
BOOK REVIEWS

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Les Serpents d’Afrique Occidentale et Centrale, 2nd ed., by Jean-Philippe Chippaux. 2001. Editions de l’Institut de Recherche pour le Développement, Collection Faune et Flore Tropicales, Paris (diffusion@bondy.ird.fr). 292 pp., softcover. 25.91 € (approx. US \$27.70). ISBN 2-7099-1439-5.

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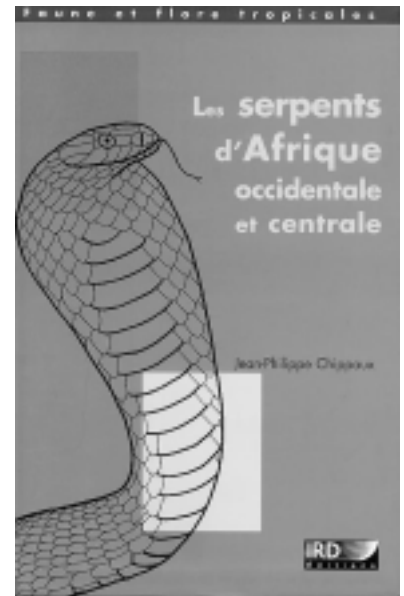
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The West African herpetofauna is poorly documented, despite having one of the richest snake faunas in Africa (e.g., Böhme 2000; Lawson 1993). Moreover, in many regions snakebite is of exceptional medical significance (see reviews by Spawls and Branch 1995 and Chippaux 1998). This new volume, therefore, fills a much needed gap.

“Chippaux 2001” is a re-edition, revised and updated, of “Chippaux 1999,” the chronological successor of Villiers’ (1975) famous *Les Serpents de l’Ouest Africain* (also in French and long out of print). The new volume has an agreeable format and a clear and practical organization. It begins with a general section (pp. 11–33) including a presentation of the classification and the evolution of snakes, an introduction to the main morphological characters useful to their identification (with good scale drawings), and a long chapter on venoms, envenomation and its treatment (the author’s speciality). The systematics section (pp. 35–249) includes a detailed account for each of the species occurring in the covered area (from Senegal east to the Central African Republic and from Mauritania south to Congo-Brazzaville). It also includes distribution maps, preceded by identification keys to the families, genera, and species. An impressive bibliographical section of 33 pages terminates the book. The text is accompanied by eight color plates, showing in total 55 photographs (illustrating four clinical envenomation cases and 47 snake species).



Several book reviews of the first edition have appeared, mentioning some important corrections. We concur with Hughes (2000) and Akani (2002) that the “*Dasypeltis fasciata*” shown in photograph 18 is in fact *D. scabra*, and that the “*Thelotornis kirtlandii*” (photograph 30) is *T. capensis*. Hughes (2000) also suggested that the “*Psammophis phillipsii*” in photograph 36 (from near Cotonou airport, Bénin; pers. comm. J.-P. Chippaux) is *P. sibilans*, that “*P. rukwae*” (photograph 38) is probably *P. sudanensis*, and that the viper “*Echis leucogaster*” (photograph 52) is *E. ocellatus*. The numbering of the pictures and their specific identification (except for the *Echis*, which has been corrected) remain unchanged in the second edition. We add that “*Grayia tholloni*” (photograph 15) is a (starving ?) *G. smithii* (the specimen probably originating from Togo; J.-P. Chippaux, pers. comm.). It would have been preferable for each photograph to be accompanied by the locality of the specimen. It should be noted also that “*Grayia smythii*” should be spelled *G. smithii* (see Pauwels et al. 2000), and “*Elapsoidea güentheri*” should have a double i and lack an umlaut. Other misspelled scientific names include “*Bothrophthalmus*” (p. 54, map; = *Bothrophthalmus*) and “*Lycophidion multimaculata*” (p. 76, right column; = *multimaculatum* as the gender of *Lycophidion* is neutral).

It is a great pity that scolecophidians, although represented by some 30 species in the area covered by the present opus (i.e., 15 % of the 195 local species recognized by Chippaux) are treated in only two pages, without any key to the genera or species. However, a volume wholly dedicated to the African Typhlopidae (Roux-Estève 1974) is available and, moreover, the Leptotyphlopidae and Typhlopidae of Africa have been dealt with in identification keys by Meirte (1992).

