

## MISCELLANEA HERPETOLOGICA GABONICA I

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**ABSTRACT.**– The lineated form of the colubrid genus *Bothrophthalmus*, namely *B. lineatus lineatus* auctorum, is deleted from the Gabon reptile list. The colubrid *Lamprophis fuliginosus* is confirmed for Gabon. New localities and/or ecological data are provided for *Agama agama* (Agamidae), *Hemidactylus mabouia* (Gekkonidae), *Gerrhosaurus nigrolineatus* (Gerrhosauridae), *Feylinia grandisquamis*, *Panaspis breviceps* (Scincidae), *Varanus ornatus* (Varanidae), *Calabaria reinhardtii* (Boidae), *Grayia ornata*, *Natriciteres fuliginoides*, *Philothamnus carinatus*, *Thrasops flavigularis* (Colubridae) and *Naja melanoleuca* (Elapidae).

**KEYWORDS.**– Reptilia, Agamidae, Gekkonidae, Gerrhosauridae, Scincidae, Varanidae, Boidae, Colubridae, Elapidae, *Bothrophthalmus*, *Lamprophis*, Gabon, Africa.

### INTRODUCTION

The herpetofauna of Gabon is one of the least known among tropical African countries. A preliminary national reptile list was first available only in 2004 (Frétey and Blanc, no date; see also Pauwels, 2004), but that list has to be seriously re-evaluated because of lack of material for documenting the presence of a number of species. For instance, Maran and Pauwels (2005) deleted three species and two genera of chelonians mentioned in that list for Gabon, pending available material. Distribution within the country and ecology are also poorly documented. Additional distributional and ecological data can thus be useful. For this reason, we decided to write a series of notes on unpublished miscellaneous observations that hardly fit into our current taxonomic works or regional inventories. This series will be published as “Miscellanea Herpetologica Gabonica”.

### MATERIAL AND METHODS

Families and taxa within families are presented in alphabetical order in the Results. New locali-

ties are as much as possible, substantiated by voucher specimens. Field observations in Gabon were made by OSGP (where field numbers are preceded by P). New locality records are marked with an asterisk\*, new department (district) records by two\*\*, new province records by three\*\*\*. Body measurements were made to the nearest millimeter; scale measurements were made with a caliper to the nearest 0.05 mm. Paired meristic characters are given in the left/right order. Snake ventral scales were counted according to the Dowling (1951) method. The terminal tail scute is not included in the subcaudal count. The numbers of dorsal scale rows are given, respectively, at one head length posterior to head, at midbody (above the ventral corresponding to half of the total number of ventrals), and at one head length anterior to vent.

Abbreviations.– Institutions: DFC: Direction de la Faune et de la Chasse, Ministère de l'Économie forestière, Libreville; IRSNB: Institut Royal des Sciences naturelles de Belgique, Brussels; MNHN: Muséum national d'Histoire naturelle, Paris. Morphology: DSR: dorsal sca-

le row(s); IL: infralabial scale(s); Lor: loreal scale(s); PV: pre-ventral scale(s); SC: subcaudal scale(s); SL: supralabial scale(s); SVL: snout-vent length; TaL: tail length; TL: total length; VEN: ventral scale(s). Others: DOR: dead on road; Dpt.: Department; Prov.: Province.

## RESULTS

### Squamata

#### Agamidae

##### *Agama agama* (Linnaeus, 1758)

**Distribution.**— We observed this species in numerous localities, including Ayémé Agoula\* (Komo Dpt., Estuaire Prov.) on 29/10/01, Bènguie\* (Okano Dpt.\*\*, Woleu-Ntem Prov.) on 29/10/01, Ékouk-Village\* (Komo Dpt., Estuaire Prov.) on 30/10/01, Four-Place\* (Komo Dpt., Estuaire Prov.) on 30/10/01, Kango\* (Komo Dpt., Estuaire Prov.) on 29/9/01, Ntoum\* (Komo-Mondah Dpt., Estuaire Prov.) on 29/9/01, and Oyan III\* (Komo Dpt., Estuaire Prov.) on 29/9/01. Numerous citizens of the capital city Libreville (Komo-Mondah Dpt., Estuaire Prov.), explained to us that this species appeared in their city only at the end of the seventies, and that it has since progressively invaded the interior of the country, clandestinely embarking on motor vehicles. According to our informants, the species would have “arrived on boats coming from West Africa”.

