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A note on the generic allocation of *Coluber moilensis* REUSS, 1834 (Serpentes: Psammophiidae)

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In the course of an experimental study of the so-called rubbing behaviour in various representatives of the Psammophiidae (DE PURY 2010), a unique behavioural trait among snakes (e.g., DE HAAN 1982, 1999, STEEHOUDER 1984, COTTONE & BAUER 2009), the question of proper taxonomic denomination of the specimens under study had also to be asked. A recent molecular phylogenetic study of psammophiids (KELLY et al. 2008) had shown that even the classification of genera within this family was not yet stable. This is also true for the Moila snake (Fig. 1), described by REUSS (1834) as *Coluber moilensis* and later reassigned to a variety of genera. Subsequently, it was assigned to *Coelopeltis* WAGLER, 1830 (type species *C. lacertina* = *Malpolon monspessulanus*) when GERVAIS (1857) described its synonym *Coelopeltis productus*, which he regarded, however, as the sister species of the only other *Coelopeltis* known to him, viz. *C. insignitus* (currently *Malpolon insignitus*). PETERS (1862) erected a new genus for the Moila snake

(*Rhagerhis*) and designated GERVAIS' (1857) *C. productus* as the type species. His use of this synonym instead of REUSS' (1834) older name *moilensis* might have favoured that his new generic name *Rhagerhis* fell into oblivion. However, in his synonymy/chresonymy list of *moilensis*, BRANDSTÄTTER (1995) did in fact list PETERS' name, but regarded it “as not free” for which reason he coined a new (but invalid) generic name for it (see below).

For a long time, *moilensis* was assigned to *Malpolon* FITZINGER, 1826, an allocation which has remained in wide use until today (e.g., DOUMERGUE 1901, PARKER 1931, HAAS 1957, MATTISON 1995, SCHLEICH et al. 1996, TRAPE & MANÉ 2006, LARGEN & SPAWLS 2010, to name just a few; for a more extensive chresonymy see BRANDSTÄTTER 1995) although KRAMER & SCHNURRENBERGER (1963) and MARX & RABB (1972) had meanwhile reallocated it to the genus *Rhamphiophis* PETERS, 1854 (type species *R. rostratus*). That PETERS (1862) regarded *Coelopeltis*, *Rhagerhis*



Figure 1. Live *Rhagerhis moilensis* spreading its hood. Photo: S. DE PURY.

and *Rhamphiophis* as closely related to each other is not only evident from his statement, viz. that *Rhagerhis* (and also *Taphrometopon*) might only be a subgenus or even an “aberration” of *Coelopeltis*; it is also evident from the synonymy he gave later (PETERS 1882) for *Rhamphiophis rostratus* where all three genus names show up. Finally, also *Rhamphiophis maradiensis* CHIRIO & INEICH, 1991 seems to be phenetically closer to *Rhagerhis moilensis* than to other *Rhamphiophis* (whose three taxa of *Rhamphiophis acutus* have been transferred to *Psammophylax* in the mean-

time: KELLY et al. 2008). Further research is also needed to properly allocate WERNER's (1919) *Coelopeltis cordofanensis* form of the Moila snake.

While PETERS (1862) based his generic diagnosis on the differences in head shape of his *C. productus* as compared with *C. insignitus*, SZYNDLAR (1988) found many years later clear differences in the skull architecture between *M. monspessulanus* and *M. moilensis* and questioned therefore their allocation to the same genus. BRANDSTÄTTER (1995) finally tried to be consequent and proposed a new genus *Scutophis* (type species *M. moilensis*) by disregarding PETERS' (1862) much older available name (see above). This action was challenged by BROADLEY (2005) who argued that *Scutophis* was not introduced in accordance with the Code (ICZN 1985, 1999). Nonetheless, *Scutophis* was used in some subsequent publications such as GENIEZ et al. (2004), SCHLÜTER (2005), PADIAL (2006), or BRITO et al. (2008).

The molecular genetic study by KELLY et al. (2008) clearly demonstrated that the Moila snake forms a distinct clade as compared to the (meanwhile two) species of its sister taxon *Malpolon*. Together with *Rhamphiophis*, these two clades form the sister group of all remaining Psammophiidae, which fits the earlier concepts of close relationships among the three clades.

