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Miscellanea Herpetologica Gabonica VII

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Abstract

We present new Gabonese locality records, ecological data or unpublished museum material for *Crocodylus niloticus* (Crocodylidae), *Trionyx triunguis* (Trionychidae), *Agama lebretoni* (Agamidae), *Hemidactylus fasciatus* and *H. mabouia* (Gekkonidae), *Gastropholis echinata* (Lacertidae), *Trachylepis albilabris* (Scincidae), *Afrotyphlops angolensis* (Typhlopidae), *Dipsadoboa viridis*, *Hapsidophrys smaragdinus*, *Toxicodryas pulverulenta* (Colubridae), *Naja melanoleuca* (Elapidae), *Lamprophis olivaceus*, *Psammophis* cf. *phillipsii* (Lamprophiidae), *Natriciteres fuliginoides* (Natricidae), *Causus lichtensteinii* and *C. maculatus* (Viperidae). We document predation cases by *Hapsidophrys smaragdinus* on *Hemidactylus mabouia* and *Trachylepis albilabris*, by *Naja melanoleuca* on *Sclerophrys regularis* (Anura: Bufonidae) and by *Psammophis* cf. *phillipsii* on *Phrynobatrachus auritus* (Anura: Phrynobatrachidae), and consumption of *Arius latiscutatus* (Siluriformes: Ariidae) and *Tragelaphus speki* (Cetartiodactyla: Bovidae) by *Crocodylus niloticus*. We add one, two and one snake species, respectively, to Estuaire, Moyen-Ogooué and Nyanga provinces' reptile lists. We add four reptile species to the list for Wonga-Wongué Presidential Reserve. We refer all records of *Agama agama* in Gabon to *A. picticauda*.

Keywords

Biodiversity, herpetofauna, herpetology, Crocodylia, Testudines, Squamata, protected areas, conservation, ecology, Gabon, Equatorial Africa.

Introduction

The series *Miscellanea Herpetologica Gabonica* was created to provide a forum to present miscellaneous zoogeographical and ecological observations on the reptiles of Gabon, adding to the herpetological synthesis provided by Pauwels and Vande weghe in 2008. More and more persons doing fieldwork in Gabon for conservation NGOs, Gabon environmental authorities, universities and scientific institutions or private companies are submitting their observations (Pauwels et al., 2016a, b), actively contributing to fill herpetological knowledge gaps. Some of the new records presented below result from the Gabon research program of the Natural History Museum of Salento in southern Italy. The French Institut de Recherche pour le Développement (IRD) organized two short faunistic surveys in 2014 whose herpetological part was performed by one of us (LC), allowing to gather several records presented here. Some other records were made during field activities of the World Wildlife Fund (WWF) Gabon, the Brigade de Faune of the Ministère des Eaux et Forêts, and the Smithsonian Institution's Gabon Biodiversity Program.

Material and Methods

New reptile voucher material under study was deposited in herpetological collections of the Natural History Museum of Salento in Calimera. Collected specimens were injected with 90% ethanol then preserved in 70% ethanol. Snake ventral scales were counted according to Dowling's (1951) method. Snake dorsal scale rows were counted at one head length behind head, at midbody (above the ventral corresponding to half of the total number of ventrals), and at one head length before vent; subcaudal counts exclude the terminal pointed scale. The sex of preserved snakes was determined by dissection of the tail base. Specimens' main diagnostic morphological characters are provided in Table 1 and within the species accounts. Identification of the Nile crocodile stomach contents was carried out through comparison with the osteological reference collection housed at the Royal Belgian Institute of Natural Sciences, Brussels.

Abbreviations: ANPN, Agence Nationale des Parcs Nationaux, Libreville; MSNS, Natural History Museum of Salento, Calimera, Italy. Morphology: A = anal plate; AT = anterior temporals; D =

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Table 1. Diagnostic morphometric and meristic data for colubrid, lamprophiid and natricid snake vouchers. For the abbreviations see Materials and Methods.

