt, R.C. 1981. Natural History of Amphibians and Reptiles of Wisconsin. Milwaukee Public Museum, Milwaukee.
- Volpe, E.P. 1952. Physiological evidence for natural hybridization of *Bufo americanus* and *Bufo fowleri*. Evolution 6:393-406.
- Volpe, E.P. 1955a. Intensity of reproductive isolation between sympatric and allopatric populations of *Bufo americanus* and *Bufo fowleri*. American Naturalist 89:303-318.
- Volpe, E.P. 1955b. A taxo-genetic analysis of the status of *Rana kandiyohi* Weed. Systematic Zoology 4:75-82.
- Volpe, E.P. 1956a. Mutant color patterns in leopard frogs. Journal of Heredity 47:79-85.
- Volpe, E.P. 1956b. Experimental F₁ hybrids between *Bufo valliceps* and *Bufo fowleri*. Tulane Studies in Zoology 4:61-75.
- Volpe, E.P. 1957a. Embryonic temperature adaptations in highland *Rana pipiens*. American Naturalist 91:303-310.
- Volpe, E.P. 1957b. The early development of *Rana capito sevosa*. Tulane Studies in Zoology 5:207-225.
- Volpe, E.P. 1957c. Embryonic temperature tolerance and rate of development in *Bufo valliceps*. Physiological Zoology 30:164-176.
- Volpe, E.P. 1957d. Genetic aspects of anuran populations. American Naturalist 91:355-372.
- Volpe, E.P. 1958. Interspecific gene exchange between Fowler's and the Southern Toad. Anatomical Record 131:605-606.
- Volpe, E.P. 1959a. Hybridization of *Bufo valliceps* with *Bufo americanus* and *Bufo terrestris*. Texas Journal of Science 11:335-342.
- Volpe, E.P. 1959b. Experimental and natural hybridization between *Bufo terrestris* and *Bufo fowleri*. American Midland Naturalist 61:295-312.
- Volpe, E.P. 1960. Evolutionary consequences of hybrid sterility and vigor in toads. Evolution 14:181-193.
- Volpe, E.P. 1961. Polymorphism in anuran populations. Pp. 221-234 In W.F. Blair (ed.), Vertebrate Speciation. University of Texas Press, Austin.
- Volpe, E.P., and J.L. Dobie. 1959. The larva of the Oak Toad, *Bufo quercicus* Holbrook. Tulane Studies in Zoology 7:145-152.
- Volpe, E.P., M.A. Wilkens, and J.L. Dobie. 1961. Embryonic and larval development of *Hyla avivoca*. Copeia 1961:340-349.
- Vonesh, J.R., and O.R. De la Cruz. 2002. Complex life cycles density dependence: assessing the contribution of egg mortality to amphibian declines. Oecologia 133:325-333.
- Vonesh, J.R., J.M. Kraus, J.S. Rosenberg and J.M. Chase. 2009. Predator effects on aquatic community assembly: disentangling the roles of habitat selection and post-colonization processes. Oikos 118:1219-1229.
- Voris, H.K., and J.P. Bacon Jr. 1966. Differential predation on tadpoles. Copeia 1966:594-598.
- Vredenburg, V.T. 2004. Reversing introduced species effects: experimental removal of introduced fish leads to rapid recovery of a declining frog. Proceedings of the National Academy of Science USA 101:7646-7650.
- Vredenburg, V., G.M. Fellers, and C. Davidson. 2005. *Rana muscosa* Camp, 1917. Mountain Yellow-legged Frog. Pp. 563-566 In M.J. Lannoo (ed.), Amphibian Declines. The Conservation Status of United States Species. University of California Press, Berkeley.
- Vredenburg, V.T., R. Bingham, R. Knapp, J.A.T. Morgan, C. Moritz, and D. Wake. 2007. Concordant molecular and phenotypic data delineate new taxonomy and conservation priorities for the endangered Mountain Yellow-legged Frog. Journal of Zoology 271:361-374.
- Vredenburg, V.T., J.M. Romansic, L.M. Chan, and T. Tunstall. 2010a. Does UV-B radiation affect embryos of three high elevation amphibian species in California? Copeia

- 2010:502-512.
- Vredenburg, V.T., R.A. Knapp, T.S. Tunstall, and C.J. Briggs. 2010b. Dynamics of an emerging disease drive large-scale amphibian population declines. *Proceedings of the National Academy of Science USA* 107:9689-9694.
- Wada, H., C.M. Bergeron, F.M.A. McNabb, B.D. Todd and W.A. Hopkins. 2011. Dietary mercury has no observable effects on thyroid-mediated processes and fitness-related traits in Wood Frogs. *Environmental Science and Technology* 45:7915-7922.
- Waddle, J.H. 2006. Use of amphibians as ecosystem indicator species. Ph.D. diss., University of Florida, Gainesville.
- Waddle, J.H., R.M. Dorazio, S.C. Walls, K.G. Rice, J. Beauchamp, M.J. Schulman, and F.J. Mazzotti. 2010. A new parameterization for estimating co-occurrence of interacting species. *Ecological Applications* 20:1467-1475.
- Wagner, G. 1997. Status of the Northern Leopard Frog (*Rana pipiens*) in Alberta. Alberta Wildlife Status Report 9, Alberta Conservation Association.
- Wagner, W.E. 1989a. Social correlates of variation in male calling behavior in Blanchard's Cricket Frog, *Acris crepitans blanchardi*. *Ethology* 82:27-45.
- Wagner, W.E. 1989b. Fighting, assessment, and frequency alteration in Blanchard's Cricket Frog. *Behavioral Ecology and Sociobiology* 25:429-436.
- Wagner, W.E. 1989c. Graded aggressive signals in Blanchard's Cricket Frog: vocal responses to opponent proximity and size. *Animal Behaviour* 38:1025-1038.
- Wagner, W.E. 1991. Social selection on male calling behavior in Blanchard's Cricket Frog. Ph.D. diss., University of Texas, Austin.
- Wagner, W.E. 1992. Deceptive or honest signalling of fighting ability? A test of alternative hypotheses for the function of changes in call dominant frequency by male cricket frogs. *Animal Behaviour* 44:449-462.
- Wahbe, T.R. 1996. Tailed frogs (*Ascaphus truei Stejneger*) in natural and managed coastal temperate rainforests of southwestern British Columbia, Canada. M.S. thesis. University of British Columbia, Vancouver.
- Wahbe, T.R. 2003. Aquatic and terrestrial movements of tailed frogs (*Ascaphus truei*) in relation to timber harvest in Coastal British Columbia. Ph.D. diss., University of British Columbia, Vancouver.
- Wahbe, T.R., and F.L. Bunnell. 2001. Preliminary observations on movements of tailed frog tadpoles (*Ascaphus truei*) in streams through harvested and natural forests. *Northwest Science* 75:77-83.
- Wahbe, T.R., and F.L. Bunnell. 2003. Relations among larval tailed frogs, forest harvesting, stream microhabitat, and site parameters in southwestern British Columbia. *Canadian Journal of Forest Resources* 33:1256-1266.
- Wahbe, T.R., F.L. Bunnell, and R.B. Bury. 2004. Terrestrial movements of juvenile and adult tailed frogs in relation to timber harvest in coastal British Columbia. *Canadian Journal of Forest Resources* 34:2455-2466.
- Wahbe, T.R., C. Ritland, F.L. Bunnell, and K. Ritland. 2005. Population genetic structure of tailed frogs (*Ascaphus truei*) in clearcut and old-growth stream habitats in south coastal British Columbia. *Canadian Journal of Zoology* 83:1460-1468.
- Waitz, J.A. 1961. Parasites of Idaho amphibians. *Journal of Parasitology* 47:89.
- Wake, D.B., and V.T. Vredenburg. 2008. Are we in the midst of the sixth mass extinction? A view from the world of amphibians. *Proceedings of the National Academy of Science USA* 105:11466-11473.
- Wallick, R.C., B. Freedman, and R.J. Wassersug. 1999. The consequences for amphibians of the conversion of natural, mixed-species forests to conifer plantations in southern New Brunswick. *Canadian Field-Naturalist* 113:408-418.
- Waldman, B. 1981. Sibling recognition in toad tadpoles: the role of experience. *Zeitschrift für Tierpsychologie* 56:341-358.
- Waldman, B. 1982a. Sibling association among schooling toad tadpoles: field evidence and implications. *Animal Behaviour* 30:700-713.
- Waldman, B. 1982b. Adaptive significance of communal oviposition in Wood Frogs (*Rana sylvatica*). *Behavioral Ecology and Sociobiology* 10:169-174.
- Waldman, B. 1984. Kin recognition and sibling association among Wood Frog (*Rana sylvatica*) tadpoles. *Behavioral Ecology and Sociobiology* 14:171-180.
- Waldman, B. 1985a. Sibling recognition in toad tadpoles: are kinship labels transferred among individuals? *Zeitschrift für Tierpsychologie* 68:41-57.
- Waldman, B. 1985b. Olfactory basis of kin