If a nude name is met with, there are two possibilities how to treat the problem. First, the nomen nudum can be subsequently “legalized” and made available by a valid description, making the revisor to the author of the name. Or, alternatively, a different new name can be coined, given that no older available name exists. In a similar case of an invalid, nude generic snake name (*Maculophis* BURBRINK & LAWSON, 2007; type species *Coronella bella* STANLEY, 1917), we decided to coin a new name (SCHULZ et al., submitted), but in the case of *Scutophis* BRANDSTÄTTER, 1995, an older, available name does actually exist, viz. *Rhagerhis* PETERS, 1862.

This generic name, whose taxonomic distinctness is also corroborated by molecular genetic evidence (KELLY et al. 2008), is therefore reinstated here to accommodate its type species *Coelopeltis productus* (= *Rhagerhis moilensis*). Diagnostic characters include: (1) the skull structure (SZYNDLAR 1988) that results in the typical head shape of Moila snakes (see also BRANDSTÄTTER 1996); (2) elongated neck ribs that are on average 3 mm longer than in equal-sized *Malpolon* (for details see DE PURY 2010, and Fig. 2) and facilitate the spreading of the neck into a hood-shaped pattern (Fig. 1) characteristic of *R. moilensis*; (3) the dorsal scale microdermatoglyphic pattern that is drastically different in *Rhagerhis moilensis* as compared with both *Malpolon insignitus* and *M. monspessulanus* (Fig. 3).

More research is needed to define the content of *Rhagerhis*, i.e., whether it is actually monotypic as currently suggested, or whether more valid taxa (*productus*, *cordofanensis*) may be hidden under this species name. Considering the vast range from Morocco and Mauritania in the west through the Saharo-Arabian deserts to Iraq and Iran, greater differentiation could be expected, as is the case in other snakes with similar distribution patterns, for example in the recently revised *Telescopus dhara-obtusum-tripolitanus* group (CROCHET et al. 2008).