An excellent feature of Chippaux’s book is that head scalation drawings have been provided for many species, which is very useful for identification. In general, at least one species per genus has so been illustrated, but unfortunately not for the genera *Rhinoleptus* (Leptotyphlopidae), *Ramphotyphlops*, *Rhinotyphlops* (Typhlopidae), *Hemirhagerhis* (Colubridae), *Poecilopholis*, *Xenocalamus* (Atractaspididae), and *Cerastes* (Viperidae). A few drawings should be corrected, including the lateral view of the head of *Malpolon moilensis* which shows one preocular, whereas the species account (p. 158) notes “la préoculaire inférieure est au moins trois fois plus petite que la supérieure” [“the lower preocular is at least three times smaller than the upper one”]. The scalation drawing for *Dromophis lineatus* (p. 162) shows two preoculars, while the species and genus accounts specify only one. The lateral view of the head of *Atractaspis reticulata* (p. 187) shows fused internasals and prefrontals (perhaps a particularity of the illustrated specimen, but at least a very atypical configuration for the species); the upper view of the head of *Polemon gracilis* (p. 204) indicates a broad supralabial/prefrontal contact although the lateral view shows an absence of contact (same remark as above). For this latter species, Chippaux wrote (and this is also visible in his drawing) “aucune labiale supérieure n’est en contact avec la pariétale” [“none of the supralabials contacts the parietal”], *contra* de Witte and Laurent (1947). Those uncertainties concerning the drawings could be removed if the illustrated specimens could be traced and examined, i.e. if the drawings had been accompanied by the museum collection numbers of the specimens on which they were based (the same comment also applies to the hemipenis

and maxillary drawings).

The generic allocation of some species remains debatable, e.g., *Charina* for *Calabaria* (sensu Kluge 1993) has not received common acceptance; African *Geodipsas* have been transferred to the new genus *Buhoma* (Ziegler et al. 1997); and the use of *Haemorrhais* for all African *Coluber* is premature—although *algiurus* has been transferred to *Haemorrhais*, *Coluber dorri* remains anomalous among African racers and should remain in *Coluber* sensu lato (Schätti and Utiger 2001). It should be noted as well that the Dispholidini has recently been revised (Broadley and Wallach 2002) with resurrection of *Rhamnophis* for *aethiopiassa* and *batesi*. Molecular studies have also shown that the two races of Gaboon adder show sufficient divergence to be treated as separate species (Lenk et al. 1999). Both species therefore occur in the region, and *Bitis rhinoceros* is endemic to the Upper Guinea forest.

Inclusion of the summarized classification of African colubrids (p. 50) by Bogert (1940), while of historical value, does not reflect current understanding of relationships among African snakes and could be easily deleted. Similarly the groupings of atractaspids by features of dentition and hemipenes (p. 177) is of little value and is, moreover, inaccurate as *Aparallactus modestus* lacks back fangs.

The identification keys and generic and specific accounts are very useful, but some mistakes are present. The general key to the Colubridae (pp. 51–53) presents two couplets numbered 31 but no couplet 33, which makes the use of the key between couplets 31 and 45 questionable. The second part of couplet 37: “de 15 à 21 rangées dorsales” [“15 to 21 dorsal scale rows”], is erroneous, because it refers to various genera, of which *Philothamnus* includes species with only 13 dorsal rows. On pages 70–71, it is stated that *Lycophidion*, whose “frontale est plus large ou aussi large que longue” [“frontal is wider than or as wide as long”], can be distinguished from *Chamaelycus* because the latter possesses “une frontale plus large que longue” [“a frontal wider than long”]. There is also a contradiction within the account of *Lycophidion nigromaculatum* (p. 74) regarding the number of preoculars (1 vs. 2). Chippaux (p. 94) indicated that *Hydraethiops laevis* shows a single internasal, while it is in fact either single or divided (Pauwels et al. 2002) as indicated in the original description. The key for the genus *Thrasops* (p. 103) begins with a first couplet leading to a single vs. divided anal plate, but the introduction to the genus incorrectly characterizes all species as having a divided anal. In the presentation of the genus *Hapsidophrys*, Chippaux (p. 119) wrote that both species show a single preocular, while two are visible on the lateral head scale drawing of *H. lineatus*, in agreement with the species account which states “1 préoculaire, parfois 2” [“1 preocular, sometimes 2”]. Chippaux indicates a maximal number of 143 subcaudals for *Dispholidus typus*, which corresponds to that shown by the only known Gabonese specimen, plotted on the map on p. 153. This specimen, however, is probably a *Thrasops* (Hughes 1983). In the introduction to the Elapidae (p. 207), the author states that the loreal scale is always absent in the group, but on p. 220, in the presentation of the cobras of the genus *Pseudohaje*, one finds “loréale généralement absente” [“loreal generally absent”] (as previously noted by Hughes 2000). The generic account for *Paranaja* (p. 227) indicates that the dorsal scale rows are oblique, contrary to the species account where they are said to be straight.