- recognition in toad tadpoles. *Journal of Comparative Physiology A* 156:565-577.
- Waldman, B. 1986a. Preference for unfamiliar siblings over familiar non-siblings in American Toad (*Bufo americanus*) tadpoles. *Animal Behaviour* 34:48-53.
- Waldman, B. 1986b. Chemical ecology of kin recognition in anuran amphibians. Pp. 225-242 *In* D. Duvall, D. Müller-Schwarze, and D.M. Silverstein (eds.). *Chemical Signals in Vertebrates. 4. Ecology, Evolution, and Comparative Biology*. Plenum Press, New York.
- Waldman, B. 1989. Do anuran larvae retain kin recognition abilities following metamorphosis? *Animal Behaviour* 37:1055-1058.
- Waldman, B. 1991. Kin recognition in amphibians. Pp. 162-219 *In* P.G. Hepper (ed.). *Kin Recognition*. Cambridge University Press, Cambridge, UK.
- Waldman, B., and K. Adler. 1979. Toad tadpoles associate preferentially with siblings. *Nature* 282:611-613.
- Waldman, B., and M.J. Ryan. 1983. Thermal advantages of communal egg mass deposition in Wood Frogs (*Rana sylvatica*). *Journal of Herpetology* 17:70-72.
- Waldman, B., J.E. Rice, and R.L. Honeycutt. 1992. Kin recognition and incest avoidance in toads. *American Zoologist* 32:18-30.
- Walker, C.F. 1932. *Pseudacris brachyphona* (Cope), a valid species. *Ohio Journal of Science* 32: 379-384.
- Walker, C.F. 1946. The Amphibians of Ohio. 1. The frogs and toads (Order Salientia). *Ohio State Museum Science Bulletin* 1(3):1-109.
- Walker, J.M. 1963. Amphibians and reptiles of Jackson Parish Louisiana. *Proceedings of the Louisiana Academy of Science* 26:91-107.
- Walker, M.V. 1946. Reptiles and amphibians of Yosemite National Park. *Yosemite Nature Notes* 25:1-48. [an undated issue with a different cover also was published]
- Walker, R.F., and W.G. Whitford. 1970. Soil water absorption capabilities in selected species of anurans. *Herpetologica* 26:411-418.
- Wallace, R.L., and L.V. Diller. 1998. Length of the larval cycle of *Ascaphus truei* in coastal streams of the Redwood region, northern California. *Journal of Herpetology* 32:404-409.
- Walls, S.C., A.R. Blaustein, and J.J. Beatty. 1992. Amphibian biodiversity of the Pacific Northwest with special reference to old-growth stands. *Northwest Environmental Journal* 8:53-69.
- Walpole, A.A., J. Bowman, D.C. Tozer and D.S. Badzinski. 2012. Community-level response to climate change: shifts in anuran calling phenology. *Herpetological Conservation and Biology* 7:249-257.
- Walston, L.J., and S.J. Mullin. 2007a. Population responses of Wood Frog (*Rana sylvatica*) tadpoles to overwintered Bullfrog (*Rana catesbeiana*) tadpoles. *Journal of Herpetology* 41:24-31.
- Walston, L.J., and S.J. Mullin. 2007b. Responses of a pond-breeding amphibian community to the experimental removal of predatory fish. *American Midland Naturalist* 157:63-73.
- Walston, L.J., and S.J. Mullin. 2008. Variation in amount of surrounding forest habitat influences the initial orientation of juvenile amphibians emigrating from breeding ponds. *Canadian Journal of Zoology* 86:141-146.
- Walters, B. 1975. Studies of interspecific predation within an amphibian community. *Journal of Herpetology* 9:267-279.
- Walton, A.C. 1938. The Nematoda as parasites of Amphibia. 4. *Transactions of the American Microscopical Society* 57:38-53.
- Walton, A.C. 1941. Notes on some helminths from California amphibia. *Transactions of the American Microscopical Society* 60:53-57.
- Walton, A.C. 1947. Parasites of the Ranidae (Amphibia). *Anatomical Record* 99:684-685.
- Walton, J. 2012. The effects of mine land reclamation on herpetofaunal communities. M.S. thesis, University of Texas, Arlington.
- Wang, I.J. 2009. Fine-scale population structure in a desert amphibian: landscape genetics of the Black Toad (*Bufo exsul*). *Molecular Ecology* 18:3847-3856.
- Ward, R., C.J. Rutledge, and E.G. Zimmerman. 1987. Genetic variation and population subdivision in the cricket frog *Acrida crepitans*. *Biochemical Systematics and Ecology* 15: 377-384.
- Warkentin, I.G., C.E. Campbell, K.G. Powell, and T.D. Leonard. 2003. First record of the Mink Frog (*Rana septentrionalis*) for insular Newfoundland. *Canadian Field-Naturalist* 117:477-478.
- Warkentin, K.M. 1992a. Effects of temperature and illumination on feeding rates of Green Frog tadpoles (*Rana clamitans*). *Copeia* 1992:735-730.

