

Miscellanea Herpetologica Gabonica V & VI

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Abstract

We report the first observations of the orange morph and new locality records for *Atheris squamigera* (Viperidae) in Gabon, and new Gabonese locality records, ecological data or unpublished museum material for *Pelusios castaneus* and *P. chapini* (Pelomedusidae), *Kinixys erosa* (Testudinidae), *Trionyx triunguis* (Trionychidae), *Crocodylus niloticus*, *Mecistops cataphractus* and *Osteolaemus tetraspis* (Crocodylidae), *Agama agama* and *A. lebretoni* (Agamidae), *Chamaeleo dilepis*, *C. oweni* and *Rhampholeon spectrum* (Chamaeleonidae), *Hemidactylus echinus* and *H. mabouia* (Gekkonidae), *Gerrhosaurus nigrolineatus* (Gerrhosauridae), *Trachylepis maculilabris* and *T. p. polytropis* (Scincidae), *Varanus ornatus* (Varanidae), *Crotaphopeltis hotamboeia*, *Dipsadoboa underwoodi*, *Hapsidophrys smaragdinus*, *Philothamnus carinatus* and *P. heterodermus*, *Rhamnophis aethiops*, *Thrasops flavigularis* (Colubridae), *Pseudohaje goldii* (Elapidae), *Aparallactus modestus*, *Atractaspis boulengeri*, *Bufo depressiceps*, *Hormonotus modestus*, *Psammophis cf. phillipsii* (Lamprophiidae), *Python sebae* (Pythonidae), *Indotyphlops braminus* (Typhlopidae), *Bitis nasicornis* and *Causus lichtensteinii* (Viperidae). We add one species each to Estuaire, Haut-Ogooué and Ogooué-Ivindo provinces' reptile lists. Two snake species are added to Ivindo National Park, bringing the total number of reptile species recorded from the park to 64, i.e., half of the species currently recorded from Gabon. We document predation cases of *Pycnonotus barbatus* (Aves: Pycnonotidae) on *Hemidactylus mabouia*, *Philothamnus heterodermus* on *Arthroleptis variabilis* (Amphibia: Arthroleptidae), *Hormonotus modestus* on *Hemidactylus mabouia*, *Psammophis cf. phillipsii* on *Gerrhosaurus nigrolineatus*, *Causus lichtensteinii* on *Sclerophrys* sp. (Amphibia: Bufonidae) and feeding of *Varanus ornatus* on spaghetti.

Keywords

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

Introduction

The reptile fauna of Gabon is still poorly known, and new species are still regularly added to the country's list (Carlino and Pauwels, 2015; Ineich and Le Garff, 2015; Pauwels et al., 2016). Data on geographic distribution and natural history within Gabon are still scarce for most species and every contribution, even minor, is welcome. The series *Miscellanea Herpetologica Gabonica* (MHG) was created to offer a forum to compile miscellaneous data on Gabon reptile species' ecology and distribution in order to progressively fill knowledge gaps. The harvest of data was particularly rich since the publication of the MHG

IV (Pauwels et al., 2016), and equivalent to two regular volumes in terms of new information and number of taxa involved, reflecting the importance of making such media available in order to promote the publication of data that would otherwise remain unpublished or be difficult to access. The present double volume of the series includes, among others, voucher material collected in Ivindo National Park thanks to an agreement between the Natural History Museum of Salento and the Centre National de la Recherche Scientifique et Technique (CENAREST) of Libreville, and observations gathered during field surveys organized for Master students at the University of Masuku in Franceville in collaboration with the University of Rennes I. Several obser-

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vations were also made during field work by the teams of the Centre International de Recherches Médicales de Franceville (CIRMF) and of Gabon's Agence Nationale des Parcs Nationaux.

Material and Methods

New reptile voucher material under study was deposited in herpetological collections of the Institut Royal des Sciences Naturelles de Belgique in Brussels, the Muséum National d'Histoire Naturelle in Paris and 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 the head, at midbody (above the ventral corresponding to half of the total number of ventrals), and at one head-length before the 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.

Abbreviations: **Institutions:** IRSNB: Institut Royal des Sciences Naturelles de Belgique, Brussels, Belgium; MHNN, Muséum d'Histoire Naturelle de Nice, Nice; MNHN, Muséum National d'Histoire Naturelle, Paris, France; MSNS, Natural History Museum of Salento, Calimera, Italy. **Morphology:** A = anal plate; AT = anterior temporals; D = divided; DSR = number of dorsal scale rows; F = female; IL = number of infralabials, followed in brackets by the number of IL in contact with the first pair of sublinguals; K = keeled; M = male; PoO = number of postoculars; PreO = number of preoculars; PV = number of pre-ventrals; S = single; SC = number of subcaudals; SL = supra-labials, followed in brackets by the SL 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