**Diet.**— Many specimens inhabiting the restaurant terraces in Libreville easily accept food like bread crumbs and other food reliefs. On the afternoon of 17 August, 2001 in the Quartier Charbonnages, Libreville, we observed an adult male eating a ripe papaya on a tree.

**Predation.**— On three occasions in 2005 at Yenzi Camp near Gamba, Ndougou Dpt., Ogooué-Maritime Prov., juveniles were seen in house gardens being killed and eaten by Common Bulbuls *Pycnonotus barbatus* (Aves: Pycnonotidae). In the same year and locality, we observed a case of predation on a juvenile by a Cattle Egret (Aves: Ardeidae: *Bubulcus ibis*), and three cases of predation by feral cats (Mammalia: Felidae: *Felis catus*), two on juveniles, one on an adult male in breeding colour. In 2004–2006 in Yenzi, we also examined two adult DOR *Psammophis* cf. *phillipsii* (Hallowell, 1844) (Colubridae),

each with an adult female *Agama agama* in the stomach, ingested head first (voucher specimens for the local populations of these two species were presented by Pauwels et al., 2004).

**Vernacular names.**— The people of the Pounou ethnic group call it *dibambila* or *dibambilang*; its French-Gabonese name is *margouillat*, a general name actually applying locally to all four-legged lacertilians but the monitor *Varanus ornatus* (Daudin, 1803).

#### Gekkonidae

##### *Hemidactylus mabouia* (Moreau de Jonnès, 1818)

**Distribution.**— We observed this species at night hunting light-attracted insects near neon lights on house walls in the towns of Fougamou (Tsamba-Magotsi Dpt., Ngounié Prov.; 9/9/01), Lambaréné (Ogooué and Lacs Dpt., Moyen-Ogooué Prov.; 8/9/01), Mouila (Douya-Onoy Dpt., Ngounié Prov.; 24/7/01, 22/9/01), Ndendé\* (Dola Dpt.\*\*, Ngounié Prov.; 6/7/01), Ndjolé\* (Abanga-Bigné Dpt.\*\*, Moyen-Ogooué Prov.; 28/9/01) and Ntoum\* (Komo-Mondah Dpt., Estuaire Prov.; 26/10/01).

**Vernacular name.**— The people belonging to the Fang ethnic group of Libreville and Ntoum call it *nchè*.

#### Gerrhosauridae

##### *Gerrhosaurus nigrolineatus* Hallowell, 1857

**Diving.**— On the morning of 25 October 2005 (rainy season), in Ivinga\*, Gamba, after a continuous rain for 12 h, a subadult specimen was observed actively swimming in a heavily flooded bunchgrass prairie. When approached, it plunged and reappeared ca. 3 m further, and repeated it twice on shorter distances. This ability of swimming and diving is a necessity, since its natural environment in Gabon is sometimes flooded during the rainy season.

#### Scincidae

##### *Feylinia grandisquamis* Müller, 1910

**Diet and behavior in captivity.**— An adult specimen collected in October 2005 in Gamba was kept three months in a terrarium in the same town, and fed with locally collected prey. It

was later released. Range of prey items accepted included earthworms (Lumbricina), termite soldiers and workers (Isoptera), ant eggs (Hymenoptera Formicidae) and caterpillar-like beetle larvae (Coleoptera). Before being bitten, each prey item was touched 2–3 times with the snout, sometimes licked with the tongue, giving chance to any fast prey to escape. During its whole time in captivity, the main time of activity was 1730–1930 h. When the sky was cloudy, activity began around 1630 h and stopped earlier. Food was not given everyday, and was disposed only after foraging activity began. While handled, the specimen never attempted to bite, but frenetically moved its body. Several other specimens caught in the same locality had had recourse to caudal autotomy when first handled.