Although the nomenclature of scales has been very well explained and illustrated in the general section, these definitions are not always taken into account in the species accounts. For instance, the drawing of *Scaphiophis albopunctatus* (p. 116) shows two preoculars, no subocular and two postoculars, but the species account states that there is one preocular, two or three suboculars and two or three postoculars. For *Thrasops batesii* too (p. 107), what should be called a subocular following the earlier definitions on p. 16, is called a postocular.

The maps, each dotted and tinted, most often dealing with a single taxon, give a good idea of the general distribution of the species. Point localities are based on literature records (white dots) and personal observations of the author (black dots). It is important to draw the attention of non French-speaking readers to the fact that the map tinting is based on the probability of the presence of the species “en fonction de critères écologiques (climat, végétation, degré d’anthropisation)” [“according to ecological criteria (climate, vegetation, degree of anthropisation)”. As Hughes (2000) and Akani (2002) have noted, the point localities for most species are drawn mainly from the French literature, and many localities from English language publications have been omitted (even if the articles are listed in the bibliography). In addition to this deficiency we also noted important discrepancies between the text and the distribution maps, notably for *Dipsadoboa underwoodi*, *Gonionotophis grantii*, *Lamprophis virgatus*, *Lycophidion irroratum*, *L. multimaculatum*, *Psammophis phillipsii*, *Telescopus variegatus*, *Atractaspis dahomeyensis*, *Polemon gabonensis*, *P. gracilis*, and *Causus resimus*. The distribution of *Python sebae* (p. 47) is still given as extending to South Africa, although southern and eastern populations have since 1984 been referred to *P. natalensis* (Broadley 1984). Chippaux (p. 238) included in the map for *Atheris broadleyi* dots intended to depict the distribution of *A. squamigera* in the map provided in the original description of the former species, and thus erroneously shows *A. broadleyi* from Gabon and Congo-Brazzaville. *Echis jogeri* Cherlin, 1990 (ignored in Chippaux 1999) is dotted on a map but not discussed in a detailed species account. This was attributed to the “nombre de spécimens trop faible (4 exemplaires au total) pour permettre une plus ample description” [“too low number of specimens (4 in total) to allow for a more complete description”], even if this species is considered as “probablement valide” (p. 244). However, other species known from less than four specimens, including some taxa that are probably invalid, such as *Mehelya riggenbachi* and *Atractaspis coalescens* (each known from a single specimen), are discussed in dedicated accounts. The genus *Eryx*, included in the first edition on the basis of the presence of *E. somalicus* in the Central African Republic, has disappeared without comment from the second edition. The map for *Mehelya capensis* shows a strong overlap of the distribution of the subspecies *capensis* and *savorgnani*, indicating they should be better treated as distinct species, and similar comments could be made for the sympatric subspecies *lineatus* and *brunneus* of *Bothrophthalmus lineatus*. Type localities are indicated in French, but should be given in the language of the original description in order to avoid possible misinterpretations due to translation.

Despite these relatively few errors and problems this book is a remarkable reference work and will serve as a useful starting point for herpetologists in the field and in the laboratory. It is an excel-

lent synthesis that all naturalists interested in the rich African fauna will want to consult. We strongly recommend its acquisition by all natural science libraries.

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