Testudines

Pelomedusidae and Trionychidae

One of us (OSGP) examined, in the collections of the MHNN, three whole dried turtles labeled "Gabon": one adult *Pelusios castaneus* (Schweigger, 1812) (MHNN 2339), one adult *P. chapini* Laurent, 1965 (MHNN 2342) and one subadult *Trionyx triunguis* (Forskål, 1775) (MHNN 2341). These turtles were donated by Robert Brun (Nice) to the museum in 1988. Although no detailed localities are available, they were collected in Gabon by Mr. Brun's nephew, who was then a soldier posted in Gabon (R. Brun, pers. comm. to the curator O. Gerriet, July 2016). Interestingly, *Pelusios chapini* was mentioned from Gabon for the first time only more recently (Maran, 2002). The male *P. gabonensis* (MSNS Rept 42) from Ipassa reported by Carlino and Pauwels (2015) was illustrated alive by Carlino (2010: 19).

Testudinidae

Kinixys erosa (Schweigger, 1812)

Boundenga et al. (2016) reported the finding of haemosporidian parasites (*Haemocystidium*-like) in two out of 14 sampled

individuals from Gabon. It can be deduced from their Table 1 that these two individuals originate from Haut-Ogooué and Ngounié prov., respectively. No detailed localities were provided by Boundenga et al. (2016), but we provide them here in Table 2. The sampling sites represent ten new locality records and confirm this species as the most common and widespread chelonian in Gabon (Maran and Pauwels, 2005).

Crocodylia

Crocodylidae

Crocodylus niloticus Laurenti, 1768

The blood of an individual from Déguélié Lake (ca. 10 km W of Lambaréné), Ogooué et Lacs Dept, Moyen-Ogooué Prov. was sampled in search of haemosporidian parasites (see Table 2 and Boundenga et al., 2016) with negative results. New locality record.

Mecistops cataphractus (Cuvier, 1824)

The individual illustrated by Susini (2013: 15) from "Plateau Batéké" was more precisely photographed along the M'Passa River within Batéké Plateaux NP (Susini, pers. comm. to PC and OSGP, 2016).

Osteolaemus tetraspis Cope, 1861

Boundenga et al. (2016) reported negative results for the screening of haemosporidian parasites in seven individuals from Gabon; they mentioned no collection localities but we provide them here in Table 2 (Boundenga, unpubl. data) for five out of the seven specimens.

Squamata

Agamidae

Agama agama (Linnaeus, 1758)

One of us (BLG) observed individuals in Bakoumba, Lékoko Dept, Haut-Ogooué Prov., in June 2012, and in Koulamoutou, Lolo-Bouenguide Dept, Ogooué-Lolo Prov., in June 2014. Respectively new dept and new locality records (Pauwels et al., 2007; Pauwels and Vande weghe, 2008). The photograph of an adult male presented by Carlino (2010: 17) without locality was taken in April 2010 on the beach of Hôtel Tropicana (Quartier Tahiti) in Libreville.

Agama lebretoni Wagner, Barej & Schmitz, 2009

One of us (BLG) observed an adult male in the park of the Hôtel Masuku in Franceville in April 2011; it was illustrated by Le Garff (2015: 26, under *A. sylvana*). This confirms the co-occurrence of *Agama agama* and *A. lebretoni* in Franceville (Pauwels et al., 2016).

Chamaeleonidae

Chamaeleo dilepis Leach, 1819

The individual shown in Vande weghe (2014: 289) without locality was actually caught by one of us (OSGP) in Yenzi, Gamba, Ogooué-Maritime Prov., and was also pictured in Pauwels and Vande weghe (2008: 85).

Chamaeleo oweni Gray, 1831

The adult male shown on p. 289 in Vande weghe (2014) as being from Monts de Cristal (also figured in Vande weghe, 2008), more precisely was photographed in Kinguéli, which represents a new locality for the species (Pauwels et al., 2002b).