*Panaspis breviceps* (Peters, 1873)

**New material.**— IRSNB 17287: Itsila waterfall\* on Ngounié River, on the border of Gabon with the Republic of Congo (Gabon side), ca 17 km E–SE of Lékindou, Boumi-Louétsi Dpt., Ngounié Prov., July 2004. This adult specimen was found in the afternoon under stones along the waterfall basin, in syntopy with a *Natriciteres fuliginoides* (see below). We visited the locality again on 17 August 2006 and lifted the very same rocks, under which we found another adult *P. breviceps*.

Varanidae

*Varanus ornatus* (Daudin, 1803)

**Distribution.**— We observed a juvenile crossing the road by day in secondary forest at Sam\* (Okano Dpt.\*\*, Woleu-Ntem Prov.) on 29 October 2001, another at Ébel Alèmbe\* (Abanga-Bigné Dpt.\*\*, Moyen-Ogooué Prov.) on the same day. Both showed five transversal dorsal rows of bright yellow ocellae between the fore and hind limbs.

Boidae

*Calabaria reinhardtii* (Schlegel, 1851)

**New material.**— IRSNB 16353 (field number P612) (male; 1 PV + 242 V; undivided anal; 27 undivided SC; 28–35–27 smooth DSR): Nkog-Mbon\* (0°27'55"S, 10°17'10"E; alt. 35 m asl.) (also known as Nkoghe-Mboum), on the road

Bifoun-Lambaréné (26 airline km from Lambaréné), Ogooué and Lacs Dpt., Moyen-Ogooué Prov., 4 August 2001. This specimen was found DOR along a secondary forest. In 2004, we examined a dead adult specimen on the road at Cap Esterias\*, Komo-Mondah Dpt., Estuaire Prov. Its head and tail had been cut with a machete by a farmer working in a nearby field, who threw the rest of the body on the road, hoping that the next passing car would give it the *coup de grâce*. Because their blunt tail is not easily distinguishable from their tail, *Calabaria* and local typhlopids are believed to have two heads, and many locals also believe them to bite by their two extremities and be highly venomous. Special attention is thus always given to ensure they die whenever encountered.

Colubridae

*Bothrophthalmus brunneus* Günther, 1863

The genus *Bothrophthalmus* contains only two morphs (with and without three dorsal red longitudinal stripes) whose respective status is still unclear, since authors' opinions differ in the interpretation of this striking colour difference as being non-geographical intraspecific variation, subspecific or specific level variation. Knoepffler (1966:7) cited *Bothrophthalmus lineatus lineatus* from Gabon, and mentioned three specimens without describing their dorsal colouration. Waardenburg and Guicherit (1991:41) mentioned "*Botrophthalmus* [sic] *lineatus*" from south-western Gabon (Ofoubou, also known as Moufoubou, Ndolou Dpt., Ngounié Prov.), but did not mention anything about the pattern. Pauwels et al. (2002:51, 55) recorded the non-striped morph under *B. l. brunneus* from south-central Gabon. Burger et al. (2004:153, 172) recorded the non-striped form from south-western Gabon under *B. lineatus*. Pauwels et al. (2006:93, 97; 2006:184) mentioned the non-striped form from south-western Gabon under *B. brunneus*. In order to verify the effective sympatry of both forms in Gabon, we re-evaluated the existing records. Waardenburg and Guicherit's record can not be verified since no preserved specimen was referred to. Knoepffler's "*lineatus*" specimens were deposited in the MNHN, and re-examined, as well as an older specimen (MNHN 1935.0407 from "Gabon" without more details