Species and collection number	Sex	SVL (mm)	TaL (mm)	DSR	PV + VEN	A	SC	SL	IL	Lor	PreO	PoO	AT
Colubridae													
<i>Dipsadoboa viridis</i>													
MSNS Rept 222	M	238	67	16-17-13, U	2+218, very slightly K	S	97, S, U	8(4-5)/8(4-5)	10(5)/10(5)	1/1	1/1	2/2	1/1
MSNS Rept 238	M	676	221	17-17-13, U	1+226, U	S	107, S, very slightly K	8(4-5)/8(4-5)	10(5)/10(5)	1/1	1/1	2/2	1/1
<i>Hapsidophrys smaragdinus</i>													
MSNS Rept 228	M	610	404	15-15-11, K	2+153, K	D	154, D, K	9(5-6)/9(5-6)	10(5)/9(4)	1/1	1/1	2/2	1/1
<i>Toxicodryas pulverulenta</i>													
MSNS Rept 243	M	722	208	19-19-15, U	1+251, K	S	121, D, K	8(3-5)/8(3-5)	11(5)/11(5)	1/1	1/1	2/2	2/2
Lamprophiidae													
<i>Lamprophis olivaceus</i>													
MSNS Rept 223	M	661	97	25-29-21, U	3+205, U	S	43, S, U	8(3-5)/8(3-5)	9(3)/9(4)	1/1	1/1	2/2	1/1
MSNS Rept 224	F	301	40	25-29-23, U	3+210, U	S	43, S, U	8(3-5)/8(3-5)	9(4)/9(4)	1/1	1/1	2/2	1/1
Natricidae													
<i>Natriciteres fuliginoides</i>													
MSNS Rept 242	M	206	128	17-17-15, U	2+122, U	S	84, D, U	8(4-5)/8(4-5)	10(5)/10(5)	1/1	1/1	3/3	1/1

divided; DSR = number of dorsal scale rows; F = female; IL = number of infralabials, followed in brackets by the number of infralabials in contact with the first pair of sublinguals; K = keeled; M = male; PoO = number of postoculars; PreO = number of preoculars; PV = number of preventrals; S = single; SC = number of subcaudals; SL = number of supralabials, followed in brackets by the number of supralabials in contact with orbit; SRR = dorsal scale row reduction; SVL = snout-vent length; TaL = tail length; U = unkeeled; V = ventral scale; VEN = number of ventral scales. Varia: Dept = Department; NP = National Park; Prov. = Province.

Results

Crocodylia

Crocodylidae

Crocodylus niloticus Laurenti, 1768

On 26 April 2010 fishermen tried to free a large live crocodile,

which was entangled in their fishing nets in Ndogo Lagoon (secteur Koumaga), Ndougou Dept, Ogooué-Maritime Prov. They called the teams of WWF Gabon (BH) and the Brigade de Faune (TBBE) for help, but the crocodile could not be saved in time and drowned. Its body was brought on land and measured (TEJL, OSGP, ET) (Figure 1). Its SVL was 231 cm; its total length was 440 cm, but the tail tip was missing and healed. Possibly due to old age, it had no teeth left, except one on the left lower jaw, under the middle of the orbit. The crocodile was dissected and its stomach contents were analyzed (TEJL, OSGP, WVN). They included bones of a sitatunga (Mammalia: Cetartiodactyla: Bovidae: *Tragelaphus spekii* Speke, 1863), five *Arius latiscutatus* Günther, 1864 (Siluriformes: Ariidae; longest one 37 cm of total length), varied small parts of vegetal matter (including reeds, probably incidentally ingested), one gastrolith, four gun bullets (lead shot), and part of the fishing net (surface ca. 60×80 cm, 5×5 cm mesh) which caused its drowning (Figures 2 and 3). The presence of five conspecific fishes and part of the



Figure 1. Dead adult *Crocodylus niloticus* from Ndogo Lagoon, Ogooué-Maritime Prov., southwestern Gabon, examined by O. S. G. Pauwels (left) and E. Tobi. Photograph by P. Mijnsbergh.



