

SUPPLEMENTAL INFORMATION

HERPETOLOGICAL SURVEY OF THE PROPOSED BAMBAMA-ZANAGA MINE SITE, DEPARTMENT OF LÉKOUMOU, REPUBLIC OF CONGO

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Appendix I. Checklist of species within five study areas in Lékoumou Department, Republic of Congo (Bambama, Simombondo, Kissiki, Lebayi, and Longou).

AMPHIBIA

AMPHIBIA: ANURA

ARTHROLEPTIDAE

Arthroleptis adelphus Perret, 1966.—We collected one specimen at night from forest at Bambama (USNM 584017). The COI sequence data from this specimen (KY080052) were placed in their own BIN, apart from sequences of this species from Gabon (Deichmann et al. 2017). However, 16S sequence data from this Congolese specimen (KY079521) together formed a clade with *A. adelphus* samples from

mainland Gabon, Bioko Island, and Cameroon. This species is known from forests of southern Cameroon, Equatorial Guinea, and Gabon (International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from <http://www.iucnredlist.org> [Accessed 20 November 2018]). This is the first record of this species from the Republic of Congo.

***Arthroleptis cf. poecilonotus* Peters, 1863.** — We collected 28 specimens along forest trails, in vegetable patches, in manioc fields, in savannah, in savannah/forest mosaic, or from pitfall traps at Bambama and Lebayi (USNM 584011, 584016, 584018–19, 584020, 584022–24, 584027–30, 584033–584034, 584043–50, 584053–58). *Arthroleptis poecilonotus* is a widespread species complex consisting of morphologically similar yet genetically divergent lineages (e.g. Rödel 2000; Rödel and Bangoura 2004; Blackburn 2008, 2010). Specimens analyzed by Deichmann et al. (2017) from Gabon and Congo, including COI sequences from these specimens (KY079527, KY079530, KY079532–37), were placed in one BIN. Sequence data from 16S (KY080060, KY080062–67) were found within a clade that included specimens from Congo, Cameroon, and Nigeria. Blackburn (2008) also identified three clades of *A. poecilonotus*: "Cameroon, Togo Hills, and Western [Ghana + Sierra Leone]." Given that the type locality for *A. poecilonotus* is Ghana, it is likely that those lineages in Central Africa will be renamed, possibly using species previously synonymized with *A. poecilonotus*, such as *A. macrodactylus* or *A. inguinalis*. For now, we identify these specimens as *A. cf. poecilonotus* and align them with the "*A. poecilonotus* Cameroon clade" of Blackburn (2008). This species was previously identified by Jackson and Blackburn (2007, 2010) from Republic of Congo.

***Arthroleptis sylvaticus* (Laurent, 1954).**—We collected 27 specimens in forest and near streams, lakes, and rivers at Bambama, Kissiki, and Lebayi (USNM 584001–08, 584010, 584012–15, 584025–26, 584031–32, 584035–37, 584039–40, 584042, 584051, 584062–64). The COI sequence data from these specimens (KY079545–32) and those from Gabon were placed into a single BIN (Deichmann et al., 2017). Since some specimens within this BIN were closest to the type locality for *A. sylvaticus* ('Buta',

Uele, Dem. Rep. of Congo), this clade was identified as this species. The 16S data for these specimens (KY080075–82) were found in a clade that included specimens from Cameroon.

Arthroleptis variabilis – We collected one specimen at night in forest at Bambama (USNM 584009, Fig. 4a). This is a lowland rainforest species, ranging from eastern Nigeria through Cameroon, Gabon, Equatorial Guinea (including both mainland areas and Bioko Island) and into Central African Republic, Republic of Congo, and Democratic Republic of Congo (Amphibian Species of the World: an Online Reference. Version 6.0 [January 2, 2018]. Available from: <http://research.amnh.org/herpetology/amphibia/index.html>. [Accessed 6 December 2018]).

Arthroleptis sp. A— We collected two specimens at night in forest at Bambama (USNM 584038, 584041). We sequenced 16S rRNA from one specimen (584041; GenBank # MK684177), and these data were compared to those available in GenBank using BLAST. The nearest GenBank sequence data were *A. sylvaticus* from Cameroon (FJ151106; 92% identical) with sufficient divergence to warrant identifying these specimens as a separate species. Note: this species is not conspecific with *Arthroleptis sp. A* identified by Deichmann et al. (2017).

Arthroleptis sp. B— We collected five specimens along forest trails, beside tracks, from pitfall traps, and in vegetable patches at Kissiki and in savannah at Lebayi (USNM 584052, 584059–61, 584065). COI sequence data from these specimens (KY079542–44) were placed in their own BIN (Deichmann et al., 2017). The 16S sequence data (KY080072–74) were found in their own clade and identified as *Arthroleptis sp. B*, which was most closely related to two other clades, including *A. sylvaticus* and *Arthroleptis sp. A* from Gabon.

Astylosternus batesi (Boulenger, 1900).—We collected six specimens from leaf litter, near rivers or streams, and a vegetable patch in gallery forest near the head of a stream at Lebayi and Loungou. (USNM 584066–71). COI sequences from these specimens (KY079562–67) were placed in a single BIN. The 16S sequence data (KY080090–94) formed a clade with one *A. batesi*, two specimens identified as *A.*

schioetzi from Cameroon, and one identified as *A. diadematus* in GenBank with sequence divergences <2–5% (Deichmann et al. 2017). *Astylosternus batesi* is distributed in Cameroon south of the Sanaga River, Equatorial Guinea, Gabon, western Republic of Congo, southwestern Central African Republic, and western Democratic Republic of Congo (Amphibian Species of the World: an Online Reference. Version 6.0 [January 2, 2018]. Available from:

<http://research.amnh.org/herpetology/amphibia/index.html>. [Accessed 6 December 2018]).

***Cardioglossa gracilis* Boulenger, 1900.**—We collected one specimen from a vegetable patch in gallery forest near the head of a stream at Lebayi (USNM 584072, Fig. 4b). The *C. gracilis* COI sequence data from this specimen (KY079571) were placed in its own BIN, and 16S sequence data (KY080098) were nearly identical to other *C. gracilis* sequences in GenBank (Deichmann et al. 2017). This species is found in forested areas under 1200 m elevation and ranges from southeastern Nigeria to northwestern Democratic Republic of Congo, including Cameroon, Equatorial Guinea, Gabon, and southwestern Central African Republic (Amphibian Species of the World: an Online Reference. Version 6.0 [January 2, 2018]. Available from: <http://research.amnh.org/herpetology/amphibia/index.html>. [Accessed 6 December 2018]; International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from <http://www.iucnredlist.org> [Accessed 20 November 2018]). This is the first confirmed record of this species in the Republic of Congo, which extends the known range of *C. gracilis* southwards from Gabon.

***Cardioglossa gratioiosa* Amiet, 1972.**—We collected two specimens in forest at night at Bambama and from the bank of the Kassiki River at Kissiki (USNM 584073–74). Sequence data of COI from one of these specimens (KY079572) were placed in their own BIN; no 16S sequence data were obtained (Deichmann et al., 2017). This species ranges from central and southern Cameroon and Equatorial Guinea to southern Gabon and northern Democratic Republic of the Congo (International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from

<http://www.iucnredlist.org> [Accessed 20 November 2018]). This is the first record of this species in the Republic of Congo, extending the range of *C. gratiosa* southwards from Gabon.

***Cardioglossa leucomystax* (Boulenger, 1903).**—We collected two specimens one from a pitfall trap in forest at Kissiki and from leaf litter near the river at Loungou (USNM 584075–76). The *C. leucomystax* COI sequence data (KY079573, KY079575) were placed in their own BIN, and 16S sequence data (KY080099, KY080101) were nearly identical to other *C. leucomystax* sequences from GenBank that were collected from Cameroon, Central African Republic, and Gabon (Deichmann et al., 2017).