- Warkentin, K.M. 1992b. Microhabitat use and feeding rate variation in green frog tadpoles (*Rana clamitans*). *Copeia* 1992:731-740.
- Warner, S.C., W.A. Dunson, and J. Travis. 1991. Interaction of pH, density, and priority effects on the survivorship and growth of two species of hylid tadpoles. *Oecologia* 88:331-339.
- Warner, S.C., J. Travis, and W.A. Dunson. 1993. Effect of pH variation on interspecific competition between two species of hylid tadpoles. *Ecology* 74:183-194.
- Warny, P.R., W.E. Meshaka, Jr. and A.N. Klipper. 2012. Larval growth and transformation size of the Green Frog, *Lithobates clamitans melanota* (Rafinesque, 1820), in south-eastern New York. *Herpetology Notes* 5:59-62.
- Washburn, A.M. 1899. A peculiar toad. *American Naturalist* 33:139-141.
- Wasserman, A.O. 1957. Factors affecting interbreeding in sympatric species of spadefoots (genus *Scaphiopus*). *Evolution* 11:320-338.
- Wasserman, A.O. 1958. Relationships of allopatric populations of spadefoots (genus *Scaphiopus*). *Evolution* 12:311-318.
- Wasserman, A.O. 1963. Further studies of hybridization in spadefoot toads (Genus *Scaphiopus*). *Copeia* 1963:115-118.
- Wassersug, R.J. 1973. Aspects of social behavior in anuran larvae. Pp. 273-297 In J.L. Vial (ed.), *Evolutionary Biology of the Anurans*. University of Missouri Press, Columbia.
- Wassersug, R.J., and D.G. Sperry. 1977. The relationship of locomotion to differential predation on *Pseudacris triseriata* (Anura: Hylidae). *Ecology* 58:830-839.
- Wassersug, R.J., and K. Hoff. 1979. A comparative study of the buccal pumping mechanisms of tadpoles. *Biological Journal of the Linnaean Society* 12:225-259.
- Waters, D.L., T.J. Hassler, and B.R. Norman. 1998. On the establishment of the Pacific Chorus Frog, *Pseudacris regilla* (Amphibian, Anura, Hylidae), at Ketchikan, Alaska. *Bulletin of the Chicago Herpetological Society* 33:124-127.
- Watling, J.I., C.R. Hickman and J.L. Orrock. 2011a. Predators and invasive plants affect performance of amphibian larvae. *Oikos* 120:735-739.
- Watling, J.I., C.R. Hickman and J.L. Orrock. 2011b. Invasive shrub alters native forest amphibian communities. *Biological Conservation* 144:2597-2601.
- Watling, J.I., C.R. Hickman, E. Lee, K. Wand and J.L. Orrock. 2011c. Extracts of the invasive shrub *Lonicera maackii* increase mortality and alter behavior of amphibian larvae. *Oecologia* 165:153-159.
- Watrous, W.L. 1967. A population and homing study of the chorus frog. M.S. thesis, Ball State University, Muncie, IN.
- Watson, J.W., K.R. McAllister, and D.J. Pierce. 2003. Home ranges, movements, and habitat selection of Oregon Spotted Frogs (*Rana pretiosa*). *Journal of Herpetology* 37:292-300.
- Wauer, R.H. 1964. Reptiles and amphibians of Zion National Park. *Zion Natural History Association*, Zion National Park, UT.
- Waye, H.L. 2001. Teflon tubing as radio transmitter belt material for Northern Leopard Frogs (*Rana pipiens*). *Herpetological Review* 31:88-89.
- Waye, H.L., and C.H. Shewchuk. 1995. *Scaphiopus intermontanus* (Great Basin Spadefoot). Production of odor. *Herpetological Review* 26:98-99.
- Weatherby, C.A. 1982. Introgression between the American Toad *Bufo americanus* and the Southern toad *B. terrestris* in Alabama. Ph.D. diss., Auburn University, Auburn, AL.
- Webb, R.G. 1965. Observations on the breeding habits of the Squirrel Treefrog, *Hyla squirella Bosc* in Daudin. *American Midland Naturalist* 74:500-501.
- Webb, R.G., and J.K. Korky. 1977. Variation in tadpoles of frogs of the *Rana tarahumarae* group in western Mexico (Anura: Ranidae). *Herpetologica* 33: 73-82.
- Webber, N., M.D. Boone and C.A. Distel. 2010. Effects of aquatic and terrestrial carbaryl exposure on feeding ability, growth, and survival of American Toads. *Environmental Toxicology and Chemistry* 29:2323-2327.
- Weed, A.C. 1922. New frogs from Minnesota. *Proceedings of the Biological Society of Washington* 34:107-110.
- Weintraub, J.D. 1974. Movement patterns of the Red-spotted Toad, *Bufo punctatus*. *Herpetologica* 30:212-215.
- Weir, L., I.J. Fiske, and J.A. Royle. 2009. Trends in anuran occupancy from northeastern states of the North American Amphibian Monitoring Program. *Herpetological Conservation and Biology* 4:389-402.
- Weir, S.M., S. Yu, and C. J. Salice. 2012. Acute toxicity of herbicide formulations and chronic toxicity of technical-grade trifluralin to larval

- Green Frogs (*Lithobates clamitans*). Environmental Toxicology and Chemistry 31:2029–2034.
- Weis, J.S. 1975. The effect of DDT on tail regeneration in *Rana pipiens* and *R.catesbeiana* tadpoles. Copeia 1975:765-767.
- Weitzel, N.H., and H.R. Panik. 1993. Long-term fluctuations of an isolated population of the Pacific Chorus Frog (*Pseudacris regilla*) in northwestern Nevada. Great Basin Naturalist 53:379-384.
- Welbourne, W.C. Jr., and R.B. Loomis. 1975. *Hannemania* (Acarina: Trombiculidae) and their anuran hosts at Fourtynine Palms Oasis, Joshua Tree National Monument, California. Bulletin of the Southern California Academy of Sciences 74:15-19.
- Weldon, C., L.H. du Preez, A.D. Hyatt, R. Muller, and R. Speare. 2004. Origin of the amphibian chytrid fungus. Emerging Infectious Diseases 10:2100-2105.
- Weller, W.F., and D.M. Green. 1997. Checklist and current status of Canadian amphibians. SSAR Herpetological Conservation 1:309-328.
- Wells, K.D. 1976. Multiple egg clutches in the Green Frog (*Rana clamitans*). Herpetologica 32:85-87.
- Wells, K.D. 1977a. The social behaviour of anuran amphibians. Animal Behaviour 25:666-693.
- Wells, K.D. 1977b. Territoriality and male mating success in the Green Frog (*Rana clamitans*). Ecology 58:750-762.
- Wells, K.D. 1978. Territoriality in the Green Frog (*Rana clamitans*): vocalizations and agonistic behaviour. Animal Behaviour 26:1051-1063.
- Wells, K.D. 2007. The Ecology & Behavior of Amphibians. University of Chicago Press, Chicago, IL.
- Wells, K.D., and T.L. Taigen. 1984. Reproductive behavior and aerobic capacities of male American Toads (*Bufo americanus*): is behavior constrained by physiology? Herpetologica 40:292-298.
- Wells, K.D., and T.L. Taigen. 1986. The effect of social interactions on calling energetics in the Gray Treefrog (*Hyla versicolor*). Behavioral Ecology and Sociobiology 19:9-18.
- Wells, K.D., and C.R. Bevier. 1997. Contrasting patterns of energy substrate use in two species of frogs that breed in cold weather. Herpetologica 53:70-80.
- Welsh, H.H. 1988. An ecogeographic analysis of the herpetofauna of the Sierra San Pedro Martir Region, Baja California, with a contribution to the biogeography of the Baja California herpetofauna. Proceedings of the California Academy of Sciences, 4th Series, 46:1-72.
- Welsh, H.H. 1990. Relictual amphibians and old-growth forests. Conservation Biology 4:309-319.
- Welsh, H.H. 1993. Hierarchical analysis of the niche relationships of four amphibians from forested habitats of northwestern California. Ph.D. diss., University of California, Berkeley.
- Welsh, H.H. Jr., and L.M. Ollivier. 1998. Stream amphibians as indicators of ecosystem stress: a case study from California's redwoods. Ecological Applications 8:1118-1132.
- Welsh, H.H. Jr., K.L. Pope, and D. Boiano. 2006. Sub-alpine amphibian distributions related to species palatability to non-native salmonids in the Klamath mountains of northern California. Diversity and Distributions 12:298-309.
- Wendelken, P.W. 1968. Differential predation and behavior as factors in the maintenance of the vertebral stripe polymorphism in *Acris crepitans*. M.S. thesis, University of Texas, Austin.
- Wente, W.H., and J.B. Phillips. 2003. Fixed green and brown color morphs and a novel color-changing morph of the Pacific Tree Frog *Hyla regilla*. American Naturalist 162:461-473.
- Wente, W.H., M.J. Adams, and C.A. Pearl. 2005. Evidence of decline for *Bufo boreas* and *Rana luteiventris* in and around the northern Great Basin, western USA. Alytes 22:95-108.
- Werler, J.E., and J. McCallion. 1951. Notes on a collection of reptiles and amphibians from Princess Anne County, Virginia. American Midland Naturalist 45:245-252.
- Werner, E.E. 1986. Amphibian metamorphosis: growth rate, predation risk, and the optimal size at transformation. American Naturalist 128:319-341.
- Werner, E.E. 1991. Nonlethal effects of a predator on competitive interactions between two anuran larvae. Ecology 75:1709-1720.
- Werner, E.E. 1992. Competitive interactions between Wood Frog and Northern Leopard Frog larvae: the influence of size and activity. Copeia 1992:26-35.
- Werner, E.E. 1994. Ontogenetic scaling of competitive relations: size-dependent effects