Figure 2. Stomach contents from the Nile crocodile shown in Figure 1. The ruler is 30 cm long. Photograph by O. S. G. Pauwels.



Figure 3. Gastrolith and lead bullets, part of the stomach contents from the Nile crocodile shown in Figure 1. Photograph by T. E. J. Leuteritz.

net in its stomach indicates that it was attracted by the fish caught in the net. The spherical lead bullets had a maximum diameter of 7 to 10 mm. They probably served to injure or kill the sitatunga. The sitatunga is the most widespread bovine in Gabon and is well known in this locality (Christy et al., 2007; Vande weghe et al., 2016). The Rough-head sea catfish *Arius laticutatus* is common in Ndogo Lagoon and frequently found in nets (Mamonekene et al., 2006). The gastrolith was composed of limonite; it had a maximum length of 35.0 mm, a maximum width of 30.0 mm and a mass of 15.0 g. Although the crocodile individual could not be weighted, it is clear that the mass of this single gastrolith was so small relative to the crocodile's total mass that it was unlikely to serve a hydrostatic function, similarly to what was concluded based on the analysis of gastroliths from *Mecistops cataphractus* and *Osteolaemus tetraspis* individuals caught in the same province (Pauwels et al., 2007a, b). This Nile crocodile individual was so exceptionally large for Gabon that it had been reported in popular online media (Anonymous, 2010). Commercial hunting of Nile crocodiles for their skin was very intensive in Gabon until the mid-70s; hunting for their meat still occurs (Pauwels, 2006), and large individuals are rare today.

Testudines

Trionychidae

Trionyx triunguis (Forskål, 1775)

On 15 Oct. 2015 at 16h15 one of us (CV) photographed at about 7 km SE of Nyonié, Komo-Océan Dept, Estuaire Prov., an adult individual which was crossing a path (piste Maridor) in dense secondary forest in the direction of a nearby stream (Figure 4). This locality is at about 4 km E of the Atlantic Ocean. New locality record (Maran, 2002; Maran and Pauwels, 2005). The turtle showed no aggressiveness when closely approached. This exceptionally large individual had a straight carapace length of 96 cm. The species is locally rare; a local nature guide working in Nyonié camp for 15 years had never seen it (Michel Djomou Guis, pers. comm. to CV, 2016).

Squamata

Agamidae

Agama lebretoni Wagner, Barej & Schmitz, 2009

MSNS Rept 119: Iboundji City, Offoué-Onoy Dept, Ogooué-Lolo Prov., Nov. 2012. Caught by day on a house wall in the city. Adult female. SVL 119 mm; TaL > 121 mm (tip missing, healed); 51 midline vertebral scales from midpoint above pectoral region to midpoint above pelvic region (58 to a point above



Figure 4. Live adult *Trionyx triunguis* near Nyonié, Estuaire Prov., northwestern Gabon. Photograph by C. Vigna.

cloaca); dorsals and supracaudals strongly keeled; no series of enlarged preloacal or femoral scales. New locality record; species already known from several localities in the dept (Pauwels et al., 2016a).

Agama picticauda Peters, 1877

Following the work of Leaché et al. (2016), we refer all records of *Agama agama* (Linnaeus, 1758) from Gabon to *A. picticauda*. There is indeed no indication that more than two *Agama* species co-exist in Gabon (Pauwels and Vande weghe, 2008, 2011; A. Leaché, pers. comm.). *Agama picticauda* thus occurs in all provinces of Gabon.