***Leptopelis aubryi* (Duméril, 1856).**—We collected three specimens in a manioc field in forest at Bambama and from a pitfall trap in forest at Simombondo (USNM 584077–79). Deichmann et al. (2017) placed COI sequences from these three specimens (KY079715–17) and an additional thirteen specimens from Gabon within one BIN. In addition, 16S data placed sequences from these *L. aubryi* (KY080240–42) in a clade with other samples of this species from Gabon and Cameroon. This species is distributed from the southern Nigeria/Cameroon border to southern Central African Republic, across the Republic of Congo, and extreme western and northern Democratic Republic of Congo (Amphibian Species of the World: an Online Reference. Version 6.0 [January 2, 2018]. Available from:

<http://research.amnh.org/herpetology/amphibia/index.html>. [Accessed 6 December 2018]). This species was recorded from Nouabalé-Ndoki National Park in the Republic of Congo (Jackson and Blackburn 2007).

***Leptopelis aubryioides* (Andersson, 1907).**—We collected two specimens on the riverbank at Loungou and at night in forest at Simombondo (USNM: 584080–81, Fig. 4c). The COI sequences from these two *L. aubryioides* (KY079722–23) were placed in their own BIN, and 16S sequences (KY080247–48) were greater than 4.5% divergent from a specimen of *L. millsoni* from Cameroon (Deichmann et al, 2017). This species ranges from southeastern Nigeria through central and southern Cameroon and Gabon to southern Congo (Amphibian Species of the World: an Online Reference. Version 6.0 [January 2, 2018]. Available from: <http://research.amnh.org/herpetology/amphibia/index.html>. [Accessed 6 December 2018]).

***Leptopelis boulengeri* (Werner, 1898).**—We collected one specimen in forest at Simombondo (USNM 584082). The COI sequence data from this specimen (KY079724) were placed in their own BIN, and 16S data (KY080249) fell within a clade of *L. boulengeri* sequences from Cameroon (Deichmann et al., 2017). This species ranges from southern Nigeria and southern Cameroon southward through Equatorial Guinea, including Bioko Island, Gabon and Republic of Congo to western Democratic Republic of Congo (Amphibian Species of the World: an Online Reference. Version 6.0 [January 2, 2018]. Available from: <http://research.amnh.org/herpetology/amphibia/index.html>. [Accessed 6 December 2018]).

***Leptopelis cf. macrotis*. Schiøtz, 1967**—We collected one specimen 200 m from camp at Bambama (USNM 584085). COI sequence data from this specimen (KY079727) were placed in its own BIN (Deichmann et al. 2017). In addition, sequence data from 16S (KY080252) were consistent with a clade that included *L. macrotis* from Guinea and Liberia (KF888338–41) and a specimen of *L. millsoni* from the Democratic Republic of Congo (HQ130757), all of which were < 2.5% divergent from the Republic of Congo sequence. Given that *L. millsoni* was identified elsewhere in the tree from a sequence from Cameroon (KF888342), the name *L. cf. macrotis* was assigned. *Leptopelis macrotis* is likely more widespread than its current distribution in West Africa from Sierra Leone to Ghana (International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from <http://www.iucnredlist.org> [Accessed 20 November 2018]), or this clade represents a complex with multiple species. Jackson and Blackburn (2010) collected samples of *L. cf. millsoni* from sites near Pointe-Noire, Republic of Congo, reporting that they exhibit a subrectangular and straight interocular bar and anastomosing dorsal markings.

***Leptopelis ocellatus* (Mocquard, 1902)** .—We collected two specimens in forest and in a vegetable patch at Kissiki and Lebayi (USNM 584083–84). These COI sequences (KY079728–29) were placed in their own COI BIN (Deichmann et al. 2017). New 16S data published from a Cameroonian *L. ocellatus* (KX492625) are 99% identical to the Congolese sequence (KY080254), further confirming this identification. This species is found in forest swamps from southern Cameroon, Equatorial Guinea,

Gabon, Republic of Congo, and Democratic Republic of Congo (Amphibian Species of the World: an Online Reference. Version 6.0 [January 2, 2018]. Available from:

<http://research.amnh.org/herpetology/amphibia/index.html>. [Accessed 6 December 2018]).

***Scotobleps gabonicus* Boulenger, 1900.**—We collected one specimen from leaf litter near the river at Lebayi (USNM 584086). Sequence data from this specimen (KY079878) were placed in their own COI BIN, while 16S data (KY080407) were present in a clade with substantial genetic variation (5–8% sequence divergence), including *S. gabonicus* specimens from Cameroon and Equatorial Guinea (Deichmann et al. 2017). This monotypic species currently ranges from the Nigeria/Cameroon border through western and southwestern Cameroon, Equatorial Guinea, western Gabon, and western Democratic Republic of Congo (Amphibian Species of the World: an Online Reference. Version 6.0 [January 2, 2018]. Available from: <http://research.amnh.org/herpetology/amphibia/index.html>. [Accessed 6 December 2018]). According to IUCN (International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from <http://www.iucnredlist.org> [Accessed 20 November 2018]), there are records of *S. gabonicus* from southern and northwestern Congo; the record reported herein is the first record of this species in western Congo.

BUFONIDAE

***Sclerophrys camerunensis* (Parker, 1936).**—We collected 47 specimens in pitfall traps in forest at Kissiki, Loungou, and Simombondo (USNM 584087–4133). COI sequences from these specimens (KY079407, KY079413–22) were placed in a BIN with those from Gabon, while 16S data (KY079931, KY079938–48) were found in a clade with other *S. camerunensis* sequences from GenBank (Deichmann et al. 2017). This species is distributed across the Congo Basin from the southern Nigeria/Cameroon border to eastern Democratic Republic of Congo (Amphibian Species of the World: an Online Reference. Version 6.0 [January 2, 2018]. Available from:

<http://research.amnh.org/herpetology/amphibia/index.html>. [Accessed 6 December 2018]). Jackson and

Blackburn (2007, 2010) reported this species from Republic of Congo, although those specimens near Pointe-Noire were morphologically heterogenous and might include multiple forms.

***Sclerophrys* cf. *gracilipes* (Bocage, 1866).**—We collected one specimen at night near camp at Bambama (USNM 584134). COI sequence data from this specimen (KY079423) were placed in their own COI BIN, while 16S data (KY079949) comprised a clade with GenBank samples labeled as *S. villiersi* from Cameroon and *S. cf. gracilipes* from Cameroon and Gabon, and were different from sequences of *S. gracilipes* from GenBank. Although originally identified as *A. funereus* by Deichmann et al. (2017), this species was reidentified as *S. cf. gracilipes* given that the type series of *A. funereus* exhibits a distinctive venter with prominent white tubercles (E. Greenbaum, pers. comm.) Jackson and Blackburn (2007) recorded both *S. funereus* and *S. gracilipes* from Nouabale-Ndoki National Park, Republic of Congo.

***Sclerophrys pusilla* (Mertens, 1937).**—We collected 18 specimens in pitfall traps or by hand at night near villages or schoolyards, near gallery forest, or in a manioc field in forest at Bambama, Kissiki, and Lebayi (USNM 584140–157). The *S. maculata* COI sequence data (KY079448, KY079452–60, KY079466–67) were placed in their own BIN, and 16S sequence data (KY079972, KY079974–75, KY079981–89, KY079991–92, KY079998–99) were placed in conspecific clades with samples from GenBank (Deichmann et al., 2017). Western populations were separated from those further east in this widespread species, identifying *S. maculata* as populations from Guinea to Cameroon (Poynton *et al.* 2016). *Sclerophrys pusilla* was distributed in Angola, the Republic of the Congo, Central African Republic, Uganda, Kenya, Tanzania, Malawi, Zambia, Mozambique, Swaziland and South Africa.