- and responses in two anuran larvae. *Ecology* 75:197-213.
- Werner, E.E., and M.A. McPeek. 1994. Direct and indirect effects of predators on two anuran species along an environmental gradient. *Ecology* 75:1368-1382.
- Werner, E.E., and K.S. Glennemeier. 1999. Influence of forest canopy cover on the breeding pond distributions of several amphibian species. *Copeia* 1999:1-12.
- Werner, E.E., G.A. Wellborn, and M.A. McPeek. 1995. Diet composition in postmetamorphic Bullfrogs and Green Frogs: implications for interspecific predation and competition. *Journal of Herpetology* 29:600-607.
- Werner, E. E., D. K. Skelly, R. A. Relyea and K. L. Yurewicz. 2007a. Amphibian species richness across environmental gradients. *Oikos* 116:1697-1712.
- Werner, E. E., K. L. Yurewicz, D. K. Skelly, and R. A. Relyea. 2007b. Turnover in a metacommunity: The role of local and regional factors. *Oikos* 116:1713-1725.
- Werner, E. E., R. A. Relyea, K. L. Yurewicz, D. K. Skelly and C. J. Davis. 2009. Comparative landscape dynamics of two anuran species: Interaction of local and regional processes with an ENSO climate driver. *Ecological Monographs* 79:503-521.
- Werner, J. K. 2003. Status of the Northern Leopard Frog (*Rana pipiens*) in western Montana. *Northwestern Naturalist* 84:24-30.
- Werner, J.K., B.A. Maxwell, P. Hendricks, and D.L. Flath. 2004. *Amphibians and Reptiles of Montana*. Mountain Press Publishing Co., Missoula.
- Wernz, J.G. 1969. Spring mating of *Ascaphus*. *Journal of Herpetology* 3:167-169. Wernz, J.G., and R.M. Storm. 1969. Pre-hatching stages of the tailed frog, *Ascaphus truei* Stejneger. *Herpetologica* 25:86-93.
- West, L.B. 1960. The nature of growth inhibitory material from crowded *Rana pipiens* tadpoles. *Physiological Zoology* 33:232-239.
- Westerman, A.G., A.J. Wigginton, D.J. Price, G. Linder, and W.J. Birge. 2003a. Integrating amphibians into ecological risk assessment strategies. Pp. 283-313 *In* G. Linder, S.K. Krest, and D.W. Sparling (eds.), *Amphibian Decline: An Integrated Analysis of Multiple Stressor Effects*. SETAC Press, Pensacola, FL.
- Westerman, A.G., W. van der Schalie, S.L. Levine, B. Palmer, D. Shank, and R.G. Stahl. 2003b. Linking stressors with potential effects on amphibian survival. Pp. 73-109 *In* G. Linder, S.K. Krest, and D.W. Sparling (eds.), *Amphibian Decline: An Integrated Analysis of Multiple Stressor Effects*. SETAC Press, Pensacola, FL.
- Westman, A.D.J., J. Elliott, K. Cheng, G. Van Aggen, and C.A. Bishop. 2010. Effects of environmentally relevant concentrations of endosulfan, azinphosmethyl, and diazinon on Great Basin Spadefoot (*Spea intermontana*) and Pacific Treefrog (*Pseudacris regilla*). *Environmental Toxicology and Chemistry* 29:1604-1612.
- Wetzel, E.J., and G.W. Esch. 1996. Seasonal population dynamics of *Halipegus occidualis* and *Halipegus eccentricus* (Diagenea: Hemiuridae) in their amphibian host, *Rana clamitans*. *Journal of Parasitology* 82:414-422.
- Weyrauch, S.L., and J.P. Amon. 2002. Relocation of amphibians to created seasonal ponds in southwestern Ohio. *Restoration Ecology* 20:31-36.
- Wharton, J.C. 1989. Ecological and life history aspects of the San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*). M.S. thesis, San Francisco State University, San Francisco, CA.
- Wheeler, C.A. 2007. Temporal breeding patterns and mating strategy of the Foothill Yellow-legged Frog (*Rana boylii*). M.S. thesis, Humboldt State University, Arcata, CA.
- Wheeler, C.A., H.H. Welsh Jr., and L.L. Heise. 2003. *Rana boylii* (Foothill Yellow-legged Frog). Oviposition behavior. *Herpetological Review* 34:234.
- Wheeler, C.H., and H.H. Welsh Jr. 2008. Mating strategy and breeding patterns of the Foothill Yellow-legged Frog (*Rana boylii*). *Herpetological Conservation and Biology* 3:128-142.
- Wheeler, G.C. 1954. The amphibians and reptiles on the North Dakota Badlands. Theodore Roosevelt Natural History Association, Medora, ND.
- Wheeler, G.C., and J. Wheeler. 1966. *The Amphibians and Reptiles of North Dakota*. University of North Dakota, Grand Forks.
- Whitaker, J.O. Jr. 1961. Habitat and food of mousetrapped young *Rana pipiens* and *Rana clamitans*. *Herpetologica* 17:173-179.
- Whitaker, J.O. Jr. 1971. A study of the Western Chorus Frog, *Pseudacris triseriata*, in Vigo County, Indiana. *Journal of Herpetology* 5:127-150.