Gekkonidae

Hemidactylus fasciatus Gray, 1831

MSNS Rept 118a: Boussimbi, Offoué-Onoy Dept, Ogooué-Lolo Prov., Nov. 2012. Found by night in the village in a wooden toilet hut. Adult female. SVL 81 mm, TaL 47 (last 12 mm regenerated). Pupil vertical. Rostral partly divided (more than halfway) by a vertical suture, surrounded by SL 1, 2 nasals, and one internasal separating the nasals. SL 10 / 12; IL 9 / 9; 18 longitudinal rows of dorsal tubercles at midbody, dorsal tubercles separated from each other by 2–4 granular scales, tubercles of the lowest row smallest; 43 rows of ventral scales between ventrolateral folds. A patch of enlarged preloacal scales in contact with a series of enlarged femoral scales. No preloacal pores; 7 / 7 femoral pits. Postcloacal tubercles 1 / 2. Subcaudals strongly widened in both original and regenerated tail parts. Hands and feet with basal webbing. New locality record; the only other record known from this dept was made on Mount Iboundji by Pauwels et al. (2002a). One of us (LC) observed four night-active individuals in Mabounié, 40 km ESE of Lambaréné, Ogooué & Lacs Dept, Moyen-Ogooué Prov. in January, May and August 2012, in the frame of environmental surveys for a project by Maboumine company to exploit a poly-metallic deposit (niobium, tantalum, rare earths and uranium). New locality record (Pauwels and Vande weghe, 2008). LC observed on 20 Feb. 2014 an individual in Mitzié, Okano Dept, Woleu-Ntem Prov. New dept record (Knoepffler, 1974; Pauwels and Vande weghe, 2008). An individual was observed by LC on 17 July 2015 in Grotte Youmbidi (Youmbidi Cave; 0°49'58.5"S, 12°45'09.0"E), about 2 km ESE of Lastoursville airport, Mouloundou Dept, Ogooué-Lolo Prov. New locality record (Pauwels and Vande weghe, 2008). Another individual was observed by LC on 11 June 2014 at night while it was crossing



Figure 5. Live adult *Gastropholis echinata* photographed by an ecoguard in Wonga-Wongué Presidential Reserve, northwestern Gabon.

the road in Kango, Komo Dept, Estuaire Prov. New locality record (Pauwels et al., 2002b). LC also examined an individual in Ayémé-Maritime, Komo-Mondah Dept, Estuaire Prov., on 27 Dec. 2015. New locality record (Pauwels and Vande weghe, 2008).

Hemidactylus mabouia (Moreau de Jonnés, 1818)

See under *Hapsidophrys smaragdinus*.

Lacertidae

Gastropholis echinata (Cope, 1862)

An adult individual (Figure 5) was photographed by an ecoguard at the Camp Présidentiel (Presidential Camp; 0.47736 S, 9.59067 E) in Wonga-Wongué Presidential Reserve, Ogooué & Lacs Dept, Moyen-Ogooué Prov. on 11 March 2016. New record for Wonga-Wongué Presidential Reserve (Vande weghe et al., 2016). This lizard is very rarely encountered, probably due to its exclusively arboreal habits; it is known from a second locality in Ogooué & Lacs Dept, but in total, including the new locality record presented here, from only four localities in Gabon, in Estuaire, Moyen-Ogooué and Ogooué-Ivindo provinces (Pauwels and Vande weghe, 2008).

Scincidae

Trachylepis albilabris (Hallowell, 1857)

MSNS Rept 113: Iboudji City, Offoué-Onoy Dept, Ogooué-Lolo Prov., Nov. 2012. Caught by day on the stairs at the entrance of a house. SVL 68 mm; TaL 108 mm (last 71 mm regenerated). Dorsal scales with three keels. Lower eyelid with a transparent disk; 4 / 4 supraoculars; one scale between posterior supraocular and anterior supratemporal; 47 scales between throat and cloacal scales; 27 scale rows around midbody. Supranasals in contact by a point; prefrontals widely in contact. New locality record; the only other known locality for this species in the dept is Diangui (Pauwels et al., 2002a). See also under *Hapsidophrys smaragdinus*.