***Sclerophrys tuberosa* (Günther, 1858).**—We collected five specimens by hand or in pitfall traps at night in forest or a manioc field in forest at Bambama and Lebayi (USNM 584135–39, Fig. 4d). COI sequence data (KY079490–94) were placed in their own BIN, and 16S sequence data (KY080022–26) were placed in conspecific clades with samples from GenBank (Deichmann et al. 2017). This species is known from Cameroon, Equatorial Guinea, including Bioko Island, Gabon, Republic of Congo, southwestern Central African Republic, eastward to northeastern Democratic Republic of Congo (International Union for the

Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from <http://www.iucnredlist.org> [Accessed 20 November 2018]).

CONRAUIDAE

Conraua crassipes (Buchholz and Peters, 1875).—We collected two specimens: one at Kissiki and another at Loungou in water. (USNM 584162–63). COI sequence data (KY079582–83) were placed in one BIN with another sample collected from the Republic of Congo (KY079581), and 16S sequence data (KY080108–09) were found within a clade that included GenBank sequences identified as *C. crassipes*, including at least one specimen from Cameroon (Deichmann et al. 2017). This species ranges from eastern Nigeria to western Democratic Republic of Congo, and from Cameroon, Equatorial Guinea (mainland and Bioko Island), Gabon, and the Republic of Congo; however, molecular analyses suggest that *C. crassipes* may include multiple species (International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from <http://www.iucnredlist.org> [Accessed 20 November 2018]).

DICROGLOSSIDAE

Hoplobatrachus occipitalis (Günther, 1858).—We collected one specimen in a grassy area at Lebayi (USNM 584158). The COI sequence data (KY079605) and others from Gabon and Republic of Congo were placed in the same BIN, and 16S sequence data (KY080130) formed a clade with many other *H. occipitalis* sequences in GenBank (Deichmann et al. 2017). This species is widespread across African savannah, ranging from southern Mauritania east to Ethiopia, south through East Africa to northern Zambia, southern and western Democratic Republic of Congo, Angola, and coastal Congo, Gabon and Cameroon (International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from <http://www.iucnredlist.org> [Accessed 20 November 2018]). Within Republic of Congo, it is known from Nouabalé-Ndoki National Park (Jackson and Blackburn 2007).

HYPEROLIIDAE

Hyperolius olivaceus Peters, 1876.—We collected three specimens at Kissiki (USNM 584159–584161). COI sequence data from these individuals (KY079647–51) and other Congolese specimens were placed in single BIN, which was separate from those sequences derived from Gabonese specimens (Deichmann et al. 2017). The 16S sequence data (KY080172–74, KY080176, KY080185) formed a clade with individuals identified as this species from Gabon. This species was resurrected from the synonymy of *H. cinnamomeoventris*; *Hyperolius c. olivaceus* is restricted to the Lower Guinean forests of Gabon, Equatorial Guinea, and Republic of Congo, and is comprised of two lineages that diverged in the early Pleistocene (Bell et al. 2017). These specimens extend the range eastward from the Niari Department to the Lékoumou Department within Congo.

PHRYNOBATRACHIDAE

Phrynobatrachus africanus (Hallowell, 1858).—We collected three specimens from pitfall traps in forest and along the bank of River Kissiki at Kissiki. (USNM 584170–72). Deichmann et al. (2017) found sequence data derived from these specimens (KY079746, KY079749–50) and others from Gabon and the Republic of Gabon divided among four COI BINs. The 16S sequence data (KY080271, KY080274–75) were found in a clade that contained specimens from throughout the range of this species in west Central Africa, revealing significant structure and suggesting that *P. africanus* represents a complex in need of taxonomic investigation. This species is known from Cameroon, Equatorial Guinea (including the island of Bioko), Gabon, southern Republic of Congo, and southwestern Central African Republic (International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from <http://www.iucnredlist.org> [Accessed 20 November 2018]).

Phrynobatrachus auritus Boulenger, 1900.—We collected four specimens from pitfall traps and in leaf litter near the river at Loungou and Simombondo (USNM 584165–68; Fig. 4e). COI sequence data from these specimens (KY079768–71) were separated into their own BIN from other Congolese and Gabonese

sequences, which were also placed multiple BINs (Deichmann et al. 2017). The 16S sequence data from these specimens (KY080293–95) and the others included in the study were placed clade with a single *P. auritus* GenBank specimen from Uganda. This species ranges from southeastern Nigeria, southern Cameroon, Gabon, Equatorial Guinea (including Bioko Island) eastward through the Republic of Congo, southwestern Central African Republic, and central Democratic Republic of Congo to western Uganda and Rwanda (International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from <http://www.iucnredlist.org> [Accessed 20 November 2018]). This species likely represents a species complex (Gvoždík and Zimkus, pers. comm.).

***Phrynobatrachus batesii* Boulenger, 1906.**— We collected a single specimen in forest from Kissiki (USNM 584173). COI sequence data derived from this specimen (KY079796) were in its own BIN, and 16S sequence data (KY080320) clustered with other specimens identified as this species in GenBank by Deichmann et al. (2017). This species is found in southeastern Nigeria, southern Cameroon, and northeastern Gabon; outlying records from Nigeria and Ghana likely belong to another species (International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from <http://www.iucnredlist.org> [Accessed 20 November 2018]). These specimens represent the first record in the Republic of Congo.

***Phrynobatrachus ruthbeatae* Rödel, Doherty-Bone, Kouete, Janzen, Garrett, Browne, Gonwouo, Barej, and Sandberger, 2012.**—We collected one specimen in a vegetable patch in forest at Simombondo (USNM 584174). The COI sequence data from this specimen (KY079805) were placed in its own BIN by Deichmann et al. (2017); 16S sequence data (KY080329) were sister to the sequences derived from *P. ruthbeatae* holotype and paratypes. This species was described by Rödel et al. (2012) from Cameroon.

***Phrynobatrachus* sp.**—We collected one specimen from beneath leaf litter at Loungou (USNM 584164). The COI sequence data derived from this specimen (KY079830) were placed in its own BIN by Deichmann et al. (2017). The corresponding 16S sequence data (KY080354) were sister to specimens in

GenBank identified as *P. dispar*, *P. leveleve*, and *P. mababiensis*. This specimen is morphologically similar to those identified as *P. ogoensis*, although this specimen lacks webbing on the feet, a trait characteristic of *P. ogoensis*. No sequence data currently exists for a specimen of *P. ogoensis*.

PIPIDAE

***Hymenochirus* sp.**—We collected one specimen in a pitfall trap in forest at Simombondo (USNM 584175). The COI sequence data derived from this specimen (KY079619) were placed in their own BIN, and 16S sequence data (KY080144) were sister to specimens identified as *H. curtipes* from the Congo and excluded *H. boettgeri* (Deichmann et al., 2017). This specimen was examined using the morphological key included Frétey et al. (2011), but could not be identified to species. Given the known distributions and the locality of this specimen, it is likely that this is *H. feae*, distributed in Gabon, or an undescribed species (International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from <http://www.iucnredlist.org> [Accessed 20 November 2018]).

***Xenopus melloptropicalis* Evans, Carter, Greenbaum, Gvoždík, Kelley, McLaughlin, Pauwels, Portik, Stanley, Tinsley, Tobias, and Blackburn, 2015.**—We collected one specimen from a pitfall trap in forest at Simombondo (USNM 584176). The COI sequence data from this specimen (KY079902) were placed in a BIN with other specimens from Congo, as well as a single specimen from western Democratic Republic of Congo (Deichmann et al., 2017). The 16S sequence data (KY080430) formed a clade with all those sequences identified as *X. melloptropicalis* in GenBank. This species is known from Kinshasa, Democratic Republic of Congo, to the northeast of this locality along the Congo River near the confluence with the Kwa River, and from Pointe Noire, Republic of Congo (Evans et al. 2015).