- Whitaker, J.O., D. Rubin, and J.R. Munsee. 1977. Observations of food habits of four species of spadefoot toads, genus *Scaphiopus*. *Herpetologica* 33:468-475.
- White, J.F. 1988. Amphibians of Delaware. *Transactions of the Delaware Academy of Science* 16:17-22.
- White, J.F. Jr., and A.W. White. 2007. *Amphibians and Reptiles of Delmarva*. 2nd ed. Tidewater Publishers, Centreville, MD.
- Whiting, A. 2004. Population ecology of the Western Chorus Frog, *Pseudacris triseriata*. M.S. thesis, McGill University, Montreal, Quebec.
- Whiting, M.J., and A.H. Price. 1994. Not the last picture show: new collection records from Paris, Texas (and other places). *Herpetological Review* 25:130.
- Whitney, C.L. 1980. The role of the "encounter" call in spacing of Pacific Tree Frogs, *Hyla regilla*. *Canadian Journal of Zoology* 58:75-78.
- Whitney, C.L. 1981. The monophasic call of *Hyla regilla* (Anura: Hylidae). *Copeia* 1981:230-233.
- Whitney, C.L., and J.R. Krebs. 1975a. Mate selection in Pacific Tree Frogs. *Nature* 255:325-326.
- Whitney, C.L., and C.J. Krebs. 1975b. Spacing and calling in Pacific Tree Frogs, *Hyla regilla*. *Canadian Journal of Zoology* 53:1519-1527.
- Wied-Neuwied, M. Prinz zu. 1838. Reise in das innere Nord-Amerika in den Jahren 1832 bis 1834. Vol. 1. J. Hoelscher, Coblenz.
- Wiens, J.A. 1970. Effects of early experience on substrate pattern selection in *Rana aurora* tadpoles. *Copeia* 1970:543-548.
- Wiens, J.J., and T.A. Titus. 1991. A phylogenetic analysis of *Spea* (Anura: Pelobatidae). *Herpetologica* 47:21-28.
- Wiese, R.J. 1985. Ecological aspects of the Bullfrog in northeastern Colorado. M.S. thesis, Colorado State University, Fort Collins.
- Wiese, R.J. 1990. Genetic structure of native and introduced populations of the Bullfrog, a successful colonist. Ph.D. diss., Colorado State University, Fort Collins.
- Wiest, J.A. Jr. 1982. Anuran succession at temporary ponds in a post oak-savanna region of Texas. Pp. 39-47 In N.J. Scott (ed.), *Herpetological Communities*. U.S. Fish and Wildlife Service, Wildlife Research Report 13.
- Wiewandt, T.A. 1969. Vocalization, aggressive behavior, and territoriality in the Bullfrog, *Rana catesbeiana*. *Copeia* 1969:276-285.
- Wiggins, D.A. 1992. Foraging success of leopard frogs (*Rana pipiens*). *Journal of Herpetology* 26:87-88.
- Wiggins, I.L. 1943. Additional note on the range of *Bufo canorus* Camp. *Copeia* 1943:197.
- Wilbur, H.M. 1972. Competition, predation, and the structure of the *Ambystoma-Rana sylvatica* community. *Ecology* 53:3-21.
- Wilbur, H.M. 1976. Density-dependent aspects of metamorphosis in *Ambystoma* and *Rana sylvatica*. *Ecology* 57:1289-1296.
- Wilbur, H.M. 1977a. Interactions of food level and population density in *Rana sylvatica*. *Ecology* 58:206-209.
- Wilbur, H.M. 1977b. Density-dependent aspects of growth and metamorphosis in *Bufo americanus*. *Ecology* 58:196-200.
- Wilbur, H.M. 1982. Competition between tadpoles of *Hyla femoralis* and *Hyla gratiosa* in laboratory experiments. *Ecology* 63:278-282.
- Wilbur, H.M. 1987. Regulation of structure in complex systems: experimental temporary pond communities. *Ecology* 68:1437-1452.
- Wilbur, H.M., and R.A. Alford. 1985. Priority effects in experimental pond communities: responses of *Hyla* to *Bufo* and *Rana*. *Ecology* 66:1106-1114.
- Wilbur, H.M., and J.E. Fauth. 1990. Experimental aquatic food webs: interactions between two predators and two prey. *American Naturalist* 135:176-204.
- Wilbur, H.M., D.I. Rubenstein, and L. Fairchild. 1978. Sexual selection in toads: the roles of female choice and male body size. *Evolution* 32:264-270.
- Wilbur, H.M., P.J. Morin, and R.N. Harris. 1983. Salamander predation and the structure of experimental communities: anuran responses. *Ecology* 64:1423-1429.
- Wilcox, E.V. 1891. Notes on Ohio batrachians. *Otterbein Aegis* 1(9):133-135.
- Wilcox, J.T. 2011. *Rana draytonii* (California Red-legged Frog). Predation. *Herpetological Review* 42:414-415.
- Wilczynski, W., H.H. Zakon, and E.A. Brenowitz. 1984. Acoustic communication in Spring Peepers: call characteristics and neurophysiological aspects. *Journal of Comparative Physiology A* 155:577-584.
- Wiley, J.E. 1982. Chromosome banding patterns of treefrogs (Hylidae) of the eastern United States. *Herpetologica* 38:507-520.
- Wilkerson, C.R. 2001. Effect of spatial

- configuration of isolated temporary wetlands on anuran metapopulations as mediated through predator-prey relations. M.S. thesis, University of Florida, Gainesville.
- Wilkinson, J.A. 2006. *Rana aurora draytonii* (California Red-legged Frog). Defensive behavior. Herpetological Review 37:207-208.
- Wilks, B.J., and H.E. Laughlin. 1962. Artificial hybridization between the microhylid genera *Hypopachus* and *Gastrophryne*. Texas Journal of Science 14:183-187.
- Willhite, C., and P.V. Cupp Jr. 1982. Daily rhythms of thermal tolerance in *Rana clamitans* (Anura: Ranidae) tadpoles. Comparative Biochemistry and Physiology 72A:255-257.
- Williams, B.K., and R.D. Semlitsch. 2009. Larval responses of three Midwestern anurans to chronic, low-dose exposures of four herbicides. Archives of Environmental Contaminants and Toxicology 58:819-827.
- Williams, B.K., T.A.G. Rittenhouse, and R.D. Semlitsch. 2008a. Leaf litter input mediates tadpole performance across forest canopy treatments. Oecologia 155:377-384.
- Williams, B.K., T.A.G. Rittenhouse, and R.D. Semlitsch. 2008b. Effects of shade and pond substrate on larval fitness traits in three anurans. Oecologia 155:377-384.
- Williams, D.D., and S.J. Taft. 1980. Helminths of anurans from NW Wisconsin. Proceedings of the Helminthological Society of Washington 47:278.
- Williams, K.L., and P.S. Chrapliwy. 1958. Selected records of amphibians and reptiles from Arizona. Transactions of the Kansas Academy of Science 61:299-301.
- Williams, M.Y. 1920. Mink Frog at Moose Factory, James Bay. Canadian Field-Naturalist 34:125.
- Williams, P.J., J.R. Robb, R.H. Kappler, T.E. Piening, and D.R. Karns. 2012a. Intraspecific density dependence in larval development of the Crawfish Frog, *Lithobates areolatus*. Herpetological Review 43:36-38.
- Williams, P.J., J.R. Robb and D.R. Karns. 2012b. Habitat selection by Crawfish Frogs (*Lithobates areolatus*) in a large mixed grassland/forest habitat. Journal of Herpetology 46:682-688.
- Williams, P.J., J.R. Robb and D.R. Karns. 2012c. Occupancy dynamics of breeding Crawfish Frogs in southeastern Indiana. Journal of Wildlife Management 36:350-357.
- Williams, P.K. 1969. Ecology of *Bufo hemiophrys* and *B. americanus* tadpoles in northwestern Minnesota. M.S. thesis, University of Minnesota, Minneapolis.
- Williamson, G.K., and R.A. Moulis. 1994. Distribution of amphibians and reptiles in Georgia. Vol. 1, maps; Vol. 2, locality data. Special Publication No. 3, Savannah Science Museum, Savannah, GA.
- Williamson, M.A., P.W. Hyder and J.S. Applegarth. 1994. Snakes, Lizards, Turtles, Frogs, Toads & Salamanders of New Mexico. Sunstone Press, Santa Fe, NM.
- Willis, Y.L., D.L. Moyle, and T.S. Baskett. 1956. Emergence, breeding, hibernation, movements and transformation of the Bullfrog, *Rana catesbeiana*, in Missouri. Copeia 1956:30-41.
- Willson, J.D., W.A. Hopkins, C.M. Bergeron, and B.D. Todd. 2012. Making leaps in amphibian ecotoxicology: translating individual-level effects of contaminants to population viability. Ecological Applications 22:1791- 1802.
- Wilmhoff, C.D., L. Williams, R. MacDonald, S. Fisher, and J. Slothouber. 1999. Geographic distribution: *Pseudacris brachyphona* (Mountain Chorus Frog). Herpetological Review 30:173.
- Wilson, A.K. 2000. Amphibian and reptile surveys in the Kaskaskia River drainage of Illinois during 1997 and 1998. Journal of the Iowa Academy of Science 107:203-205.
- Wilson, D.J., and H. Lefcort. 1993. The effect of predator diet on the alarm response of Red-legged Frog, *Rana aurora*, tadpoles. Animal Behaviour 46:1017-1019.
- Wilson, G.A., T.L. Fulton, K. Kendall, G. Scrimgeour, C.A. Paszkowski, and D.W. Coltman. 2008a. Genetic diversity and structure in Canadian Northern Leopard Frog (*Rana pipiens*) populations: implications for reintroduction programs. Canadian Journal of Zoology 86:863-874.
- Wilson, G.A., T.L. Fulton, K. Kendall, D.M. Schock, C.A. Paszkowski, and D.W. Coltman. 2008b. Genetic evidence for single season polygyny in the Northern Leopard Frog (*Rana pipiens*). Herpetological Review 39:46-50.
- Wilson, L.D., and L. Porras. 1983. The ecological impact of man on the south Florida herpetofauna. University of Kansas, Museum of Natural History Special Publication 9:1-9.
- Wilson, L.W. 1945. Amphibians of Droop Mountain State Park. Proceedings of the West