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

Species & catalog number	Sex	SVL (mm)	TaL (mm)	DSR	PV + VEN	A	SC	SL	IL	Lor	PreO	PoO	AT
Colubridae													
<i>Dipsadoboa underwoodi</i>													
IRSNB 18388	F	446	129	17-17-11, U	2 + 193, U	S	79, S, U	8 (3-5) / 8 (3-5)	9 (4) / 9 (4)	1 / 1	1 / 1	2 / 2	1 / 1
MSNS Rept 225	F	322	92	17-17-13, U	3 + 193, U	S	1D+79S	8 (4-5) / 8 (4-5)	10 (5) / 10 (5)	1 / 1	1 / 1	2 / 2	1 / 1
<i>Philothamnus carinatus</i>													
MSNS Rept 241	M	213	80	13-13-11, U	1 + 149, K	S	85, D, slightly K	9 (4-6) / 9 (4-6)	10 (5) / 10 (5)	1 / 1	1 / 1	2 / 2	2 / 2
<i>Philothamnus heterodermus</i>													
MNHN 2014.0063	F	445	167	15-15-11, U	2 + 162, K	S	84, D, U	9 (4-6) / 9 (4-6)	10 (5) / 10 (5)	1 / 1	2 / 2	2 / 2	2 / 2
MSNS Rept 229	F	394	>127	15-15-11, U	2 + 152, slightly K	S	>69, D, slightly K	9 (4-6) / 9 (4-6)	10 (5) / 10 (5)	1 / 1	1 / 1	2 / 2	2 / 2
MSNS Rept 231	F	424	170	15-15-11, U	1 + 154, slightly K	S	89, D, slightly K	9 (4-6) / 9 (4-6)	10 (5) / 10 (5)	1 / 1	1 / 1	2 / 2	3 / 3
MSNS Rept 239	F	392	150	15-15-11, U	1 + 150, K	S	82, D, slightly K	9 (4-6) / 9 (4-6)	10 (5) / 10 (5)	1 / 1	1 / 1	2 / 2	2 / 2
<i>Rhamnophis aethiopissa</i>													
MSNS Rept 226	F	260	135	17-17-11, U	1 + 166, K	D	140, D	7 (4-5) / 7 (4-5)	9 (5) / 9 (5)	1 / 1	1 / 1	3 / 3	1 / 1
Lamprophiidae													
<i>Aparallactus modestus</i>													
MSNS Rept 237	M	275	60	15-15-15, U	1 + 133, U	S	40, S, U	7 (3-4) / 7 (3-4)	7 (4) / 7 (4)	0 / 0	1 / 1	2 / 2	1 / 1*
<i>Atractaspis boulengeri</i>													
MSNS Rept 220	M	394	34	23-23-17, U	2 + 198, U	S	1D+8S+9D+2S+4D, U	5 (3-4) / 5 (3-4)	5 (3) / 5 (3)	0 / 0	1 / 1	1 / 1	1 / 1
<i>Buroma depressiceps</i>													
MSNS Rept 221	M	195	34	19-19-15, K	2 + 143, U	S	34, D	7 (3-4) / 7 (3-4)	9 (4) / 9 (4)	1 / 1	2 / 2	2 / 2	1 / 1
<i>Hormonotus modestus</i>													
MSNS Rept 135	M	525	>66	15-15-13, U	2 + 230, K	S	>38, D, K	8 (3-5) / 8 (3-5)	9 (4) / 9 (4)	1 / 1	1 / 1	3 / 3	2 / 2
MSNS Rept 219	F	556	134	15-15-13, U	1 + 217, K	S	85, D, K	8 (3-5) / 8 (3-5)	9 (4) / 9 (4)	1 / 1	1 / 1	3 / 4	2 / 2

* Behind the contact between 6th SL and parietal.

Rhampholeon spectrum (Buchholz, 1874)

The live adult male illustrated without locality by Panzera (2012: 9) corresponds to the specimen MSNS Rept 45 from Ipassa, Ogooué-Ivindo Prov., reported by Carlino and Pauwels (2015).

Gekkonidae

Hemidactylus echinus O'Shaugnessy, 1875

IRSNB 18392: Ipassa, 17 June 2016. Caught in forest at around midnight at 1 km from Ipassa Station towards the water tower. Adult male, SVL 62 mm; TaL 61 mm, tail original; pupil vertical with crenelated margins; rostral half divided by a dorso-ventral suture; SL 10 / 10; IL 11 / 11; 19 rows of dorsal tubercles at midbody, dorsal tubercles pointed, separated from each other by 4 or 5 granular scales; tubercles of the lowest row most developed and pointed; one pair of postmentals in contact; 54 rows of ventrals at midbody between lowest rows of tubercles on flanks; a patch of enlarged precloacal scales including a continuous row of 8 scales arranged in an inverted V whose 4 central ones are pitted; no enlarged femoral scales; subcaudal

scales not enlarged; two or three pointed scales on the underside of each tail segment, in addition to lateral and dorsal pointed scales on each segment; hands and feet with slight basal webbing. MSNS Rept 240: Ipassa Station, 14 June 2016. Caught at 10 P.M. in secondary forest on a branch one meter above the ground. Adult female, SVL 60 mm, TaL 46 mm, last 25 mm regenerated; pupil vertical with crenelated margins; rostral half divided by a dorso-ventral suture; SL 13 / 14; IL 11 / 10; 19 rows of dorsal tubercles at midbody, dorsal tubercles pointed, separated from each other by 4 or 5 granular scales; tubercles of the lowest row most developed and pointed; one pair of postmentals in contact; 52 rows of ventrals at midbody between lowest rows of tubercles on flanks; a patch of enlarged precloacal scales including a continuous series of six enlarged, pitted scales forming an inverted V; no enlarged femoral scales; subcaudal scales not enlarged, both in original and regenerated parts. Dissection revealed two eggs (approx. 8 × 9 mm) in an advanced development stage. The species was confirmed for Gabon by Carlino and Pauwels (2015) based on a single adult male individual from Ipassa. The present specimens thus repre-

Table 2. Details on the reptile sampling in search of haemosporidian parasites by Boundenga et al. (2016). * = new locality record; ** = new dept record.