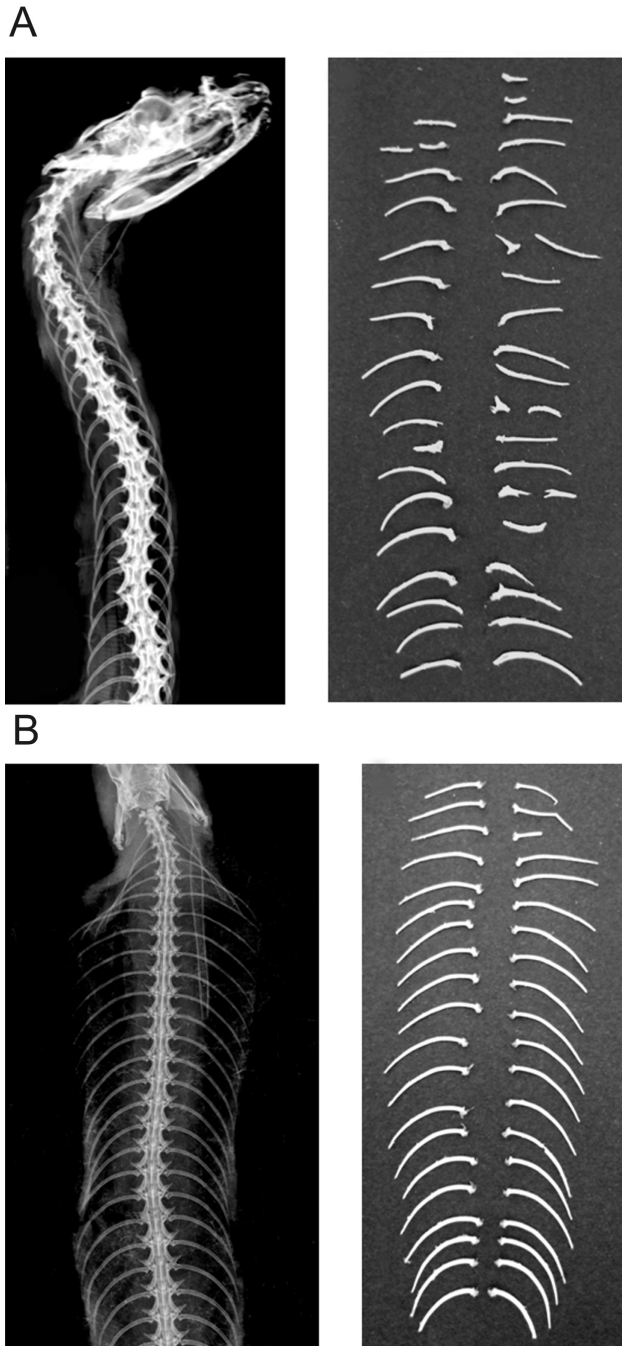


Figure 2. Images of neck ribs, x-ray in situ (left) and disarticulated (right) of (A) *Malpolon monspessulanus* and (B) *Rhagerhis moilensis* (after DE PURY 2010).

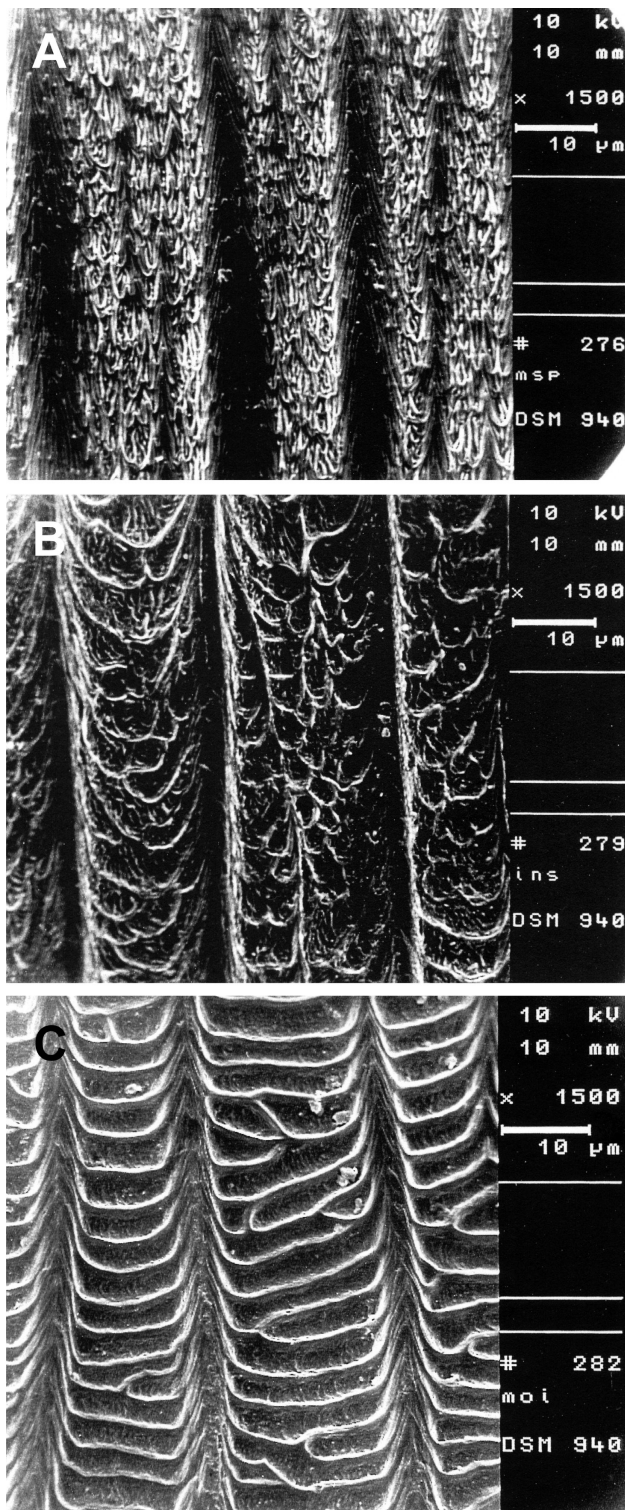


Figure 3. Scanning Electron Microscope (SEM) images of scale surface ultrastructure: (A) *Malpolon monspessulanus*, (B) *Malpolon insignitus*, and (C) *Rhagerhis moilensis* (after BRANDSTÄTTER 1995).

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