- Virginia Academy of Science 16:39-41.
- Wilson, V.V. 1975. The systematics and paleoecology of two Pleistocene herpetofaunas of the southeastern United States. Ph.D. diss. Michigan State University, East Lansing.
- Windes, K.M. 2010. Treefrog (*Hyla squirella*) responses to rangeland management in semi-tropical Florida, USA. M.S. thesis, University of Central Florida, Orlando.
- Windmiller B.S. 1990. The limitations of Massachusetts regulatory protection for temporary pool breeding amphibians. M.S. thesis, Tufts University, Medford, MA.
- Windmiller, B., R.N. Homan, J.V. Regosin, L.A. Willitts, D.L. Wells, and J.M. Reed. 2008. Breeding amphibian population declines following loss of upland forest habitat around vernal pools in Massachusetts, USA. Pp. 41-51 In J.C. Mitchell, R.E. Jung Brown, and B. Bartholomew (eds.), Urban Herpetology. Herpetological Conservation 3. Society for the Study of Amphibians and Reptiles, Salt Lake City, UT.
- Winn, B., J.B. Jensen, and S. Johnson. 1999. Geographic distribution. *Eleutherodactylus planirostris*. Herpetological Review 30:49.
- Withers, D.I. 1992. The Wyoming toad (*Bufo hemiophrys baxteri*): an analysis of habitat use and life history. M.S. thesis, University of Wyoming, Laramie.
- Witte, C.L., M.J. Sredl, A.S. Kane, and L.L. Hungerford. 2008. Epidemiologic analysis of factors associated with local disappearances of native ranid frogs in Arizona. Conservation Biology 22:375-383.
- Witte, K., K.-C. Chen, W. Wilczynski, and M.J. Ryan. 2000. Influence of amplexus on phonotaxis in the cricket frog *Acris crepitans blanchardi*. Copeia 2000:257-261.
- Witte, K., M.J. Ryan, and W. Wilczynski. 2001. Changes in the frequency structure of a mating call decrease its attractiveness to females in the cricket frog *Acris crepitans blanchardi*. Ethology 107: 685-699.
- Witte, K., H.E. Farris, M.J. Ryan, and W. Wilczynski. 2005. How cricket frog females deal with a noisy world: habitat-related differences in auditory tuning. Behavioral Ecology 16:571-579.
- Witters, L.R., and L. Sievert. 2001. Feeding causes thermophily in the Woodhouse's Toad (*Bufo woodhousii*). Journal of Thermal Biology 26:205-208.
- Witschi, E. 1953. The Cherokee Frog, *Rana sylvatica cherokiana* nom. nov., of the Appalachian Mountain region. Proceedings of the Iowa Academy of Science 60:764-769.
- Wojtaszek, B.F., B. Staznik, D.T. Chartrand, G.R. Stephenson, and D.G. Thompson. 2004. Effects of Vision™ herbicide on mortality, avoidance response, and growth of amphibian larvae in two forest wetlands. Environmental Toxicology and Chemistry 23:832-842.
- Wolf, K., G.L. Bullock, C.E. Dunbar, and M.C. Quimby. 1968. Tadpole edema virus: a viscerotropic pathogen for anuran amphibians. Journal of Infectious Disease 118:253-262.
- Wolff, B.G., S.M. Conway and C.J. Dabney III. 2012. *Batrachochytrium dendrobatidis* and ranavirus in anurans inhabiting decorative koi ponds near Minneapolis, Minnesota. Herpetological Review 43:427-429.
- Wollmuth, L.P., L.I. Crawshaw, R.B. Forbes, and D.A. Grahn. 1987. Temperature selection during development in a montane anuran species, *Rana cascadae*. Physiological Zoology 60:472-480.
- Woltz, H.W., J.P. Gibbs, and P.K. Ducey. 2008. Road crossing structures for amphibians and reptiles: informing design through behavioral analysis. Biological Conservation 141:2745-2750.
- Woo, P.T.K., and J.P. Bogart. 1984. *Trypanosoma* sp. (Protozoa; Kinetoplastida) in Hylidae (Anura) from eastern North America with notes on their distribution and prevalences. Canadian Journal of Zoology 62:820-824.
- Wood, J.T. 1948. *Microhyla c. carolinensis* in an ant nest. Copeia 1948:226.
- Wood, K.V., J.D. Nichols, H.F. Percival, and J.H. Hines. 1998. Size-sex variation in survival rates and abundance of Pig Frogs, *Rana grylio*, in northern Florida wetlands. Journal of Herpetology 32:527-535.
- Wood, T.S. 1977. Food habits of *Bufo canorus*. M.S. thesis, Occidental College, Los Angeles, CA.
- Wood, W.F. 1935. Encounters with the Western Spadefoot, *Scaphiopus hammondii*, with a note on a few albino larvae. Copeia 1935:100-102.
- Woodford, J.E., and M.W. Meyer. 2003. Impact of lakeshore development on Green Frog abundance. Biological Conservation 110:277-284.
- Woodhams, D.C., V.T. Vredenburg, M.-A. Simon, D. Billheimer, B. Shakhtour, Y. Shyr, C.J. Briggs, L.A. Rollins-Smith, and R.N.

