

Short Communications

SALAMANDRA 42 2/3 181-183 Rheinbach, 20 August 2006 ISSN 0036-3375

A possible attempt of predation of *Liophidium vaillanti* upon *Dromicodryas bernieri* observed in central-southern Madagascar (Serpentes: Colubridae)

VINCENZO MERCURIO, FABIO MATTIOLI, TOKIHERY J. RAZAFINDRABE & FRANCO ANDREONE

Abstract. We report the observation of an attack and putative predation of the colubrid snake *Liophidium vaillanti* upon a freshly preserved individual of *Dromicodryas bernieri* at the Isalo Massif, central-southern Madagascar. This observation suggests that *L. vaillanti* is – at least occasionally – ophiophagous, and that its prey choice is mainly based upon visual cues.

Key words. Reptilia, Serpentes, Colubridae, *Liophidium vaillanti*, *Dromicodryas bernieri*, Madagascar, ophiophagy.

Approximately 75 species of colubrid snakes belonging to 18 genera are currently known from Madagascar (CADLE 2004). The life history of most of these snakes, including their feeding preference and preying behaviour, remains largely unknown. Indeed, these aspects are of central interest for a better comprehension of the ecology of species. Surprisingly, while trophic ecology is a well-known domain for the mainland African snakes, very little has been published on the Malagasy species. Some scattered data are available

for the genera *Geodipsas*, *Liopholidophis*, and *Stenophis* (CADLE 1996a, 1996b, VENCES et al. 2004), whereas for the remnant genera only very little information is available (e. g., DOMERGUE 1986, PRESTON-MAFHAM 1991, GLAW & VENCES 1994).

So far, the prey items of Malagasy colubrids appear to consist primarily of frogs and lizards. Peculiar trophic habits are reported for *Geodipsas laphystia*, which preys upon frog eggs (CADLE 1996b), for some *Pseudoxyrhopus* species, which are apparently specialised



Fig. 1. Possible attempt of predation of *Liophidium vaillanti* on a formalin fixed *Dromicodryas bernieri*, Isalo Massif, central-southern Madagascar.

to eat hard-bodied lizards (CADLE 1999), and for a single dissected museum specimen of *Micropisthodon ochraceus* which contained at least four snails (CADLE 2003). *Liopholidophis rhadinaea* is also known to prey upon amphibian eggs (CADLE 1996a). Ophiophagy is only reported for *Mimophis mahfalensis* and for *Madagascarophis* species (DOMERGUE 1987, PRESTON-MAFHAM 1991).

During our ongoing research work on the Madagascan herpetofauna we had the chance to witness a singular behaviour regarding a little known colubrid, *Liophidium vaillanti*. The observation occurred on 24 November 2004 during a survey in the Isalo Massif, central-southern Madagascar (Fianarantsoa Province, Antsohy Fivondronona, Ranohira Firaisana), at a locality known as "Zahavola" (22°37.55'S; 45°21.50'E; altitude about 820 m a.s.l.). At the end of a day of survey work we were just photographing a female *Liophidium vaillanti*, whose presence had not yet been recorded for the Isalo Massif. This snake (823 mm total length) was handled for some minutes with the purpose of taking photographs of dorsal pattern. At the same time, the voucher specimens of other preserved amphibians and reptiles were removed from the fixative solution (4 % formalin), and put on the ground, waiting to be labelled. One of these was an individual of another colubrid, a male *Dromicodryas bernieri*, of 710 mm total length. The live *L. vaillanti* and the freshly fixed *D. bernieri* were at a certain time quite close. The *L. vaillanti* immediately noticed the preserved snake and moved towards it. Before we could react, it reached it and grasped its head (Fig. 1), starting to swallow with repeated and alternating movements of the jaws. Since the *D. bernieri* was full of formalin we stopped the swallowing as quickly as possible, before its head was totally swallowed. We documented this unusual behaviour with some photographs and the *L. vaillanti* apparently was not at all disturbed by our activity and repeated flashes.

Of course it is questionable whether the observed behaviour is a real predation attempt or represents an aggressive answer to

a stressed condition. We are led to sustain the first hypothesis, since: (1) the *L. vaillanti* specimen was calm, and did not show any aggressive posture; (2) it did not limit its attack to a bite, but it swallowed the other individual; (3) the *L. vaillanti* was much more robust than its prey, having a maximum body diameter of about 20 mm versus 11 mm in *D. bernieri*. Besides this, since the *D. bernieri* was immobile on the ground and unsuitable in term of smell after the formalin fixation we are led to believe that the prey selection in *L. vaillanti* is – at least partly - based upon visual cues. Of course, further observations are needed to confirm the regularity of this ophiophagy.