Typhlopidae

Afrotyphlops angolensis (Barboza du Bocage, 1866)

An adult individual was photographed by one of us (LC; Figure 6) at the Camp Présidentiel (0.47736 S, 9.59067 E) in Wonga-Wongué Presidential Reserve, Ogooué & Lacs Dept, Moyen-

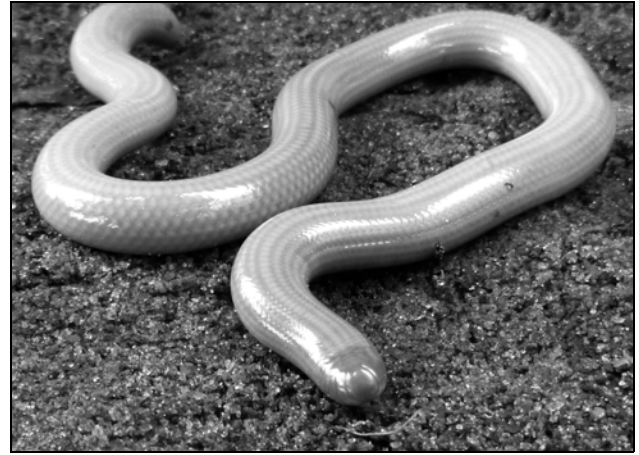


Figure 6. Live adult *Afrotyphlops angolensis* photographed in Wonga-Wongué Presidential Reserve, northwestern Gabon. Photograph by L. Chirio.

Ogooué Prov. on 14 Apr. 2014. New record for Wonga-Wongué Presidential Reserve (Vande weghe et al., 2016) and new prov. record, filling a gap between the records in Ogooué-Maritime and Ogooué-Ivindo prov. (Pauwels and Vande weghe, 2008).

Colubridae

Dipsadoboa viridis (Peters, 1869)

We report here the second and third known specimens from the core area of Ivindo NP, MSNS Rept 222 and MSNS Rept 238, collected by one of us (PC) at Ipassa on 14 and 19 June 2016, respectively (first specimen recorded by Carlino and Pauwels, 2015). Both were found at around 23:30 in mature secondary forest about 2 km SE of the research station, on tree branches at 50-100 cm above the floor. Both show a vertically elliptical pupil; temporal formula of 1 + 2 / 1 + 2; an anterior pair of sublinguals much longer than the posterior one; a slightly widened vertebral row. In MSNS Rept 238, SRR from 17 to 15 occurs by fusion of 8th row with vertebral row above V 158 (right) and 156 (left) and from 15 to 13 by fusion of rows 3 and 4 above V 158 (left) and 160 (right). On 22 April 2014 LC photographed an adult individual in Mitzic, Okano Dept, Woleu-Ntem Prov. (Figure 7); its uniform green dorsal color, blue ventral and tail color, DSR of 17, frontal longer than wide and single subcaudals allow to readily identify it. New dept

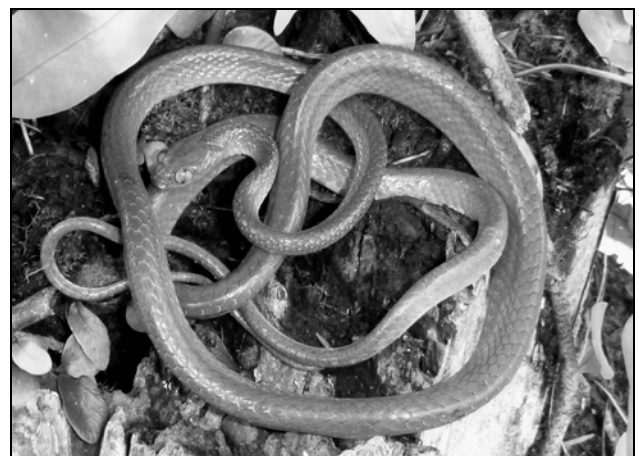


Figure 7. Live adult *Dipsadoboa viridis* in Mitzic, Woleu-Ntem Prov., northeastern Gabon. Photograph by L. Chirio.



Figure 8. Adult *Hapsidophrys smaragdinus* in Nyonié, Estuaire Prov., killed with a machete, with one of the three adult *Hemidactylus mabouia* its stomach contained. On the right side lies the head of the snake. Photograph by C. Vigna.

record (Pauwels and Vande weghe, 2008).