- Harris. 2007. Symbiotic bacteria contribute to innate immune defenses of the threatened Mountain Yellow-legged Frog, *Rana muscosa*. Biological Conservation 138:390-398.
- Woodhams, D.C., R.A. Alford, C.J. Briggs, M. Johnson, and L.A. Rollins-Smith. 2008. Life-history trade-offs influence disease in changing climates: strategies of an amphibian pathogen. Ecology 89:1627-1639.
- Woodhouse, S.W. 1854. Report on the natural history of the country passed over by the exploring expedition under the command of Brev. Capt. L. Sitgreaves, United States Topographical Engineers, during the year 1851. Pp. 33-40 In Report of an Expedition down the Zuni and Colorado Rivers, by Captain L. Sitgreaves. Beverley Tucker, Senate Printer, Washington, DC.
- Woodliffe, P.A. 1989. Inventory, assessment, and ranking of natural areas of Walpole Island. Proceedings of the Eleventh North American Prairie Conference, pp. 47-52.
- Woodward, B.D. 1982a. Sexual selection and nonrandom mating patterns in desert anurans (*Bufo woodhousei*, *Scaphiopus couchi*, *S. multiplicatus* and *S. bombifrons*). Copeia 1982:351-355.
- Woodward, B.D. 1982b. Male persistence and mating success in Woodhouse's toad (*Bufo woodhousei*). Ecology 63:583-585.
- Woodward, B.D. 1983. Predator-prey interactions and breeding-pond use of temporary-pond species in a desert anuran community. Ecology 64:1549-1555.
- Woodward, B.D. 1984. Arrival to and location of *Bufo woodhousei* in the breeding pond: effect on the operational sex ratio. Oecologia 62:240-244.
- Woodward, B.D. 1987a. Clutch parameters and pond use in some Chihuahuan Desert anurans. Southwestern Naturalist 32:13-19.
- Woodward, B.D. 1987b. Interactions between Woodhouse's Toad tadpoles (*Bufo woodhousei*) of mixed sizes. Copeia 1987:380-386.
- Woodward, B.D., and S. Mitchell. 1990. Predation on frogs in breeding choruses. Southwestern Naturalist 35:449-450.
- Woodward, B.D., and S. Mitchell. 1992. Temperature variation and species interactions in aquatic systems in Grand Teton National Park. Pp. 140-145 In University of Wyoming/National Park Service Research Center, 16th Annual Report.
- Woolbright, L.L., E.J. Greene, and G.C. Rapp. 1990. Density-dependent mate searching strategies of male Woodfrogs. Animal Behaviour 40:135-142.
- Woolbright, L.L., A.H. Hara, C.M. Jacobsen, W.J. Mautz, and F.L. Benevides Jr. 2006. Population densities of the coquí, *Eleutherodactylus coqui* (Anura: Leptodactylidae) in newly invaded Hawaii and in native Puerto Rico. Journal of Herpetology 40:122-126.
- Wright, A.A., and A.H. Wright. 1933. Handbook of Frogs and Toads. 1st ed. Comstock Publishing Associates, Ithaca, NY. [second edition, 1942]
- Wright, A.H. 1914. Life-histories of the Anura of Ithaca, New York. Carnegie Institution of Washington, Publication 197.
- Wright, A.H. 1924. A new bullfrog (*Rana heckscheri*) from Georgia and Florida. Proceedings of the Biological Society of Washington 37:141-152.
- Wright, A.H. 1929. Synopsis and description of North American tadpoles. Proceedings of the United States National Museum 74:1-70.
- Wright, A.H. 1932. Life-Histories of the Frogs of Okefenokee Swamp, Georgia. Macmillan Co., New York. [reprinted 2002]
- Wright, A.H., and A.A. Wright. 1938. Amphibians of Texas. Transactions of the Texas Academy of Science 21:5-44.
- Wright, A.H., and A.A. Wright. 1949. Handbook of Frogs and Toads. 3rd ed. Comstock Publishing Associates, Ithaca, NY.
- Wright, H.P., and G.S. Myers. 1927. *Rana areolata* at Bloomington, Indiana. Copeia (159):173-175.
- Wright, J.W. 1966. Predation on the Colorado River Toad, *Bufo alvarius*. Herpetologica 22:127-128.
- Wright, M.F., and S.I. Guttman. 1995. Lack of an association between heterozygosity and growth rate in the Wood Frog, *Rana sylvatica*. Canadian Journal of Zoology 73:569-575.
- Wyatt, J.L., and E.A. Forsyth. 2004. Conservation implications of predation by Cuban Treefrogs (*Osteopilus septentrionalis*) on native hylids in Florida. Florida Scientist 3:695-700.
- Wygoda, M.L. 1984. Low cutaneous evaporative water loss in arboreal frogs. Physiological Zoology 57:329-337.
- Wylie, K., M.-L. Gramby, and M. Kostalos. 2009. Inhibition of metamorphosis in *Bufo americanus* tadpoles in Nine Mile Run

- Restoration Area, Pittsburg [sic], Pennsylvania USA. *Froglog* 91:10-12.
- Wylie, S.R. 1981. Effects of basking on the biology of the Canyon Treefrog, *Hyla arenicolor* Cope. Ph.D. diss. Arizona State University, Tempe.
- Wyman, R.L. 1988. Soil acidity and moisture and the distribution of amphibians in five forests of southcentral New York. *Copeia* 1988:394-399.
- Yahner, R.H., W.C. Bramble, and W.R. Byrnes. 2001. Response of amphibian and reptile populations to vegetation maintenance of an electric transmission line right-of-way. *Journal of Arboriculture* 27:215-221.
- Yeager, D. 1926. Miscellaneous notes. *Yellowstone Nature Notes* 3(4):7.
- Yeary, C.M. 1979. Support for a mutualistic relationship between the Western Narrow-mouthed Frog, *Gastrophryne olivacea*, and the tarantula, *Dugesia hentzii*. M.S. thesis, University of Tulsa, Tulsa, OK.
- Yoder, H.R. 1998. Community ecology of helminth parasites infecting molluscan and amphibian hosts. Ph.D. diss. University of Wisconsin-Milwaukee.
- Yoder, H.R., and J.R. Coggins. 1996. Helminth communities in the northern Spring Peeper, *Pseudacris c. crucifer* Wied, and the wood frog, *Rana sylvatica* LeConte, from southeastern Wisconsin. *Journal of the Helminthological Society of Washington* 63:211-214.
- Yoder, H.R., and J.R. Coggins. 2007. Helminth communities in five species of sympatric amphibians from three adjacent ephemeral ponds in southeastern Wisconsin. *Journal of Parasitology* 93:755-760.
- Yoder, H.R., J. R. Coggins, and J. C. Reinbold. 2001. Helminth parasites of the Green Frog (*Rana clamitans*) from southeastern Wisconsin, U.S.A. *Comparative Parasitology* 68:269-272.
- Young, F.N., and C.C. Goff. 1939. An annotated list of the arthropods found in the burrows of the Florida Gopher Tortoise, *Gopherus polyphemus* (Daudin). *Florida Entomologist* 22:53-62.
- Young, J.E., and B.I. Crother. 2001. Allozyme evidence for the separation of *Rana areolata* and *Rana capito* and for the resurrection of *Rana sevosa*. *Copeia* 2001:382-388.
- Young, M.K., G.T. Allison, and K. Foster. 2007. Observations of Boreal Toads (*Bufo boreas* oreas) and *Batrachochytrium dendrobatidis* in south-central Wyoming and north-central Colorado. *Herpetological Review* 38:146-150.
- Young, M.T. 2011. The Guide to Colorado Reptiles and Amphibians. Fulcrum Publishing, Golden, Colorado.
- Youngstrom, K.A., and H.M. Smith. 1936. Description of the larvae of *Pseudacris triseriata* and *Bufo woodhousii woodhousii* (Anura). *American Midland Naturalist* 17:629-632.
- Zacharow, M., W.J. Barichivich, and C.K. Dodd Jr. 2003. Using ground-placed PVC pipes to monitor hylid treefrogs: capture biases. *Southeastern Naturalist* 2:575-590.
- Zaga, A., E.E. Little, C.F. Raben, and M.R. Ellersieck. 1998. Photoenhanced toxicity of a carbamate insecticide to early life stage anuran amphibians. *Environmental Toxicology and Chemistry* 17:2543-2553.
- Zamparo, D., and D.R. Brooks. 2005. Three rarely reported digeneans inhabiting amphibians from Vancouver Island, British Columbia, Canada. *Journal of Parasitology* 91:1242-1244.
- Zampella, R.A., and J.F. Bunnell. 2000. The distribution of anurans in two river systems of a coastal plain watershed. *Journal of Herpetology* 34:210-221.
- Zell, G.A. 1986. The clawed frog: an exotic from South Africa invades Virginia. *Virginia Wildlife* 47(2):28-29.
- Zellmer, A.J., C.L. Richards, and L.M. Martens. 2008. Low prevalence of *Batrachochytrium dendrobatidis* across *Rana sylvatica* populations in southeastern Michigan, USA. *Herpetological Review* 39:196-199.
- Zelmer, D.A., E.J. Wetzel, and G.W. Esch. 1999. The role of habitat in structuring *Halipegus occidualis* metapopulations in the Green Frog. *Journal of Parasitology* 85:19-24.
- Zenisek, C.J. 1963. A study of the natural history and ecology of the leopard frog, *Rana pipiens* Schreber. Ph.D. diss., Ohio State University, Columbus.
- Zettergren, L.D., B.W. Boldt, D.H. Petering, M.S. Goodrich, D.N. Weber, and J.G. Zettergren. 1991. Effects of prolonged low-level cadmium exposure on the tadpole immune system. *Toxicology Letters* 55:11-19.
- Zeyl, C. 1993. Allozyme variation and divergence among populations of *Rana sylvatica*. *Journal Herpetology* 27:233-236.
- Zielinski, W.J., and G.T. Bartholomew. 1989.