Taxon	Sample number	Sampling date	Sample code	Locality
Testudinidae				
<i>Kinixys erosa</i>				
	24	23 Oct. 2009	HOREP1	Kélé*, Passa Dept**, Haut-Ogooué Prov.
	25	23 Oct. 2009	HOREP2	Kélé*, Passa Dept**, Haut-Ogooué Prov.
	42	27 Oct. 2009	HO Ron9	Franceville*, Passa Dept**, Haut-Ogooué Prov.
	90	18 Nov. 2009	OI 90	Laboka 1* (between Lalara and Koumameyong, at 15 km SE of Lalara), Lopé Dept, Ogooué-Ivindo Prov.
	91	18 Nov. 2009	OI 91	Ntsibelong* (on N. 4 road between Ovan and Makokou, at 18 km W of Makokou), Ivindo Dept, Ogooué-Ivindo Prov.
	146	2 Dec. 2009	OL 146	Lémengué*, Lombo-Bouenguidi Dept, Ogooué-Lolo Prov.
	243	23 Jan. 2010	NG 243	Mingola*, Douya-Onoy Dept, Ngounié Prov.
	251	25 Jan. 2010	NG 251	Mayenga*, Dola Dept, Ngounié Prov.
	343	11 Mar. 2010	WN 343	Ntougoum* (near Konossaville 1°40'23.9"N, 12°04'09.7"E), Woleu Dept, Woleu-Ntem Prov.
	358	12 Mar. 2010	WN 358	Bissok*, Woleu Dept, Woleu-Ntem Prov.
	370	15 Mar. 2010	WN 370	Nkolabona, Woleu Dept, Woleu-Ntem Prov.
	376	17 Mar. 2010	WN 376	Minvoul Centre, Haut-Ntem Dept, Woleu-Ntem Prov.
	417	17 June 2010	OM 1	Kongo*, Etimboué Dept, Ogooué-Maritime Prov.
	434	25 June 2010	OM 18	Kongo*, Etimboué Dept, Ogooué-Maritime Prov.
Crocodylidae				
<i>Crocodylus niloticus</i>				
	324	17 Feb. 2010	MO 324	Déguélié Lake* (ca. 10 km W of Lambaréné), Ogooué et Lacs Dept, Moyen-Ogooué Prov.
<i>Osteolaemus tetraspis</i>				
	88	17 Nov. 2009	OI 88	Nzafieng* (16 km W of Booué), Lopé Dept, Ogooué-Ivindo Prov.
	233	22 Jan. 2010	NG 233	Mbougou* (35 km NW of Mouila), Tsamba-Magotsi Dept, Ngounié Prov.
	284	13 Feb. 2010	MO 284	Koungouleu* (20 km N of Lambaréné), Ogooué et Lacs Dept, Moyen-Ogooué Prov.
	423	23 June 2010	OM 7	Kongo (15 km S of Ikènguè), Etimboué Dept, Ogooué-Maritime Prov.
	424	23 June 2010	OM 8	Ikènguè (25 km E-NE of Omboué), Etimboué Dept, Ogooué-Maritime Prov.
Varanidae				
<i>Varanus ornatus</i>				
	329	9 Mar. 2010	WN 329	Nkang (on the road Oyem-Konossoville, at 13 km E of Oyem), Woleu Dept, Woleu-Ntem Prov.
	360	13 Mar. 2010	WN 360	Akam Essatouk (Canton de Nyé), Woleu Dept, Woleu-Ntem Prov.
Pythonidae				
<i>Python sebae</i>				
	41	27 Oct. 2009	HO Ron8	Otala*, Sébé-Brikolo Dept**, Haut-Ogooué Prov.
	115	25 Nov. 2009	OL 115	Ndoubakoumbi* (on the road Mouila Pouvi-Koulamoutou, ca. 20 km SW of Koulamoutou), Lolo-Bouenguidi Dept**, Ogooué-Lolo Prov.
	126	27 Dec. 2009	OL 126	Koulamoutou*, Lolo-Bouenguidi Dept**, Ogooué-Lolo Prov.
	275	12 Feb. 2010	MO 275	Nkonié Lake* (ca. 40 km W-NW of Lambaréné), Ogooué et Lacs Dept, Moyen-Ogooué Prov.

sent the second and third records for Gabon. These and additional individuals observed but not collected by PC in June 2016 indicate that the species is locally common.