In conclusion, we are led to interpret the apparent attempt of ophiophagy of *L. vaillanti*, given the harsh habitat conditions of the Isalo Massif (a very arid area) as an opportunistic predation in a habitat where prey availability is scanty, as was the case of the predation of a large terrestrial boa (*Acrotrophis dumerilii*) upon a giant cockroach documented for the same area (ANDREONE & MERCURIO 2005).

Acknowledgements

This research was made possible through an agreement with Malagasy institutions, and was supported by the Nando Peretti Foundation, Conservation International, and the National Amphibian Conservation Center.

References

- ANDREONE, F. & V. MERCURIO (2005): Natural History. *Acrotrophis dumerilii* (Dumeril's Ground Boa). Diet. – Herpetol. Rev., **36**(2): 185-186.
- CADLE, J.E. (1996a): Snakes of the genus *Liopholidophis* (Colubridae) from eastern Madagascar: New species, revisionary notes, and an estimate of phylogeny. – Bull. Mus. Comp. Zool., **154**(5): 369-464.
- CADLE, J.E. (1996b): Snakes of the genus *Geodipsas* (Colubridae) from Madagascar, with descriptions of new species and observations on natural history. – Bull. Mus. Comp. Zool.,

- 155(2): 33-87.
- CADLE, J.E. (1999): The dentition, systematics, and phylogeny of *Pseudoxyrhopus* and related genera from Madagascar, with descriptions of a new species and a new genus. – Bull. Mus. Comp. Zool., **155**(8): 381-443.
- CADLE, J.E. (2003): Colubridae, Snakes. – pp. 997-1004 in GOODMAN, S.M. & J.P. BENSTEAD (eds): The natural history of Madagascar. – Chicago and London (The University of Chicago Press), 1709 pp.
- DOMERGUE, C.A. (1986): Notes sur les serpents de la région Malgache. VI. Le genre *Ithycyphus* GÜNTHER, 1873; description de deux espèces nouvelles. – Bull. Mus. Nat. Hist. Nat., Paris, série 4, **8**(A2): 409-34.
- DOMERGUE, C.A. (1987): Notes sur les serpents de la région Malgache. VII. Révision du genre *Madagascarophis* MERTENS, 1952. – Bull. Mus. Nat. Hist. Nat., Paris, série 4, **9**(A2): 455-89.
- GLAW, F. & M. VENCES (1994): A fieldguide to the amphibians and reptiles of Madagascar. 2nd edition. – Cologne (Vences und Glaw Verlag), 480 pp.
- PRESTON-MAFHAM, K. (1991): Madagascar: A natural history. – Oxford (Facts on File), 224 pp.
- VENCES, M., F. GLAW, M. MERCURIO & F. ANDREONE (2004): Review of the Malagasy tree snakes of the genus *Stenophis* (Colubridae). – Salamandra, **40**(2): 161-179.

Manuscript received: 11 November 2005

Authors' addresses: VINCENZO MERCURIO, Forschungsinstitut und Naturhistorisches Museum Senckenberg, Sektion Herpetologie, Senckenberganlage 25, D-60325, Frankfurt a.M., Germany, E-Mail: vincenzomercurio@gmx.de; FABIO MATTIOLI, Acquario di Genova, Area Porto Antico, Ponte Spinola, I-16128, Genova, Italy, E-Mail: fmattioli@acquariodigenova.it; TOKIHERY J. RAZAFINDRABE, Département de Biologie Animale, Université d'Antananarivo, BP 906, Antananarivo 101, Madagascar, E-Mail: tokyraz@yahoo.fr; FRANCO ANDREONE, Museo Regionale di Scienze Naturali, Via G. Giolitti, 36, I-10123 Torino, Italy, E-Mail: f.andreone@libero.it.

| | | | | | |
|------------|----|-----|---------|---------------------------|----------------|
| SALAMANDRA | 42 | 2/3 | 183-187 | Rheinbach, 20 August 2006 | ISSN 0036-3375 |
|------------|----|-----|---------|---------------------------|----------------|

Feylinia currori GRAY, 1845 (Squamata: Scincidae): new distribution records from Kenya

PHILIPP WAGNER & ANDREAS SCHMITZ

Abstract. We report two new distribution records from Kakamega Forest for the skink species *Feylinia currori*. These findings represent the easternmost records for the species as well as the first record of the genus and species for Kenya.

Key words: Reptilia, Squamata, Scincidae, *Feylinia currori*, new record, distribution, Kenya.

The African skink genus *Feylinia* contains six small (semi-)fossorial species (*boulengeri*, *currori*, *elegans*, *grandisquamis*, *macrolepis*, *polylepis*) which inhabit forest, woodland and moist savanna areas of West and Central Africa. While one species, *Feylinia*

polylepis, is endemic to Principé island, the others are distributed in central Africa. The species *Feylinia boulengeri* has been listed for Tunisia (UETZ 2005) but this seems to be based on a confusion with *Sphenops boulengeri*, since the type locality of *F. boulengeri* is