- African Clawed Frog skin compounds: antipredatory effects on African and North American water snakes. *Animal Behaviour* 38:1083-1086.
- Ziesmer, T.C. 1997. Vocal behavior of the foothill and Mountain Yellow-legged Frogs (*Rana boylii* and *Rana muscosa*). M.S. thesis, California State University, Sonoma, CA.
- Zippel, K.C., and C. Tabaka. 2008. Amphibian chytridiomycosis in captive *Acris crepitans blanchardi* (Blanchard's Cricket Frog) collected from Ohio, Missouri and Michigan, USA. *Herpetological Review* 39: 192-193.
- Zug, G.R., and P.B. Zug. 1979. The Marine Toad, *Bufo marinus*: a natural history resumé of native populations. *Smithsonian Contributions to Zoology* (284):1-58.
- Zulich, M.O. 1966. A population study of four species of frogs. M.S. thesis, Ball State University, Muncie, IN.
- Zweifel, R.G. 1955. Ecology, distribution, and systematics of frogs of the *Rana boylei* group. University of California Publications in Zoology 54:207-292.
- Zweifel, R.G. 1956a. Two pelobatid frogs from the Tertiary of North America and their relationships to fossil and recent forms. *American Museum Novitates* 1762:1-45.
- Zweifel, R.G. 1956b. A survey of the frogs of the *augusti* group, genus *Eleutherodactylus*. *American Museum Novitates* 1813:1-35.
- Zweifel, R.G. 1961. Larval development of the tree frogs *Hyla arenicolor* and *Hyla wrightorum*. *American Museum Novitates* 2056:1-19.
- Zweifel, R.G. 1968a. Effects of temperature, body size and hybridization on mating calls of toads *Bufo a. americanus* and *Bufo woodhousei fowleri*. *Copeia* 1968:269-285.
- Zweifel, R.G. 1968b. Reproductive biology of anurans of the arid Southwest, with adaptation of embryos to temperature. *Bulletin of the American Museum of Natural History* 140:1-64.
- Zweifel, R.G. 1970a. Distribution and mating call of the treefrog, *Hyla chrysoscelis*, at the northeastern edge of its range. *Chesapeake Science* 11:94-97.
- Zweifel, R.G. 1970b. Descriptive notes on larvae of toads of the *debilis* group, genus *Bufo*. *American Museum Novitates* 2407:1-13.
- Zweifel, R.G. 1989. Calling by the frog, *Rana sylvatica*, outside the breeding season. *Journal of Herpetology* 23:185-186.

FOOTNOTES

- * This publication is variously cited as 1981 or 1982. Vol. 60 was published in 1981, although issue 12 did not appear until January 1982. The online journal is dated 1981, but the reprints are dated 1982.
- ** Dated 1929, but published 1930.
- *** Dated 1866 but published in 1867. The date attributed to newly described species is thus 1867. Also see Cope (1877).
- ± W.C. Brown's name was apparently omitted as a junior author. He appears as such in the table of contents.
- # The amphibian sections of this monograph were actually written by Crystal Thompson and Helen Thompson.

OTHER ANURAN-INCLUSIVE BIBLIOGRAPHIES OF NOTE

- Banta, B.H. 1965. An annotated chronological bibliography of the herpetology of the state of Nevada. *The Wasmann Journal of Biology* 23:1-224.
- Campbell, R.W., M.G. Shepard, B.M. Van Der Raay and P.T. Gregory. 1982. A bibliography of Pacific Northwest herpetology. British Columbia Provincial Museum, Heritage Record No. 14.
- Carpenter, C.C., and J.J. Krupa. 1989. Oklahoma Herpetology, An Annotated Bibliography. University of Oklahoma Press, Norman.
- Collins, J.T., and R.E. Kurtz. 1977. A bibliography of the amphibians and reptiles of Kentucky (1820-1976). Meseraull Printing, Lawrence, KS.
- Corn, P.S., R.B. Bury and H.H. Welsh. 1984. Selected bibliography of Wyoming amphibians and reptiles. Smithsonian Herpetological Information Service No. 59.
- Dixon, J.R. 2000. Amphibians and Reptiles of Texas, with Keys, Taxonomic Synopses, Bibliography, and Distribution Maps. 2nd ed. Texas A & M University Press, College Station.
- Slutkowski, L.A., P.A. Cochran and M.J. Mossman. 1987. Bibliography of Wisconsin herpetology. Wisconsin Endangered Species Resources Report 28.
- Enge, K.M. 2002. An updated, indexed bibliography of the herpetofauna of Florida. Florida Fish and Wildlife Conservation Commission, Technical Report No. 19. [earlier

- edition with C.K. Dodd, Jr. as coauthor dated 1992] [ongoing online version at: <http://legacy.myfwc.com/herpbibl/>]
- Moriarty, J.J., and D.G. Jones. 1988. An annotated bibliography of Minnesota herpetology 1900-1985. J.F. Bell Museum of Natural History, Minneapolis.
- Morris, M.A., R.S. Funk and P.W. Smith. 1983. An annotated bibliography of the Illinois herpetological literature 1960-1980, and an updated checklist of species of the state. Illinois Natural History Survey Bulletin 33:123-137.
- Redmond, W.H., A.C. Echternacht and A.F. Scott. 1990. Annotated checklist and bibliography of amphibians and reptiles of Tennessee (1835 through 1989). Miscellaneous Publications of the Center for Field biology, Austin Peay State University, Clarksville, TN.
- Stewart, M.M., and L.F. Biuso. 1982. A bibliography of the Green Frog, *Rana clamitans* Latreille 1801-1981. Smithsonian Herpetological Information Service No. 56.



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The Southern Leopard Frog (Lithobates sphenocephalus) is a common anuran throughout the southeastern United States and Canada. (Photograph by C. Kenneth Dodd).