***Xenopus pygmaeus* Loumont, 1986.**—We collected 18 specimens from pitfall traps in forest at Simombondo (USNM 584177–94). COI sequence data derived from these specimens (KY079880–84) were placed in a BIN with additional Congolese specimens (Deichmann et al. 2017). The corresponding 16S sequence data (KY080409–12) were found in a clade with specimens at base of the *X. allofraseri*

clade with *X. pygmaeus* specimens from Gabon and Democratic Republic of Congo, rendering *X. pygmaeus* paraphyletic. Inclusion of samples from the Congo Basin may resolve *X. pygmaeus* as monophyletic. This species was identified by Zimkus and Larson (2013) from Batéké Plateau National Park in neighboring Gabon.

PTYCHADENIDAE

Ptychadena cf. mascareniensis—We collected two specimens in a manioc field in forest at Bambama and at night in a schoolyard at Lebayi (USNM 584201, 584203). This species corresponds to *Ptychadena cf. mascareniensis* “D” (OTU 6), which is distributed across the Congo Basin and as far west as western Republic of Congo (Measey et al. 2007; Vences et al. 2004; Zimkus et al. 2017). COI sequence data from this specimen (KY079836) and others collected from Republic of Congo were placed in a single BIN, while 16S sequence data (KY080360) formed a clade with other specimens from GenBank identified as *Ptychadena cf. mascareniensis* “D” (Deichmann et al. 2017). Westernmost populations are known from Cameroon with the species distributed across the Democratic Republic of Congo to easternmost populations in Kenya and Uganda (Zimkus et al. 2017)

Ptychadena uzungwensis (Loveridge, 1932).—We collected two specimens, an adult and a juvenile, in a pitfall trap in forest at Simombondo (USNM 584195–96). Sequence data from the adult specimen (KY079877) were placed in their own COI BIN; 16S sequence data (KY080406) formed a clade with specimens in GenBank identified as this species from Tanzania and Gabon (Deichmann et al. 2017). This species ranges widely from Rwanda and Burundi, through eastern and southeastern Democratic Republic of Congo, southern Tanzania, Malawi, Zambia, central Mozambique, Zimbabwe and Angola (International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from <http://www.iucnredlist.org> [Accessed 20 November 2018]). This species was identified by Zimkus and Larson (2013) from Batéké Plateau National Park in neighboring Gabon. This represents the first record for this species in Congo (Brazzaville).

Ptychadena sp.—We collected four specimens in leaf litter in forest at Kissiki and from pitfall traps in forest at Simombondo (USNM 584197–200). Sequences derived from four of these specimens (KY079857–60) and a Congolese sample from another site (KY079861), were placed in their own COI BIN by Deichmann et al. (2017). The corresponding 16S sequence data (KY080384–87) formed a clade with specimens identified as *P. perreti* (originally as *P. christyi*) from Uganda and *P. aff. bibroni* from Gabon. Their identity could, therefore, not be determined and were referred to "*Ptychadena* sp. B."

RANIDAE

Amnirana albolabris (Hallowell, 1856).—We collected eight specimens in leaf litter on the forest floor at Bambama, around a marshy pond at a spring at Lebayi, and Loungou (USNM 584204–11; Fig. 4f). Sequences from these specimens (KY079495, KY079497–500, KY079505–8) were placed in their own COI BIN, while those from Gabon and other sites in the Republic of Congo were placed in a separate bin (Deichmann et al. 2017). The 16S sequence data (KY080027, KY080029–32, KY080037–40) were identical, or nearly so, to *A. albolabris* from sites adjacent to three national parks in Gabon, as well as Batéké Plateau National Park (Zimkus and Larson 2013; Larson and Zimkus 2018). Nominotypical *A. albolabris* is widespread across the Lower Guinean Forests, Central and East Africa, and more closely related to *A. asperrima* than populations of *A. albolabris* from West Africa (Jongsma et al. 2018). More western *Amnirana albolabris* from Guinea, Sierra Leone, Liberia, Côte d'Ivoire, Ghana, and Togo were more closely related to *A. fonensis*. *Amnirana albolabris* in the Lower Guinean Forest and Congo Basin may represent as many as five species (Jongsma et al. 2018).

Amnirana cf. *amnicola* (Perret, 1977).—We collected three specimens on the forest floor at Bambama and Kissiki (USNM 584212–14). Sequences from these specimens (KY079509–11) were in their own COI BIN, and 16S sequence data (KY080041–43) were found in a clade with a specimen from Cameroon (DQ283369; Deichmann et al., 2017). *Amnirana amnicola* has been recorded from Cameroon, mainland Equatorial Guinea, Gabon, Republic of Congo, and the Democratic Republic of Congo (International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018.

Available from <http://www.iucnredlist.org> [Accessed 20 November 2018]). Jongsma et al. (2018) detected distinct, cryptic lineages of *A. amnicola* at the Chaillu Mountains in southern Republic of Congo identified as “*amnicola* 1.” Sequences collected from Zanaga were almost identical to those from Chaillu Mountains. Since it is likely that these specimens represent a new species, we identify them as *A. cf. amnicola*.

***Amnirana cf. lepus* (Andersson, 1903).**—We collected seven specimens from the forest floor at Bambama and near water at Lebayi (USNM 584215–21). Sequence data from these specimens (KY079512–18) were placed in one COI BIN, and 16S sequence data (KY080044–49) formed a clade sister to *A. lepus* sequences in GenBank from Cameroon (Deichmann et al. 2017). *Amnirana lepus* has been recorded from Cameroon, Equatorial Guinea, Gabon, Central African Republic, Republic of Congo, and the Democratic Republic of Congo (International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from <http://www.iucnredlist.org> [Accessed 20 November 2018]). Jongsma et al. (2018) found two distinct clades of *A. lepus*: one north and the other south of the Congo River. Sequences collected from Zanaga were identical to those from the Republic of Congo and Democratic Republic of Congo identified by Jongsma et al. (2018) as “*lepus* 1.” Since specimens from Zanaga likely represent a new species, we identify them as *A. cf. lepus*.

RHACOPHORIDAE

***Chiromantis rufescens* (Günther, 1869).**— We collected one specimen in forest at Kissiki (USNM 584222). Separate BINs were formed from COI sequences derived from this Congolese specimen (KY079576) and those from Gabon, but 16S sequence data (KY080102) formed a 16S clade that included sequences derived from Gabon, Equatorial Guinea, Cameroon, and elsewhere (Deichmann et al. 2017). This species ranges from Sierra Leone in West Africa across the Congo Basin to Uganda (International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from <http://www.iucnredlist.org> [Accessed 20 November 2018]).

REPTILES

REPTILIA: SQUAMATA: SERPENTES

BOIDAE

Calabaria reinhardtii (Schlegel, 1851). — One individual was found in leaf litter near the riverbank at Longou and photographed but not collected by the mammal team. This nocturnal, fossorial forest species is found in dense primary forest to heavily degraded secondary forest to plantations throughout forested West and central Africa, from Liberia to eastern Democratic Republic of Congo (Chippaux and Jackson 2019). *Calabaria reinhardtii* is protected under CITES II (Convention on International Trade in Endangered Species [CITES] of Wild Fauna and Flora [2018]: Appendices I, II and III. Available at: <https://www.cites.org/eng/app/appendices.php> [Accessed 5 December 2018]). Previous reports of this species from Congo include Trape (1985), Rasmussen (1991) and Jackson et al. (2007).

COLUBRIDAE

Dasypeltis fasciata Smith, 1849. —We collected two specimens at Lebayi (USNM 584254, USNM 584255). *Dasypeltis fasciata* is a forest species (Pauwels and Vande Weghe 2008), with a range encompassing forested areas of west, central and east Africa (Chippaux and Jackson 2019). Trape and Roux-Estève (1995) collected three *D. fasciata* from a forested region around Dimonika. A specimen was killed in a village in degraded and fragmented habitat near Pointe Noire (Jackson and Blackburn 2010).