Hemidactylus mabouia (Moreau de Jonnés, 1818)

MSNS Rept 53a: logging camp (0°47'32.26"N, 13°8'30.07"E) along a bridge on Zadié River on the road to Bélinga, Ivindo Dept, Ogooué-Ivindo Prov., February 2011. Caught at night on a hut. Adult male. SVL 60 mm, TaL 77 mm, tail original. Pupil vertical with crenelated margins. Rostral surrounded by 1st SL on each side, nasals, and one scale separating the nasals. Rostral

partly (>1/3) divided by a vertical suture. SL 13 / 11; IL 8 / 8; 15 rows of dorsal tubercles at midbody; dorsal tubercles separated from each other by 2–6 granular scales; tubercles of the lowest row similar to the others; 42 rows of ventral scales at midbody between ventrolateral folds; a continuous row of 36 femoro-precloacal pores; subcaudals strongly widened. All fingers and toes clawed, fingers and toes unwebbed. MSNS 53c: same locality and date as MSNS Rept 53a. Adult female. SVL 43 mm, TaL 50 mm, tail complete. Rostral surrounded by 1st SL on each side, nasals, and one scale separating the nasals. Rostral partly (>1/2) divided by a vertical suture. SL 11 / 11; IL 10 / 10; 14



Figure 1. Live *Trachylepis p. polytropis* in Mandji, Ogooué-Lolo Province, central Gabon. Photograph by B. Le Garff.



Figure 2. Live *Trachylepis p. polytropis* on Bende Islet, Ndogo Lagoon, Ogooué-Maritime Prov., Gabon. Photograph by O. S. G. Pauwels.

rows of dorsal tubercles at midbody; tubercles of the lowest row similar to the others; 36 rows of ventral scales between ventrolateral folds. Patch of enlarged preloacal scales; no enlarged femoral scales; no femoral or preloacal pores. Subcaudals strongly enlarged. Fingers and toes unwebbed. No lateral spiny scales on tail. New locality record. Panzera (2011) presented a photograph of a bird holding a gecko tail in its beak; neither species is identified in the caption, but they are respectively *Pycnonotus barbatus* (Pycnonotidae) and an adult *Hemidactylus mabouia* (S. Panzera, pers. comm. to OSGP and PC, 2016). They were photographed in the early morning of 18 February 2011 at Hôtel Tropicana along the beach in Libreville; after a long pursuit of the gecko, the bird got only its tail to eat (S. Panzera, pers. comm.).

Gerrhosauridae

Gerrhosaurus nigrolineatus Hallowell, 1857

See under *Psammophis cf. phillipsii* and Figure 7.

Scincidae

Trachylepis maculilabris (Gray, 1845)

One of us (BLG) observed individuals on the campus of Masuku University, Franceville, Passa Dept, Haut-Ogooué Prov. in June 2012. One of these individuals was illustrated by Le Garff (2015: 27, top left) without locality. New dept record. The first record of this species from the Haut-Ogooué Prov. was made by Ineich and Le Garff (2015) based on individuals collected in Lékoko Dept, along with individuals of *T. affinis* (Gray, 1839), a species that was then also newly recorded for the province. Le Garff (2015: 27, top right, without locality) provided a close-up view of the head of an adult *T. maculilabris* from near Bakoumba in Haut-Ogooué Prov.

Trachylepis polytropis polytropis (Boulenger, 1903)

Several individuals were observed; one was photographed by BLG in a forest at Mandji, Lolo-Bouenguide Dept, Ogooué-Lolo Prov. in June 2014 (Figure 1). New dept record (Pauwels and Vande weghe, 2008). An adult individual was photographed in the afternoon of 11 September 2008 by OSGP on Bende Islet in Ndogo Lagoon, Ndougou Dept, Ogooué-Maritime Prov. (Figure 2). New record for the islet (Pauwels et al., 2006).

Varanidae

Varanus ornatus (Daudin, 1803)

Two adults were photographed by one of us (CV) on 26 October

2013 (Figure 3) while they were eating together food remains (spaghetti with vegetables) at the “Chez Béti” tourist camp, Nyonié, Komo-Océan Dept, Estuaire Prov. New locality and food records, confirming the extremely eclectic diet of this monitor (Pauwels and Vande weghe, 2008). Boundenga et al. (2016) reported negative results for the screening of haemsporidian parasites in four “*Varanus niloticus*” individuals from Gabon. The latter species identification is to be corrected to *V. ornatus*. No collection localities were mentioned by Boundenga et al. (2016), but we provide them here in Table 2 (Boundenga, unpubl. data). Gaël Vande weghe (pers. comm. to OSGP) observed in October 2006 a *Varanus ornatus* in Waka NP along a small forest river.