Hapsidophrys smaragdinus (Schlegel, 1837)

MSNS Rept 228: Ipassa, Ivindo NP, Ogooué-Ivindo Prov., May 2016. Pupil round. Temporal formula 1 + 2 / 1 + 2. Dorsal scales with two apical pits. SRR from 15 to 13 occurs above V 93 on both sides by fusion of rows 3 and 4, and from 13 to 11 above V 105 (left) and 103 (right) by fusion of rows 4 and 5. Its stomach contains a *Trachylepis albilabris*, freshly ingested, head first (SVL 32 mm, TaL 40 mm; lower eyelid with a transparent disk; supranasals separated; prefrontals separated; one scale between posterior supraocular and anterior supratemporal; 30 scale rows around midbody; dorsals with three keels). This new specimen confirms this species as one of the most common in the park (Carlino and Pauwels, 2015), as it is generally in Gabon (Pauwels and Vande weghe, 2008). On 3 Dec. 2016 at 9:15 AM, one of us (CV) photographed an adult individual (total length 91 cm) which had just been killed with a machete in Nyonié, Komo-Océan Dept, Estuaire Prov., by villagers who mistook it for a *Dendroaspis*. Its stomach contained three freshly ingested adult *Hemidactylus mabouia* (Figure 8). The latter observation confirms this gecko as a common prey item for this snake (Pauwels and Vande weghe, 2008). LC observed by day on 15 June 2014 an individual in Kango, Komo Dept, Estuaire Prov., killed in a plantation; another individual on 20 Dec. 2015 that escaped in the vegetation in Ayémé Plaine, Komo-Mondah Dept, Estuaire Prov. (both new locality records; Pauwels and Vande weghe, 2008).

Toxicodryas pulverulenta (Fischer, 1856)

MSNS Rept 243: Ipassa, Ivindo NP, Ogooué-Ivindo Prov., 24 June 2016. Caught by one of us (PC) at 20:45 on a branch at one meter above the ground in secondary forest along a road. Temporal formula 2 + 2 on each side. Vertebral row widened. SRR from 19 to 17 occurs above V 149 (left) and 146 (right) by fusion of rows 3 and 4 on each side; from 17 to 15 above V 150 (left) and 147 (right) by fusion of row 8 with vertebral row on each side. This is the second specimen recorded from Ivindo NP. Like the first one (Carlino and Pauwels, 2015) it has 19 DSR at midbody; Pauwels and Vande weghe (2008) had only recorded Gabonese specimens with 21 DSR at midbody. Based on the extensive molecular phylogeny by Figueroa et al. (2016) we accept the allocation of the African species previously referred to *Boiga* by us and other authors to *Toxicodryas*.



Figure 9. Adult *Naja melanoleuca* regurgitating a *Sclerophrys regularis* in Gamba, Ogooué-Maritime Prov., southwestern Gabon. Photograph by D. Rousseaux.

Elapidae

Naja melanoleuca Hallowell, 1857

On 30 March 2008 one of us (DR) saw a cobra being killed with sticks by villagers in Gamba, Ndougou Dept, Ogooué-Maritime Prov. While being beaten, the cobra regurgitated an adult *Sclerophrys regularis* (Reuss, 1833) (Anura: Bufonidae) (Figure 9). The latter toad species is well known from Gamba (Burger et al., 2006; Pauwels, 2007), but it had not yet been recorded in the diet of this cobra species in Gabon. On 15 July 2016 one of us (LC) observed an adult dead-on-road individual on the northern exit road of Tchibanga, Mougoutsi Dept, Nyanga Prov. New prov. record (Pauwels and Vande weghe, 2008). On 9 Feb. 2010 LC observed an individual crossing the road at Mabounié, 40 km ESE of Lambaréné, Ogooué & Lacs Dept, Moyen-Ogooué Prov. New locality record (Pauwels and Vande weghe, 2008). Another individual, killed by workers in a Siat Gabon plantation, was examined on 24 July 2013 by LC near Bitam, Ntem Dept, Woleu-Ntem Prov. New dept record (Pauwels and Vande weghe, 2008). LC witnessed a bite case of a dog by a Black and white cobra in Quartier Hauts de Gué Gué in Libreville on 15 Feb. 2014. The dog died 72h after the bite.