Dipsadoboa underwoodi Rasmussen, 1993. —We collected three specimens, all on the ground in forest at night: one beside a spring at Lebayi, one at the edge of a river at Kissiki, and one on the forest floor at Bambama (USNM 584256–58). Strictly a dense forest species, *D. underwoodi*, is described as terrestrial (Chippaux 2006), and as primarily arboreal but spending a lot of time on the ground, hunting frogs along the edges of wetlands (Pauwels and Vande Weghe 2008). Its range extends from Guinea to Congo (Chippaux and Jackson 2019). This specimen represents the first report of this species from Congo.

***Dipsadoboa viridis* (Peters, 1869).** —We collected one specimen at night on the forest floor near a swamp at Simonbondo (USNM 584259). This snake rolled its body into a defensive ball, protecting its head with its coils (Fig. 5a). *Dipsadoboa viridis* is restricted to trees overhanging forest streams where it feeds on birds and arboreal frogs (Pauwels and Vande Weghe 2008; Chippaux and Jackson 2019). It ranges from Guinea to the Democratic Republic of Congo and is also known from Rwanda and Burundi (Spawls et al. 2018). Trape (1985) reported this species from Dimonika.

***Grayia caesar* (Günther, 1863).** —We identified one *G. caesar* from a partial shed skin found near the river at Bambama. This species was readily identifiable by its high subcaudal count, greater than other *Grayia* species. *Grayia caesar* is a central African species with a range extending from Nigeria to Central African Republic (Chippaux and Jackson 2019), where it is restricted to streams in dense primary forest (Pauwels and Vande Weghe, 2008). Trape (1985) reported this species from Dimonika.

***Grayia ornata* (Bocage, 1866).** —We captured one *G. ornata* in a gill net in the Ogooué River at Simonbondo (USNM 584266). *Grayia ornata* is a dense forest species which inhabits swamps and big rivers like the Ogooué (Pauwels and Vande Weghe, 2008). Trape (1985) reported this species from the forest around Dimonika. Rasmussen (1991) collected four *G. ornata* in the Kouilou using gill nets placed in rivers. Jackson et al. (2007) collected large numbers of *G. ornata* and smaller numbers of *G. smithii* using gill nets in the Likouala region of northern Congo.

***Natriciteres fuliginoides* (Günther, 1858).** — We collected two specimens, one beside a forest swamp at Bambama, and the other on the forest floor in camp at Simombondo (USNM 584270–71). This diurnal species is found in primary, secondary, and gallery forests, savannah, and is seldom far from water, feeding on amphibians in forest floor leaf litter or in tall grass (Pauwels and Vande Weghe, 2008). Its range extends from Guinea to Congo (Chippaux and Jackson 2019). Trape (1985) and Jackson et al. (2007) reported this species from Congo.

***Philothamnus carinatus* (Andersson, 1901).** —We collected one specimen on the forest floor at Kissiki (USNM 584260, Fig. 5b). *Philothamnus carinatus* ranges from Guinea to the Democratic Republic of Congo to Kenya (Chippaux and Jackson 2019). It is found in clearings, in savannah along the edge of gallery forest, in plantations, and, in many places, it is the most commonly encountered snake species (Pauwels and Vande Weghe 2008). Other reports from Congo include Trape (1985), Jackson et al. (2007) and Zassi-Boulou et al. (unpubl. data).

***Philothamnus dorsalis* (Bocage, 1866).** —We collected one specimen on a road through savannah at Kissiki (USNM 584261). *Philothamnus dorsalis* has a more restricted range than the previous two species, extending from Gabon to Angola to eastern Democratic Republic of Congo (Chippaux and Jackson 2019). It is found in trees at edges of forests, in gardens, and often found killed on roads (Pauwels and Vande Weghe 2008). Rasmussen (1991) reported a specimen from the Kouilou region sleeping on a tree branch overhanging a swamp. Zassi-Boulou et al. (unpubl. data) reported this species from heavily degraded urban habitat in Brazzaville.

***Philothamnus heterodermus* (Hallowell, 1857).** —We found one dead specimen, missing its head, on the trail between the village and our campsite at Simonbondo (USNM 584262). *Philothamnus heterodermus* has a broad distribution in sub-Saharan Africa, extending from Guinea to Angola to Tanzania (Chippaux and Jackson 2019). This rarely seen snake is quick to flee (Pauwels and Vande Weghe 2008) and is found in savannah (Trape and Roux-Estève 1995), in degraded forest and around human habitations (Chippaux 2006), and most often in clearings and at the edge of forest (Pauwels and Vande Weghe 2008). In Congo it has been found in relatively undisturbed forest habitat near Dimonika (Trape 1985) and from heavily disturbed habitat near Pointe Noire (Jackson and Blackburn 2010).

***Thelotornis kirtlandii* (Hallowell, 1844).** —We observed a specimen in a tree at the ecotone between forest and savannah at Simonbondo. *Thelotornis kirtlandii* is found throughout forested sub-Saharan Africa (Chippaux and Jackson 2019). This diurnal and arboreal species is most often found in clearings in

dense forest, in secondary forest, and in plantations where it feeds on lizards and amphibians (Pauwels and Vande Weghe 2008). Trape (1985) and Jackson and Blackburn (2007) reported this species from Congo.

***Toxicodryas blandingii* (Hallowell, 1844).** —One specimen was killed by locals at Loungou (USNM 584253). This nocturnal, arboreal species is found throughout forested sub-Saharan Africa, ranging from Guinea to Kenya, which is found in dense primary forest, gallery forest, and savannah to semi-urban environments such as gardens (Chippaux and Jackson 2019). It feeds on birds, bats, and lizards, especially chameleons (Greenbaum and Carr 2005; Pauwels and Vande Weghe 2008). Reports of this species from Congo include Trape (1985), Rasmussen (1991) and Jackson and Blackburn (2010).

ELAPIDAE

***Dendroaspis jamesoni* (Traill, 1843).** —We observed but did not collect one individual in the forest canopy at Bambama. *Dendroaspis jamesoni* has a broad range in forested Central Africa, extending from Togo to Kenya (Chippaux and Jackson 2019). A semi-arboreal species, abundant in forests, it inhabits open primary and secondary forests, and sometimes ventures into plantations. It feeds on birds and small mammals (Trape and Roux-Estève 1995; Jackson pers. obs.). Reports of this species from Congo include Trape (1985), Jackson and Blackburn (2010) and Zassi-Boulou et al. (unpubl. data).

***Naja annulata* Peters, 1867.** — A large individual was observed in the Ogooué River at Simombondo. *Naja annulata* is restricted to forested parts of central Africa where it inhabits clear rivers and streams; juveniles often are found in small forest streams (Chippaux and Jackson 2019). Reports of this species from Congo include Rasmussen (1991), Jackson and Blackburn (2007), Jackson et al. (2007), and Zassi-Boulou et al. (unpubl. data).