Colubridae

Crotaphopeltis hotamboeia (Laurenti, 1768)

One adult individual caught in Lékédi Park, Lékoko Dept, Haut-Ogooué Prov., was examined by one of us (BLG) in June 2012. This individual was illustrated by Le Garff (2015: 25, erroneously under *Dipsadoboa weileri* (Lindholm, 1905)). New dept record. The species was first recorded in Haut-Ogooué Prov. by Pauwels and Sallé (2009), where it was so far known only from Franceville in Passa Dept.

Dipsadoboa underwoodi Rasmussen, 1993

IRSNB 18388: SEEF (Société Equatoriale d’Exploitation Forestière) logging concession, transect R5 (0°25’42”N, 10°30’22”E; alt. 490 m asl), Monts de Cristal, Estuaire Prov., 26 Oct. 2011. It shows a frontal longer than wide; anterior pair of sublinguals longer than posterior pair; the color of the ventral



Figure 3. Adult *Varanus ornatus* eating food remains at a tourist camp in Nyonié, Estuaire Province, Gabon. Photograph by C. Vigna.



Figure 4. Live adult *Hapsidophrys smaragdinus* at Hôtel Masuku in Franceville, Haut-Ogooué Province, southeastern Gabon. Photograph by B. Le Garff.

surface of its tail is the same as that of its belly; for additional characters see Table 1. New prov. record (Pauwels et al., 2002b; Pauwels and Vande weghe, 2008). We report here an additional specimen from Ipassa, where the species can be regarded as common (Carlino and Pauwels, 2015); MSNS Rept 225, caught on 14 June 2016 at 11 P.M. while it was crossing a path in secondary forest near the station; its SRR from 17 to 15 occurs above V 130 (left) and 135 (right) by fusion of rows 3 and 4, and from 15 to 13 above V 136 by fusion of both paravertebral rows with the vertebral row; temporal formula $1 + 2$ (left) / $1 + 2$ (right).

Hapsidophrys smaragdinus (Schlegel, 1837)

One individual was observed by one of us (BLG) in Lékédi Park, Lékoko Dept, Haut-Ogooué Prov. in April 2013. New dept record (Pauwels et al., 2007). Another individual was photographed by BLG in June 2011 in the garden of Hôtel Masuku (Figure 4) and another observed in April 2011 on the campus of Masuku University in Franceville. The individual shown on p. 288 in Vande weghe (2014), said to be from the Monts de Cristal, more precisely was photographed midway along the L-107 road, Estuaire Prov., a new locality record for the species which was already recorded from several localities in the Monts de Cristal (Pauwels et al., 2002b).

Philothamnus carinatus (Andersson, 1901)

MSNS Rept 21, an adult female (SVL 409 mm) from Ipassa, Ivindo NP, presented by Carlino and Pauwels (2015), was re-examined and its dissection revealed four eggs (length 18–20 mm, width approx. 6 mm). We report here an additional specimen from Ipassa, MSNS Rept 241, collected on 20 June 2016, a juvenile whose umbilical scar is visible on V 134–136; its SRR from 13 to 11 occurs above V 93 (left) and 94 (right) by fusion of rows 3 and 4; its temporal formula is $(1/(1+1)) + 2$ on the left side and $2 + (1/(1+1))$ on the right side (for additional characters see Table 1).

Philothamnus heterodermus (Hallowell, 1857)

MNHN-RA 2014.0063: Mandji, about 10 km SW of Koulamoutou, Lolo-Bouenguïdi Dept, Ogooué-Lolo Prov., June 2014. Main morphological characters provided in Table 1. New dept record; within the Massif du Chaillu, the species was so far recorded only from Iboundji in Offoué-Onoy Dept (Pauwels et al., 2002a). The Mandji individual was illustrated by Le Garff (2015: 25, under *P. carinatus*) without locality. MSNS Rept



Figure 5. Freshly killed *Thrasops flavigularis* at Pointe Denis, Estuaire Province, Gabon. Photograph by J.-B. Squarcini.

229: Ipassa, Ivindo NP, Ogooué-Ivindo Prov., May 2016. Its stomach contains one *Arthroleptis variabilis* Matschie, 1893 (Arthroleptidae) with a SVL of about 40 mm, ingested head first. MSNS Rept 231: Ipassa, Ivindo NP, Ogooué-Ivindo Prov., May 2016. Temporal formula $3 + (1 / (1 + 1)) / 3 + 2 + 2$; an additional half V on the right side just before the last V; its stomach contains one *Arthroleptis variabilis* with a SVL of 27 mm, ingested head last. MSNS Rept 239: Ipassa, Ivindo NP, Ogooué-Ivindo Prov., May 2016. Temporal formula $2 + (1/(1+1))$ (left), $((1+1)/1) + (1/(1+1))$ (right); SRR from 15 to 13 by fusion of rows 3 and 4 above V 79 (left) and 80 (right), and from 13 to 11 by fusion of rows 5 and 6 above V 86 (left) and 85 (right).