Lamprophiidae

Lamprophis olivaceus (Duméril, 1856)

We report here the second and third known specimens from the core area of Ivindo NP, MSNS Rept 223-224, collected at Ipassa in May 2016. They show respectively the following temporal formula: 1 + 3 / 1 + 3 and 1 + 3 / 1 + 2 + 4. Their main meristic characters are presented in Table 1. The species was already recorded from three localities in the park's buffer zone (Carlino and Pauwels, 2015) and can thus be regarded as locally common. On 21 Dec. 2015 LC examined a dead-on-road individual in Ayémé-Maritime, Komo-Mondah Dept, Estuaire Prov. Its uniform grey dorsal coloration and orange eyes with a vertical pupil left no doubt as to its identification. New prov. record (Pauwels and Vande weghe, 2008).

Psammodphis cf. *phillipsii* (Hallowell, 1844)

In the afternoon of 30 Sept. 2005 one of us (DR) photographed a juvenile individual in Gamba Oil Terminal, Ndougou Dept, Ogooué-Maritime Prov., while it was eating an adult *Phrynobatrachus auritus* Boulenger, 1900 (Anura: Phrynobatrachidae) (Figure 10). New prey record, confirming again the very eclectic diet of this snake, already known to feed in Gabon on amphibians, lizards and birds (Pauwels and Vande weghe, 2008; Pauwels et al., 2016b).



Figure 10. Juvenile *Psammophis* cf. *phillipsii* eating an adult *Phrynobatrachus auritus* in Gamba Oil Terminal, Ogooué-Maritime Prov., southwestern Gabon. Photograph by D. Rousseaux.

Natricidae

Natriciteres fuliginoides (Günther, 1858)

MSNS Rept 242: Ipassa, Ivindo NP, Ogooué-Ivindo Prov., May 2016. Temporal formula 1 + (1 / (1+1)) on both sides. SRR from 17 to 15 occurs above V 83 (left) and 80 (right) by fusion of rows 3 and 4. This new material confirms the species as one of the most common snakes in the park (Carlino and Pauwels, 2015).

Viperidae

Causus lichtensteinii (Jan, 1859)

On 5 July 2014 one of us (LC) found a dead adult individual in Salo savanna (0.62479 S, 9.53449 E, alt. 131 m asl) near Malon pool in Wonga-Wongué Presidential Reserve, Bendjé Dept, Ogooué-Maritime Prov. (Figure 11). First record for Wonga-Wongué Presidential Reserve (Vande weghe et al., 2016) and new dept record; the closest record in the province was made in the Fernan Vaz in Etimboué Dept (Boulenger, 1906).

Causus maculatus (Hallowell, 1842)

One of us (LC) examined the photograph of an individual of this species taken by an ecoguard at the Camp Présidentiel (0.47736 S, 9.59067 E) in Wonga-Wongué Presidential Reserve, Ogooué & Lacs Dept, Moyen-Ogooué Prov. in June 2014. The same month LC observed another individual at the Camp Présidentiel. Their typical stout habitus, round pupil, blotched dorsal pattern



Figure 11. Adult *Causus lichtensteinii* found dead in Wonga-Wongué Presidential Reserve, northwestern Gabon. Photograph by L. Chirio.

and dark parietal chevron left no doubt as to their specific identity. First record for Wonga-Wongué Presidential Reserve (Vande weghe et al., 2016) and new prov. record (Pauwels and Vande weghe, 2008). The presence of this viper in the savanna areas of southwestern Gabon is expected, especially since it has been recorded from Conkouati in the coastal area of the Republic of the Congo (Pauwels and Vande weghe, 2008: 237).

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