***Naja melanoleuca* Hallowell, 1857.** —We documented two individuals: one killed by locals at Loungou (USNM 584272), the other escaped in forest at Kissiki. The broadly distributed Forest Cobra, *Naja melanoleuca*, has recently been found to in fact represent a complex of five species, of which two, *N.*

melanoleuca (*sensu stricto*) and *N. subfulva*, are known from Congo (Wüster et al. 2018). Relevant scale counts and coloration for USNM 585272 are as follows: The dorsum is uniformly black. The venter is yellow anteriorly with seven discrete dark bands, then black posteriorly. Of the seven discrete dark bands, there are three main bands and four accessory bands. The first main dark band is four ventrals in width, extending from ventrals 18-21. The last ventral of the last discrete dark band is the 60th ventral. There are 23 dorsal scale rows at the neck and 19 at midbody. There are 221 ventrals and 65 subcaudals. There are seven upper labials (the 3rd and 4th in contact with the eye), eight infralabials, the first four in contact with the anterior sublinguals, and no cuneates. There is one preocular and there are three postoculars. The temporal formula is 1 + 2 on the right side, with four nuchals bordering the temporals, and 1 + 3 on the left side, with five nuchals bordering the temporals. All of these scale counts are within the range of overlap between *N. melanoleuca* (*sensu stricto*) and *N. subfulva* (Wüster et al. 2018). *Naja melanoleuca* (*sensu lato*) specimens collected in Likouala Department, Congo by Jackson et al. (2007) have been found through molecular analysis (Wüster et al. 2018) to include individuals of both *N. melanoleuca* (*sensu stricto*) and *N. subfulva*. These were collected within a few kilometers of each other and not clearly morphologically distinct from one another. It may be that molecular work is necessary to distinguish *N. melanoleuca* (*sensu stricto*) from *N. subfulva* in this part of their range.

LAMPROPHIIDAE

***Aparallactus modestus* (Günther, 1859).**—We collected one specimen at Kissiki (USNM 584263). This semi-fossorial leaf-litter species inhabits primary and secondary forest, and dense plantations. It is found throughout the equatorial forests of central and western Africa from Guinea to Uganda (Chippaux and Jackson 2019). Reports of this species from Congo include Trape (1985), Jackson and Blackburn (2007), and Portillo et al. (2017).

***Bothrolycus ater* Günther, 1874.**—We collected one specimen in leaf litter near our pit-fall traps at Kissiki (USNM 584264). *Bothrolycus ater* is seldom seen and its biology little known. Diurnal and

terrestrial, it may be restricted to dense primary forest where it lives in the leaf litter (Chippaux and Jackson 2019). Its range extends from Cameroon to the Democratic Republic of Congo and includes Bioko Island (Equatorial Guinea) (Chippaux and Jackson 2019). In Gabon it is known from the Massif de Chaillu (Pauwels and Vande Weghe 2008). In Congo it is known from only two specimens: one collected by Trape (1985), the second at Sibiti (Trape and Roux-Estève 1995). Our specimen is the third specimen from Congo, and the first to be photographed alive (Fig. 5c).

***Gonionotophis brussauxi* (Mocquard, 1889).** —We collected a single specimen at night in camp at Bambama (USNM 584265). This nocturnal, terrestrial species is found in primary or dense secondary forest. It feeds on terrestrial amphibians and spends the day under leaf litter or in hollow logs (Pauwels and Vande Weghe 2008). Its range extends from Cameroon to the Democratic Republic of Congo (Chippaux and Jackson 2019). Records of this species from Congo include Trape (1985).

***Lycophidion laterale* Hallowell, 1857.** —We captured three female juveniles at Lebayi: two in forest and one in nearby savannah (USNM 584267–69). *Lycophidion laterale* has a broad distribution in West and Central Africa, from Liberia to Angola to Central African Republic and eastern Democratic Republic of Congo (Chippaux and Jackson 2019), where it is found in dense primary forest, degraded secondary forest, and plantations (Pauwels and Vande Weghe 2008). Greenbaum (2017) reports this species from eastern Democratic Republic of Congo, and Spawls et al. (2018) report it from western Uganda. Reports of this species from Congo include Trape (1985), Rasmussen (1991) and Jackson and Blackburn (2010).

TYPHLOPIDAE

***Afrotyphlops steinhausi* (Werner, 1909).** —A single specimen was donated by locals at Loungou (USNM 584276). This blind-snake is strictly a rainforest species and is known from southeastern Nigeria through Cameroon and southern Central African Republic to northeastern Democratic Republic of Congo (Broadley and Wallach 2009). Trape and Roux-Estève (1995) predicted it might also occur in the Congo, but ours is the first specimen from the Congo.

VIPERIDAE

Atheris squamigera **Hallowell, 1854**. —We collected one specimen at night in forest near the swamp at Simonbondo (USNM 584273). This arboreal species inhabits primary or secondary forest, and has a range extending from Nigeria to Kenya to Angola (Chippaux and Jackson 2019). Reports from the Congo include Rasmussen (1991).

Bitis gabonica (**Duméril, Bibron & Duméril, 1854**). —We documented two specimens of *B. gabonica*; One was killed in forest at Bambama by locals (USNM 584274), the second was identified from a shed skin at Simombondo. Stomach contents of the specimen included a bird and a mouse. This species is found in secondary and degraded forests, and often around human habitations. Its range extends from Nigeria to the Democratic Republic of Congo to Angola (Chippaux and Jackson 2019). Records from the Congo include Trape (1985) and Jackson et al. (2007).

Bitis nasicornis (**Shaw, 1802**). —One individual was killed in the forest at Bambama by locals (USNM 584275). This species is restricted to dense primary forest and swamp forest and has a range extending from Guinea to Gabon to Central African Republic (Chippaux 2006). Previous records from the Congo include Trape (1985) and Jackson et al. (2007).

REPTILIA: SQUAMATA: SAURIA

CHAMAELEONIDAE

Chamaeleo dilepis **Leach, 1819**. —Our single observation of *C. dilepis* was in the form of a charred lizard impaled on a stick, burned in a fire and said to be for use in what an indigenous informant called “voudou”. This specimen was shown to us by villagers as we passed through Lebayi. No voucher was collected. This species has a broad distribution in Africa and is often locally abundant. An arboreal but primarily savannah species, *C. dilepis* can be found perched on the branches of widely dispersed bushes and trees as well as on the ground between them (Chirio and Lebreton 2007). This species has CITES II

protection (Convention on International Trade in Endangered Species [CITES] of Wild Fauna and Flora [2018]: Appendices I, II and III. Available at: <https://www.cites.org/eng/app/appendices.php> [Accessed 5 December 2018]). Previous reports of this species from Congo include De Witte (1967), Rasmussen (1991) and Jackson and Blackburn (2010).

***Rhampholeon spectrum* (Buchholz, 1874).** —A single, live specimen of *R. spectrum* was brought to the camp near Bambama by locals. We photographed (Fig. 5d) it and then returned to them. This species is primarily restricted to primary and dense secondary forest, though it occasionally ventures into plantations at the edge of the forest. Its distribution is restricted to parts of Cameroon to Congo (Chirio and LeBreton 2007; Pauwels and Vande Weghe 2008). This species has previously been reported from Congo (De Witte 1967; Tilbury 2018), and has CITES II protection (Convention on International Trade in Endangered Species [CITES] of Wild Fauna and Flora [2018]: Appendices I, II and III. Available at: <https://www.cites.org/eng/app/appendices.php> [Accessed 5 December 2018]).

GEKKONIDAE

***Hemidactylus kamdemtohami* Bauer & Pauwels, 2002.** —We collected a single specimen at night on the trunk of a tree in camp at Bambama (USNM 584228; Fig. 5e). This species was previously known from only two specimens: the type specimen, collected in Gabon (Bauer and Pauwels 2002), and one collected in Equatorial Guinea. Our specimen represents the first report from Congo, and a new locality more than 200km from each of the previous two collection sites.

***Hemidactylus mabouia* (Moreau de Jonnès, 1818).** —We collected four specimens: two in villages (Bambama and Lebayi), and two without collection data (Lebayi, USNM 584223–26). *Hemidactylus* eggs probably belonging to *H. mabouia* were observed in an abandoned house near Bambama. *Hemidactylus mabouia* is strongly associated with human habitations and degraded habitat (Henle and Böhme 2003). Reports from Congo include De Witte et al. (1967), Largen (1991), Jackson and Blackburn (2007), and Jackson et al. (2007).

Hemidactylus muriceus Peters, 1870. —We collected a single specimen at Lebayi (USNM 584227).