Rhynchophis aethiopissa aethiopissa Günther, 1862

MSNS Rept 226: Ipassa, Ivindo NP, Ogooué-Ivindo Prov., May 2016. Caught by day in secondary forest. Pupil round. Vertebral row distinctly enlarged. On each side, an additional, small triangular scale between the postnasal, the loreal and the 1st and 2nd supralabials. Four post-parietals. The species was already recorded from the buffer zone of the park (Carlino and Pauwels, 2015), the present record is the first from the park's core area.

Thrasops flavigularis (Hallowell, 1852)

One of us (JBS) photographed in February 2016 an adult individual killed by locals in the garden of the River Lodge hotel in Pointe Denis ($0^{\circ}19'01''N$, $9^{\circ}22'01''E$), Komo-Océan Dept, Estuaire Prov. (Figure 5). New dept record. The only other record for Estuaire Prov. was made by Pauwels and David (2008) in Moukouma II in Komo Dept.

Elapidae

Pseudohaje goldii (Boulenger, 1895)

A young individual, about 1.1 m long (Figure 6), was observed at



Figure 6. Live subadult *Pseudohaje goldii* near Nyonié, Estuaire Province, Gabon. Photograph by C. Vigna.

around 10 A.M. on 1 July 2013 along Nyonié River, between the village of Nyonié and Camp Béti (GPS 0°2.4028'S, 9°20.4862'E), Komo-Océan Dept, Estuaire Prov. It was crossing a recently burnt, open grassy area in sunny weather. It escaped at high speed when approached. The photographs taken by one of us (CV) allowed to note that it had 7(3-4)/7(3-4) SL, 0/0 loreal, 1/1 PreO, 3/3 PoO, 1+2 / 1+2 temporals and 15 DSR of which the vertebral row is not widened. It is the third individual of that species observed by CV in that locality; all observations took place in the morning. New dept record (Pauwels and Kamdem Toham, 2002).

Lamprophiidae

Aparallactus modestus (Günther, 1859)

The adult female MSNS Rept 34 (SVL 468 mm) from Ipassa, Ivindo NP, presented by Carlino and Pauwels (2015), was re-examined and its dissection revealed eight eggs of subequal size, about 24 by 7 mm. We report here the 2nd specimen for Ivindo NP, caught in Ipassa in May 2016, MSNS Rept 237; its pupil is round; it shows on each side a contact between the nasal and the preocular; on each side the 6th SL contacts the parietal; its anterior sublinguals are wider than the posterior ones, but of about the same length; it has an additional half V on the left side just before the anal plate; its vertebral row is not widened.

Atractaspis boulengeri Mocquard, 1897

MSNS Rept 220: Ipassa, Ivindo NP, Ogooué-Ivindo Prov., 23 June 2016. Found at 8:30 P.M. in primary forest near the research station. Pupil round. SRR: from 23 to 21 by fusion of rows 6 & 7 at V 107 / 111, from 21 to 19 by fusion of rows 6 & 7 at V 152 / 148, from 19 to 17 by fusion of rows 4 & 5 / 3 & 4 at V 186 / 188. Temporal formula 1 + 3 / 1 + 3. No supralabial in contact with parietals. First pair of sublinguals fused with first pair of infralabials.

Buroma depressiceps (F. Werner, 1897)

MSNS Rept 221: Ipassa, Ivindo NP, Ogooué-Ivindo Prov., 18 June 2016. Found at 9:30 A.M. in the leaf litter near the water pump of the research station. Round pupil. SRR: from 19 to 17 by fusion of rows 3 & 4 at V 76 / 74, from 17 to 15 by fusion of rows 2 & 3 at V 117 / 103. Temporal formula 1 + 2 / 1 + 2. Two pairs of sublinguals. Fast to attempt escape and repeatedly bit



Figure 7. Live adult *Psammophis cf. phillipsii* preying on an adult *Gerrhosaurus nigrolineatus* in Vera Plains, Ogooué-Maritime Prov., Gabon. Photograph by O. S. G. Pauwels.

when caught. New record for Ivindo NP (Carlino and Pauwels, 2015), and first record from a protected area in Gabon (Vandeweghe et al., 2016).

Hormonotus modestus (A. M. C. Duméril, Bibron & A. H. A. Duméril, 1854)

MSNS Rept 135: Ipassa, Ivindo NP, Ogooué-Ivindo Prov., 20 March 2015, caught on a tree branch at 80 cm above ground in secondary forest. SRR from 15 to 13 by fusion of rows 3 and 4 at the level of the V 165 / 164. MSNS Rept 219: Ipassa, Ivindo NP, Ogooué-Ivindo Prov., May 2016. SRR from 15 to 13 by fusion of rows 3 and 4 at the level of the 154th V on each side. Both specimens show a vertically elliptical pupil and an enlarged vertebral row. Main morphological characters provided in Table 1. New record for Ivindo NP and for Ogooué-Ivindo Prov. (Carlino and Pauwels, 2014, 2015). The stomach of MSNS Rept 219 contains three partly digested adult *Hemidactylus mabouia*.