on locality). Knoepffler's MBG 0323 from "Lambaréné, route de Bakota" became MNHN 1967.0361; MBG 0332 and MBG 0737 from Makokou (Ivindo Dpt., Ogooué-Ivindo Prov.) are now MNHN 1967.0362 and MNHN 1967.0363 respectively (as also verified through the dates accompanying the specimens in the MNHN register and in Knoepffler's paper). None of them shows a lineated pattern. All four MNHN specimens have 23–23–21 DSR, a deep loreal depression, 7/7 SL of which only the 5<sup>th</sup> enters the orbit, 2+3 / 2+3 temporals, 3/3 preoculars, 2/2 postoculars, 8/8 IL, and a single anal scale. All DSR but the first are strongly keeled, and the first row is slightly keeled in all specimens except MNHN 1935.0407. In this latter specimen (the smallest), all DSR, including the first are strongly keeled. Additional data are presented in Table 1. It can be concluded that there is currently no evidence that the striped form *lineatus* occurs in Gabon, from where a number of unstriped *brunneus* are known. Pending a revision of the genus, we suggest both forms be treated as different species. Avoiding doing so may result in additional confusion to their respective records.

*Grayia ornata* (Barboza du Bocage, 1866)

**New material.**— DFC (P603), IRSNB 16352 (P604): Moukalaba River\*, alt. 280 m., 2°46' S 11°9' E, along the road Tchibanga-Ndendé, near Ndènguila, Doutsila Dpt.\*\*, Nyanga Prov.\*\*\*, 5/7/01; IRSNB 16324 (P605), IRSNB 16325 (P793): Moukalaba River\*, alt. 36 m., 2°47' S 10°44' E, along the road Tchibanga-Digoudou, near the bac, Mougoutsi Dpt.\*\*, Nyanga Prov.\*\*\*, 23/7/01, 19/9/01.

P603–5 and P793 were caught in fishing nets. All specimens have smooth DSR, a divided anal scale and divided SC; additional characters are presented in Table 2. Although the possession of extralabials is typical for the species, P793 does not have any. We also saw a beheaded adult specimen on the road at Kougouleu\*, Komo Dpt., Estuaire Prov. on 23 August 2001, at midday; an interview with Kougouleu villagers revealed that it had been locally killed in a field along the road. Ethnozoological data were already gathered on *G. ornata* from Nyanga Prov. (see Pauwels et al., 2002:137, 139), but the above mentioned

specimens are the first documented record of the species for that province.

*Lamprophis fuliginosus* (Boie, 1827)

The species was not mentioned for Gabon by Hughes (1983), and no Gabonese locality appears on the dotted map provided by Chipaux (2006:65). Mocquard (1887:63, 79–80) listed *Boedon unicolor* from Franceville, Passa Dpt., Haut-Ogooué Prov. This record was based on three specimens, deposited in the Paris Museum: MNHN 1886.0224–0226, that we re-examined, and positively identified as *Lamprophis fuliginosus*. All three are females. Their dorsal colouration is uniformly dark brown. The dorsal surface of their head is also dark brown, except in MNHN 1886.0226, which shows a discrete postocular stripe. Their ventral colouration is uniform yellowish-brown. All three have 8/8 SL, 2/2 preoculars, no suboculars, 2/2 postoculars, 1+2/1+2 temporals, the 4<sup>th</sup> and 5<sup>th</sup> SL in contact with the eye, 10/10 IL (except on right side of MNHN 1886.0224, where there are nine), a single anal scale and divided SC. Additional characters are provided in Tables 3–4.

The MNHN registers indicate that these three specimens, collected during the Brazza's expedition, were entered in the collections in 1886. The registers interestingly also mention that three other specimens also identified as *Boaedon unicolor*, collected in Franceville during an expedition by the French explorer Thollon, and

**Table 1.** Morphometric and meristic data for non-striped Gabonese *Bothrophthalmus* specimens in the MNHN collections.