Hemidactylus muriceus is a common forest gecko (Henle and Böhme 2003). Largen (1991) reported this species from Congo.

LACERTIDAE

Poromera fordii (Hallowell, 1857). —We collected two specimens at the edge of a stream and at the edge of a swamp at Bambama (USNM 584230–31). A species which is found in secondary forest and ventures into cultivated areas, *P. fordii* is known from Cameroon, Gabon and Congo, and is commonly found chasing insects along the edges of streams and swamps (Pauwels and Vande Weghe 2008). It is a good swimmer and never far from water (Chirio and LeBreton 2007). In Congo Largen (1991) collected specimens in grassy habitats, in forest, on the ground, and perched on tall grasses.

SCINCIDAE

Lacertaspis reichenowi (Peters, 1874). —We collected two specimens both at Bambama: one at the edge of a forest stream and the other in a forest pitfall trap (USNM 584232–3). This species inhabits primary and secondary forest, from Cameroon to Democratic Republic of Congo, often close to water. Although this diurnal, leaf-litter species is said to be rarely seen (Pauwels and Vande Weghe 2008). We are not aware of a previous report of this species from Congo, though its presence is expected (Fig. 5f).

Lepidothyris striatus (Hallowell 1854). —We collected one specimen in a pitfall trap in the forest at the Kissiki site (USNM 584234; Fig. 5g). Primarily a species of dense forest, it also ventures into gallery forest, savannah and plantations. This species is restricted to central Africa but has until recently been synonymized with the more broadly distributed *Lepidothyris fernandi* (Wagner et al. 2009). This is a large and distinctive skink, rarely seen because it is nocturnal and semi-fossorial, inhabiting forest leaf litter, but captured so frequently in pitfall traps as to suggest that the species may be more abundant than it appears. Previous reports from Congo include De Witte (1967), Jackson and al. (2007), Jackson and Blackburn (2010).

***Trachylepis affinis* (Gray, 1838).** —We collected 10 specimens at all sites except Kissiki, all but one captured in forest leaf litter / pit-fall traps, and a single individual found in savannah at Lebayi (USNM 584235–244). *Trachylepis affinis* is restricted to forest habitats (Chirio and LeBreton 2007; Pauwels and Vande Weghe 2008). Reports of *T. affinis* from Congo include De Witte et al. (1967) and Jackson et al. (2007).

***Trachylepis albilabris* (Hallowell, 1857).** —We collected eight specimens in forest leaf litter, in forest near villages, houses under construction, and other human impacted areas at Bambama and Lebayi (USNM 584245–252). *Trachylepis albilabris* is said to be a habitat generalist and is more common at the edges of forest, in savannah and near human habitations (Chirio and LeBreton, 2007; Pauwels and Vande Weghe, 2008). Reports from Congo include Largen (1991) and Jackson and Blackburn (2010).

VARANIDAE

***Varanus niloticus* (Linnaeus 1766).** —We captured one juvenile specimen in a gill net in the Ogooué River at Simombondo and released it. *Varanus niloticus* is broadly distributed in sub-Saharan Africa. Recent molecular work has shown that *V. ornatus*, formerly considered a separate species or a subspecies of *V. niloticus*, and to which *V. niloticus* from the central African forest were thought to belong, are not genetically distinct from *V. niloticus* (Dowell et al. 2015). The Congo population is classified within the southern clade of *V. niloticus* (Dowell et al. 2015). *Varanus niloticus* is protected under CITES II (Convention on International Trade in Endangered Species [CITES] of Wild Fauna and Flora [2018]: Appendices I, II and III. Available at: <https://www.cites.org/eng/app/appendices.php> [Accessed 5 December 2018]). Previous reports from Congo include De Witte et al. (1967), Largen (1991) and Jackson and Blackburn (2010).

REPTILIA : TESTUDINES

PELOMEDUSIDAE

Pelusios carinatus **Laurent, 1956**. —A local at Loungou fished an empty shell out of the Ogooué River. This aquatic turtle is known from the Democratic Republic of Congo, Republic of Congo, and the eastern border of Gabon. It prefers still, shallow water (Pauwels and Vande Weghe 2008).

TESTUDINIDAE

Kinixys erosa (**Schweigger, 1812**). —We documented and released two live specimens brought by locals at Bambama and Simonbondo. This species has a broad range in sub-Saharan Africa extending from the Gambia to Angola to Uganda. It is relatively common and found in primary and secondary forest, forest-savannah mosaic, and plantations (Pauwels and Vande Weghe 2008). *Kinixys erosa* is protected under CITES II (Convention on International Trade in Endangered Species [CITES] of Wild Fauna and Flora [2018]: Appendices I, II and III. Available at: <https://www.cites.org/eng/app/appendices.php> [Accessed 5 December 2018]) and is listed by the International Union for the Conservation of Nature as Data Deficient (DD) (International Union for the Conservation of Nature [IUCN]. 2018. IUCN Red List of Threatened Species, 2018. Available from <http://www.iucnredlist.org> [Accessed 20 November 2018], Fig. 5h).

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TABLE 1. Amphibian species encountered during surveys, organized by field site (Ba=Bambama, Le=Lebayi, Ki=Kissiki, Si=Simombondo, Lo=Loungou) and by habitat (FF=forest floor, A=arboreal, S=savanna, W=water, NW=near water, HH=human habitation, ND=no data).

	Ba	Ki	Le	Si	Lo	FF	A	S	W	N W	HH	ND
ANURA												
Arthroleptidae												
<i>Arthroleptis adelphus</i> (Foulassi Screeching Frog)	1	-	-	-	-	1	-	-	-	-	-	-
<i>Arthroleptis cf. poecilonotus</i>	23	-	6	-	-	24	-	2	-	1	2	-
<i>Arthroleptis sylvaticus</i> (Forest Screeching Frog)	17	6	4	-	-	21	-	-	-	5	-	1
<i>Arthroleptis variabilis</i> (Variable Squeaker Frog)	1	-	-	-	-	1	-	-	-	-	-	-
<i>Arthroleptis sp. B</i>	2	-	-	-	-	2	-	-	-	-	-	-
<i>Arthroleptis sp. C</i>	-	4	1	-	-	4	-	1	-	-	-	-
<i>Astylosternus batesi</i> (Benito River Night Frog)	-	-	4	-	2	1	-	-	-	4	-	1
<i>Cardioglossa gracilis</i> (Rio Benito Long-fingered Frog)	-	-	1	-	-	-	-	-	-	1	-	-
<i>Cardioglossa gratiosa</i> (Ongot Long-fingered Frog)	1	1	-	-	-	1	-	-	-	1	-	-
<i>Cardioglossa leucomystax</i> (Silver Long-fingered Frog)	-	1	-	-	1	1	-	-	-	1	-	-
<i>Leptopelis aubryi</i> (Gaboon Forest Treefrog)	2	-	-	1	-	3	-	-	-	-	-	-
<i>Leptopelis aubryoides</i> (Kala Forest Treefrog)	-	-	-	1	1	-	1	-	-	1	-	-
<i>Leptopelis boulengeri</i> (Victoria Forest Treefrog)	-	-	-	1	-	1	-	-	-	-	-	-