Psammophis cf. phillipsii (Hallowell, 1844)

At around midday on 19 Oct. 2008 one of us (OSGP) observed an adult individual preying on an adult *Gerrhosaurus nigrolineatus* in Vera Plains (Plaines Vera), a savanna-forest mosaic locality near Gamba, Ndougou Dept, Ogooué-Maritime Prov. (Figure 7). The observation took place in an open savanna where both species are common (OSGP, pers. obs. 2002–2011). New locality and prey records, confirming the eclectic diet of this snake, already known to feed in Gabon on amphibians, lizards and birds (Pauwels and Vandeweghe, 2008).

Pythonidae

Python sebae (Gmelin, 1789)

On 26 August 2015 CV photographed an adult individual (total length ca. 4.5 m) in Nyonié (0°1'20.8092"S, 9°21'4.2516"E) along Nyonié River (Figure 8). CV also photographed a 2.5 m individual on 30 March 2014 in the same locality. New locality record. Boundenga et al. (2016) reported negative results for the screening of haemosporidian parasites in six individuals from Gabon, but no collection localities were mentioned. We provide them here in Table 2 (Boundenga, unpubl. data); they represent four new locality records.

Typhlopidae

Indotyphlops braminus (Daudin, 1803)

MSNS Rept 230: 800 m North of Hôtel Tropicana, Quartier Tahiti, Libreville, Estuaire Prov., 14 March 2012. Found at 6:48



Figure 8. Live adult *Python sebae* in Nyonié, Estuaire Province, Gabon. Photograph by C. Vigna.



Figure 9. Live orange *Atheris squamigera* in Mondah Forest, Estuaire Province, Gabon. Photograph by C. Orbell.

P.M. in the sand on the beach under a soaked piece of driftwood, at 9 m from the wave line. SVL 99, TaL 2.5 mm. Dorsum dark grayish-brown, belly lighter. Tail tip and lateral and lower parts of head whitish. DSR 20 at midbody. When caught, it defended itself using the terminal spiny scale of its tail. First record for Quartier Tahiti; within Libreville, this snake is thus currently recorded from quartiers La Sablière, Louis, Quaben and Tahiti (Pauwels et al., 2004).

Viperidae

Atheris squamigera (Hallowell, 1856)

Two of us (CO and LJTW) observed and photographed (Figure 9) on 13 March 2016 an orange individual on a trail in the Parcelle des Conservateurs, Mondah Forest, Estuaire Prov. This is the first time that the orange morph of this species is reported from Gabon (Pauwels and Vande weghe, 2008). Local guides mentioned to LJTW that the orange morph is not uncommon in the Mondah Forest close to the beach. The adult green individual shown on p. 287 in Vande weghe (2014), said to be from the Monts de Cristal, is more precisely from Tchimbélé, which is a new locality record, adding to several localities already known for the Monts de Cristal (Pauwels et al., 2002b).

Bitis nasicornis (Shaw, 1802)

One adult individual observed by one of us (PC) on 10 April 2010 while it was swimming in Ivindo River at 8:10 A.M. near the



Figure 10. Adult *Causus lichtensteinii* preying on a *Sclerophrys* toad in Lopé National Park, central Gabon. Photograph by K. Jeffery.

jetty of the Ipassa Research Station, Ivindo NP, Ogooué-Ivindo Prov. New locality record.

Causus lichtensteinii (Jan, 1859)

On 13 May 2009 at 11 A.M., KJ observed an adult individual (Figure 10) in the northern sector of Lopé NP, Lopé Dept, Ogooué-Ivindo Prov. It was on an old forestry road in an area of secondary growth forest (UTM: 786609, 9980447), in the process of consuming a toad (Bufonidae: *Sclerophrys* Tschudi, 1838). Upon the observer's arrival it slowly retreated into the adjacent vegetation, all the time holding on firmly to the toad. The adder was approximately 60 cm in total length. New dept record and first record for Lopé NP (Pauwels and Vande weghe, 2008).

Acknowledgments

We are grateful to Jérôme Maran (Bessières) for helping in the identification of the MHNN turtles. OSGP thanks Sébastien Bruaux, Tom Geerinckx and Terry Walschaerts (IRSNB), Antonio Durante (MSNS) and Olivier Gerriet (MHNN) for providing working facilities, Robert Brun (Nice), Sandro Panzera (MSNS), Eric Leroy and Franck Prugnolle (CIRMF, Franceville), Antonio Susini (Milan) and Gaël Vande weghe (Kigali) for useful information, and Mike Dloogatch for editorial support. KJ is grateful to Edmond Dimoto, CIRMF field technician, who first spotted the Lopé *Causus*.

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