Collection Number	Sex	SVL (mm)	TaL (mm)	TaL /TL	VEN	SC
MNHN 1935.0407	M	228	60	0.21	192	79
MNHN 1967.0361	F	524	114	0.18	191	70
MNHN 1967.0362	M	309	78	0.20	191	80
MNHN 1967.0363	F	956	195	0.17	198	68

**Table 2.** Meristic data for *Grayia ornata* from Nyanga Prov., Gabon.

Collection Number	Sex	PV + VEN	SC	DSR
DFC (P603)	M	3 + 145	88	19–19–16
IRSNB 16324	F	2 + 148	82	19–17–15
IRSNB 16325	M	1 + 145	> 81	18–16–15
IRSNB 16352	M	2 + 147	> 46	19–17–15

**Table 3.** Morphometrical data for *Lamprophis fuliginosus* from Franceville, Gabon.

Collection Number	SVL (mm)	TaL (mm)	TaL/TL	Length of frontal	Width of frontal	L/W frontal
MNHN 1886.0224	890	129	0.13	7.85	6.20	1.27
MNHN 1886.0225	767	102	0.12	6.95	5.10	1.36
MNHN 1886.0226	615	93	0.13	6.40	4.45	1.44

**Table 4.** Meristical data for *Lamprophis fuliginosus* from Franceville, Gabon.

Collection Number	VEN	SC	DSR	Lor	Teeth
MNHN 1886.0224	230	52	29–31–21	1/1	6+15
MNHN 1886.0225	223	50	29–29–21	2/2	6+14
MNHN 1886.0226	225	51	27–27–19	1/1	6+14

entered in the MNHN collections in 1887, were later destroyed due to their bad state of preservation. If they were indeed of the same species, it would thus seem locally common, although Franceville is the only known locality in Gabon for the species. Two other *Lamprophis* species are known from the country: *L. olivaceus* and *L. virgatus* (see a.o. Mocquard, 1897:13, Pauwels et al., 2002a:53).

#### *Natriciteres fuliginoides* (Günther, 1858)

An adult specimen was found at Itsila waterfall\* on Ngounié River, on the border of Gabon with the Republic of Congo (Gabon side), ca 17 km E–SE of Lékindou, Boumi-Louétsi Dpt., Ngounié Prov., July 2004. It was found in the afternoon under stones along the waterfall basin. It was released after the examination of diagnostic characters: round pupil, 2 internasals, 1/1 loreal, 2/2 preoculars, 3/3 postoculars, 17–17–15 smooth DSR, vertebral row not enlarged, divided SC and a single anal scale. It did not make any attempt to bite when caught.

#### *Philothamnus carinatus* (Andersson, 1901)

**New material.**– IRSNB 16362 (P714) (female; PV+VEN: 1+150; single anal; SC: 83, divided; DSR: 13–13–11, smooth): Koumameyong\*, Mvounge Dpt.\*\*, Ogooué-Ivindo Prov., 6/10/01. This specimen was crossing a road in secondary forest in the afternoon.

#### *Thrasops flavigularis* (Hallowell, 1852)

**New material.**– IRSNB 16354 (P611) (only head preserved; PV+VEN: 1+208; SC: 144, divided; anal divided; DSR: 14–15–11, keeled): Moukouma II\*, on the road Libreville-Lambaréné, Komo Dpt.\*\*\*, Estuaire Prov.\*\*\*,

4/8/01. This specimen was found DOR along secondary forest.

#### Elapidae

#### *Naja melanoleuca* Hallowell, 1857

**New material.**– IRSNB 16397 (P610) (only head and tail preserved; female; PV+VEN: 1+?; anal single; SC: 63, divided; DSR: 26–?–13, smooth): Agricole I\*, on the road Libreville-Lambaréné, Komo Dpt., Estuaire Prov., 4/8/01. P610 was found in the morning on the road where it had just been thrown after being killed by a farmer in a garden near the road. We examined an adult headless specimen sold as food at Oyan I\*, Komo Dpt., Estuaire Prov., on 4/7/01; the snake had been caught by snare in a nearby secondary forest. We saw an adult specimen crossing the road at Andem\*, Komo Dpt., Estuaire Prov. in the sunny afternoon of 29/9/01. Vernacular names: The Fang villagers of Agricole I call it *évin-a-nyo* (*évin* = black; *nyo* = snake); the Pounou inhabitants of Oyan I call it *moudouma*.

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