<i>Leptopelis cf. macrotis</i>	1	-	-	-	-	1	-	-	-	-	-	-
<i>Leptopelis ocellatus</i> (Ocellated Forest Treefrog)	-	1	1	-	-	-	1	-	-	-	1	-
<i>Scotobleps gabonicus</i> (Gaboon Forest Frog)	-	-	1	-	-	-	-	-	-	1	-	-
Bufonidae												
<i>Sclerophrys camerunensis</i> (Oban/Cameroon Toad)	-	4	-	42	1	47	-	-	-	-	-	-
<i>Sclerophrys cf. gracilipes</i>	1	-	-	-	-	1	-	-	-	-	-	-
<i>Sclerophrys pusilla</i> (Merten's Striped/Flat-backed Toad)	8	3	7	-	-	8	-	-	-	1	8	1
<i>Sclerophrys tuberosa</i> (Warty/Fernando Po Toad)	4	-	1	-	-	5	-	-	-	-	-	-
Conrauidae												
<i>Conraua crassipes</i> (Abo Slippery Frog)	-	1	-	-	1	1	-	-	1	-	-	-
Dicroglossidae												
<i>Hoplobatrachus occipitalis</i> (Crowned Bullfrog)	-	-	1	-	-	-	-	1	-	-	-	-
Hyperoliidae												
<i>Hyperolius olivaceus</i> (Olive Reed Frog)	-	3	-	-	-	-	-	-	-	-	-	3
Phrynobatrachidae												
<i>Phrynobatrachus africanus</i> (African Swamp Frog)	-	3	-	-	-	1	-	-	-	1	-	1
<i>Phrynobatrachus auritus</i> (Eared River/Golden Puddle Frog)	-	-	-	2	2	2	-	-	-	1	-	1
<i>Phrynobatrachus batesii</i>	-	1	-	-	-	1	-	-	-	-	-	-

(Bates' River Frog)

Phrynobatrachus ruthbeateae

- - - 1 - 1 - - - - -

(Ruth Beate's Puddle Frog)

Phrynobatrachus sp.

- - - - 1 1 - - - - -

Pipidae

Hymenochirus sp.

- - - 1 - 1 - - - - -

Xenopus mellotropicalis

- - - 1 - 1 - - - - -

(Gabonese Clawed Frog)

Xenopus pygmaeus

- - - 18 - 18 - - - - -

(Bouchia Clawed Frog)

Ptychadenidae

Ptychadena cf. *mascareniensis* "D"

1 - 1 - - 1 - - - - 1 -

Ptychadena uzungwensis

- - - 2 - 2 - - - - -

(Uzungwe Grassland/Ridged Frog)

Ptychadena sp.

- 1 - 3 - 4 - - - - -

Ranidae

Amnirana albolabris

1 - 6 - 1 1 - - - 7 - -

(White-lipped Frog)

Amnirana cf. *amnicola*

1 2 - - - 3 - - - - -

Amnirana cf. *lepus*

5 - 2 - - 5 - - - 2 - -

Rhacophoridae

Chiromantis rufescens

(African/Western Foam-nest

Treefrog)

- 1 - - - - - - - - 1

TABLE 2. Reptile species encountered during surveys, organized by field site (Ba=Bambama, Le=Lebayi, Ki=Kissiki, Si=Simombondo, Lo=Loungou) and by habitat (FF=forest floor, A=arboreal, S=savannah, W=water, NW=near water, HH=human habitation, ND=no data).

	Ba	Le	Ki	Si	Lo	FF	A	S	W	NW	HH	ND
SERPENTES												
Boidae												
<i>Calabaria reinhardtii</i> Calabar Boa	-	-	-	-	1	-	-	-	-	1	-	-
Colubridae												
<i>Dasyeltis fasciata</i> Central African Egg-eater	-	2	-	-	-	-	-	1	-	-	-	1
<i>Dipsadoboa underwoodi</i> Underwood's Tree Snake	1	1	1	-	-	-	1	-	-	2	-	-
<i>Dipsadoboa viridis</i> Green Tree Snake	-	-	-	1	-	-	1	-	-	-	-	-
<i>Grayia caesar</i> Long-tailed African Water Snake	1	-	-	-	-	-	-	-	-	1	-	-
<i>Grayia ornata</i> Ornate African Water Snake	-	-	-	1	-	-	-	-	1	-	-	-
<i>Natriciteres fuliginoides</i> Collared Marsh Snake	1	-	-	1	-	1	-	-	-	-	-	-
<i>Philothamnus carinatus</i> Thirteen-scaled Bush Snake	-	-	1	-	-	1	-	-	-	-	-	-
<i>Philothamnus dorsalis</i> Stripe-backed Bush Snake	-	1	-	-	-	-	-	1	-	-	-	-
<i>Philothamnus heterodermus</i> Gabon Bush Snake	-	-	-	1	-	-	-	-	-	-	1	-
<i>Thelotornis kirtlandii</i> Forest Vine Snake	-	-	-	1	-	-	1	-	-	-	-	-
<i>Toxicodryas blandingii</i> Blanding's Tree Snake	-	-	-	-	1	-	-	-	-	-	-	1
Elapidae												
<i>Dendroaspis jamesoni</i> Jameson's Mamba	1	-	-	-	-	-	1	-	-	-	-	-
<i>Naja annulata</i> Ringed Water Cobra	-	-	-	1	-	-	-	-	1	-	-	-
<i>Naja melanoleuca</i> Central African Forest Cobra	-	-	1	-	1	-	-	-	-	1	-	1

Lamprophiidae

<i>Aparallactus modestus</i> Western Forest Centipede-eater	-	-	1	-	-	-	-	-	-	-	-	1
<i>Bothrolycus ater</i> Loreal-pitted Snake	-	-	1	-	-	1	-	-	-	-	-	-
<i>Gonionotophis brussauxi</i> Mocquard's African Ground Snake	1	-	-	-	-	1	-	-	-	-	-	-
<i>Lycophidion laterale</i> Flat Wolf Snake	-	3	-	-	-	2	-	1	-	-	-	-

Typhlopidae

<i>Afrotyphlops steinhausi</i> Steinhaus' Worm Snake	-	-	-	-	1	-	-	-	-	-	-	1
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Viperidae

<i>Atheris squamigera</i> Rough-scaled Bush Viper	-	-	-	1	-	-	1	-	-	-	-	-
<i>Bitis gabonica</i> Gaboon Viper	1	-	-	2	-	1	-	1	-	-	-	-
<i>Bitis nasicornis</i> Rhinoceros Viper	1	-	-	-	-	1	-	-	-	-	-	-

SAURIA**Chamaeleonidae**

<i>Chamaeleo dilepis</i> Flap-necked Chameleon	-	1	-	-	-	-	-	-	-	-	-	1
<i>Rampholeon spectrum</i> Cameroon Pygmy Chameleon	1	-	-	-	-	-	-	-	-	-	-	1

Gekkonidae

<i>Hemidactylus kamdemtohami</i> Kamdem Toham's Half-toed Gecko	1	-	-	-	-	-	1	-	-	-	-	-
<i>Hemidactylus mabouia</i> African Half-toed House Gecko	1	3	-	-	-	-	-	-	-	-	2	2
<i>Hemidactylus muriceus</i> Prickly Half-toed Gecko	-	1	-	-	-	-	-	-	-	-	-	1

Lacertidae

<i>Poromera fordii</i> West African Grass Lizard	2	-	-	-	-	-	-	-	-	2	-	-
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Scincidae

<i>Lacertaspis reichenowii</i> Reichenow's Skink	2	-	-	-	-	1	-	-	-	1	-	-
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<i>Lepidothyris striatus</i> Central African Red-flanked Skink	-	-	1	-	-	1	-	-	-	-	-	-
<i>Trachylepis affinis</i> Brown-flanked Skink	7	2	-	1	-	9	-	1	-	-	-	-
<i>Trachylepis albilabris</i> Guinea Skink	6	2	-	-	-	3	-	-	-	-	4	1
Varanidae												
<i>Varanus niloticus</i> Nile Monitor	-	-	-	1	-	-	-	-	1	-	-	-
TESTUDINES												
Pelomedusidae												
<i>Pelusios carinatus</i> Keeled Hinged Terrapin	-	-	-	-	1	-	-	-	1	-	-	-
Testudinidae												
<i>Kinixys erosa</i> Forest Hinged Tortoise	1	-	-	1	-	2	-	-	-	-	-	-
