

Bonn. zool. Beitr.	Bd. 50	H. 1–2	S. 27–30	Bonn, Dezember 2001
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A note on the coexistence of three species of Pacific monitor lizards in Australia (Sauria, Varanidae, *Varanus indicus* group)

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Abstract. Ziegler, Philipp & Böhme (1999) recorded *Varanus doreanus* and *V. finschi* for the first time for Australia, from where only the collective species *V. indicus* was known so far. The existence of “true” *V. indicus* in continental Australia had to remain open at the time, because only records for the Australian Murray Islands, situated between New Guinea and Australia, were available to us. Now, we present the first “true” *V. indicus* to occur in mainland Australia (Maningrida, Arnhem Land / Northern Territory) thus proving the coexistence of three sibling species of the *V. indicus* group in continental Australia.

Key words. Sauria, Varanidae, *Varanus indicus* group, *V. doreanus*, *V. finschi*, *V. indicus*, coexistence, Australia.

Recently, Ziegler, Philipp & Böhme (1999) demonstrated that two of the sibling species that emerged from the partition of *Varanus indicus* (Daudin, 1802), viz. *V. doreanus* (Meyer, 1874) and *V. finschi* Böhme, Horn & Ziegler, 1994, also occur in northern Australia. This situation required a reappraisal of the definite occurrence of *V. indicus* sensu stricto in Australia, as most sources listing this species for the Australian fauna (e. g., de Rooij 1915, Mertens 1942, Brandenburg 1983, Cogger et al. 1983, Gibbons 1985, Schmida 1985, Wells & Wellington 1985, Hoser 1989, Wilson & Knowles 1992, Cogger 1994) were published before the discovery and/or resurrection of the sibling taxa making up the *V. indicus* group today: *V. caerulivirens* Ziegler, Böhme & Philipp, 1999; *V. doreanus* (Meyer, 1874); *V. finschi* Böhme, Horn & Ziegler, 1994; *V. jobiensis* Ahl, 1932; *V. melinus* Böhme & Ziegler, 1997; *V. spinulosus* Mertens, 1941; and *V. yuwonoi* Harvey & Barker, 1998 (see Böhme et al. 1994; Böhme & Ziegler 1997; Harvey & Barker 1998; Ziegler & Böhme 1999; Ziegler, Böhme & Philipp 1999; Ziegler, Philipp & Böhme 1999).

Ziegler, Philipp & Böhme (1999) recorded *V. doreanus* for the first time from two areas outside New Guinea, viz. from the Aru Islands and from Australia (northern Queensland, Cape York) – other records from Indonesia still need to be proven. In the same paper they raised *V. finschi* (originally described as a subspecies of *V. doreanus* from New Britain, Bismarck Archipelago: Böhme et al. 1994) to full species rank, due to its sympatry with *V. doreanus* in New Guinea. Moreover, *V. finschi*, too, was documented to occur in northern Queensland, Australia (Ziegler, Philipp & Böhme 1999). But unequivocal records of the true *V. indicus* (s. str.) from Australia were hardly detectable from the literature, and according to voucher material available to us, this species could definitely be proven to exist only on the Australian Murray



Fig. 1. Living *Varanus indicus* from Maningrida, Arnhem Land / Northern Territory.



Fig. 2. Ventral view of the head region of a preserved specimen of *Varanus indicus* (R0347) in the Northern Territory Museum and Art Gallery at Darwin from Maningrida. Photographs by Bernd Eidenmüller.

Islands between New Guinea and mainland Australia. The occurrence on the latter continent was not verifiable even by the published photographic material: the Australian Pacific monitors illustrated by Hoser (1989), Wilson & Knowles (1992), and Bennett (1998) cannot be assigned to any of the three species involved, as their throat and tongue colorations are not visible. The specimen shown by Schmida (1985) seems indeed to be a true *indicus* due to its light and visibly unpatterned throat colour, however, it lacks locality data. Also the specimen pictured by Cogger (1994) is identifiable as a true *V. indicus*, but originates from the Murray Islands (see above).

So, the first true *V. indicus* to occur in mainland Australia can be presented hereby (Wells & Wellington 1985 apply the name *rouxi* to the Australian population, but this is clearly a synonym of *V. indicus*: Mertens 1942; Ziegler, Philipp & Böhme 1999): one of us (B.E.) was able to take photographs of a living specimen, caught

at Maningrida, Arnhem Land / Northern Territory, which shows the diagnostic light unpatterned throat colouration in combination with an entirely dark tongue (fig. 1). A subsequent check of voucher material in the Northern Territory Museum and Art Gallery at Darwin revealed a further specimen from the locality Maningrida (fig. 2), which could be checked also in respect to the typical low midbody scale count (113) of this species (S value, see Brandenburg 1983; Böhme et al. 1994; Ziegler, Böhme & Philipp 1999). Thus, the coexistence of three sibling species of the *V. indicus* group in continental Australia is proven. However, their detailed distribution within Australia and their possible or rather expectable niche segregations (see Philipp 1999) should be followed up further on. In the meantime a ninth species (*V. cerambonensis*) could be described within the *V. indicus* group (Philipp, Böhme & Ziegler 1999).

Acknowledgements

Dr. Frank Glaw from the Zoologische Staatssammlung München and an anonymous reviewer made useful comments on the manuscript. Bernd Eidenmüller wants to thank Gavin S. Bedford from Darwin University for his help in the field and Paul Horner for access to the holdings of the Northern Territory Museum and Art Gallery at Darwin.

Zusammenfassung

War an Pazifikwaranen (*Varanus indicus*-Gruppe) bisher lediglich *V. indicus* für Australien bekannt, konnten Ziegler, Philipp & Böhme (1999) erstmals seine Schwesterarten *V. doreanus* und *V. finschi* für das australische Festland nachweisen. Ob ebenfalls der „echte“ *V. indicus* tatsächlich im kontinentalen Australien vorkommt, mußte zu diesem Zeitpunkt noch offen bleiben, da uns nur Nachweise von den zwischen Neuguinea und Australien gelegenen und politisch zu Australien gehörenden Murray-Inseln vorlagen. Hier können wir erstmals verbürgte Nachweise des „echten“ *V. indicus* für das australische Festland (Maningrida, Arnhem Land / Northern Territory) erbringen und damit die dortige Koexistenz dreier Schwesterarten der *V. indicus*-Gruppe dokumentieren.

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