

***Underwoodisaurus* Wermuth 1965, a Junior Synonym of *Phyllurus* Schinz 1822**

The most recent review of nomenclature within the family Gekkonidae is that of Wermuth (1965). Superimposed on this Kluge's (1967a, b) revisions of the higher taxonomic categories of the family have prompted a reappraisal of some of the previously accepted nomenclature. It is in this regard that the name *Underwoodisaurus* Wermuth, 1965 is reduced to the status of a junior synonym of *Phyllurus* Schinz 1822.

The name *Underwoodisaurus* was first employed by Wermuth (1965) as a subgenus erected to incorporate two species: *Gymnodactylus (Underwoodisaurus) millii* (type) and *G. (U.) vankampeni*. Reviewing nomenclature within the family Gekkonidae, Wermuth (1965) modified Underwood's (1954) conceptualization of the *Gymnodactylus* complex. Underwood (ibid.) regarded this complex as consisting of four separate genera: *Gymnodactylus*, *Cyrtodactylus*, *Wallsaurus* and *Phyllurus*. Wermuth (1965) incorporated almost all species of this complex into the single genus *Gymnodactylus* with the subgenera *Gymnodactylus*, *Cyrtodactylus* and *Wallsaurus*. He continued to recognize the genus *Phyllurus* but separated from it the two species mentioned above (*P. millii* and *P. vankampeni*), for which he created the subgenus *Underwoodisaurus*, also a part of the genus *Gymnodactylus*. The distinction between the four subgenera, as outlined by Wermuth (1965:VIII), was based upon pupil shape and geographic distribution.

Wermuth's (1965:VIII) reasons for breaking up Underwood's (1954) genus *Phyllurus* were based chiefly on tail shape. Thus, in Wermuth's (1965) terms members of the genus *Phyllurus* had markedly flattened, leaf-like tails (*P. platurus*, *P. cornutus*), whereas those forms with a more cylindrical tail were incorporated into *Gymnodactylus* under the subgeneric heading of *Underwoodisaurus*. His somewhat vague definition of this subgenus was as follows (Wermuth, 1965:IX):

"Australo-Asiatic species of the genus *Gymnodactylus* with vertical, straight-edged pupils and without a flattened, leaf-like tail".

The subgenera of Wermuth (1965) were short-lived, however. Kluge (1964, 1967a) pointed out that pupil shape was an unreliable taxonomic character in the Gekkonidae, sometimes being

variable within species and frequently being variable within genera (1967a:14). Indeed, based partly on a reconsideration of the significance of pupil shape Kluge (1964) had already included *Wallsaurus* within the genus *Homonota*. This latter point was noted by Wermuth (1965:200) in an addendum, but the subgeneric name *Wallsaurus* still remained in the main body of the text. Kluge regarded *Gymnodactylus* and *Cyrtodactylus* as distinct genera (Kluge, 1967a:9) and retained the genus *Phyllurus* as a discrete unit comprised of all the species recognized by Underwood (1954) except for *P. vankampeni*, which he included in the genus *Cyrtodactylus* (Kluge, 1967a:28). This latter point is significant as it removed the somewhat spurious "asiatic" element from *Phyllurus*.

In a detailed consideration of evolution within the Gekkonidae, Kluge (1967a) divided the family into four subfamilies. Within this framework he included the genus *Phyllurus* in the subfamily Diplodactylinae while *Gymnodactylus*, *Cyrtodactylus* and *Homonota* (including *Wallsaurus* of Underwood and Wermuth) were placed into the subfamily Gekkoninae. Thus, in Kluge's consideration (1967a, b) *Underwoodisaurus* received no recognition and its remaining species (*millii*) was accommodated within *Phyllurus*.

Notwithstanding this, however, Cogger (1967, 1975) and Bustard (1970) elevated the name *Underwoodisaurus* to generic status. The definition of *Phyllurus* given by Kluge (1967b), however, is based upon osteological as well as external features and includes in its text the complete range of variation of tail structure once thought to be significant in the separation of *Underwoodisaurus* from *Phyllurus*. The only differences between the generic diagnoses given for *Phyllurus* and *Underwoodisaurus* by Cogger (1975:174 and 178 respectively) refer to minor features of the digits. The digits are said to be moderately compressed in *Phyllurus* and slightly compressed in *Underwoodisaurus*; *Phyllurus* is stated to have three or more lateral scale rows on the digits, *Underwoodisaurus* to have only two; and the lower claw-sheathing scale in *Phyllurus* is said to be deeply notched while that of *Underwoodisaurus* may be deeply notched or divided. Caudal characteristics are not mentioned in the generic diagnoses. In the light of Kluge's (1967b) detailed analysis of the subfamily Diplodactylinae it is evident that the name *Underwoodisaurus* represents an unnecessary category of diplodactyline geckos and should accordingly be regarded as a junior synonym of *Phyllurus*.

ACKNOWLEDGMENTS.—I would like to thank Mrs. Eva Rosenberg for translating pertinent parts of Wermuth's (1965) treatise, an anonymous referee for clarifying some points of nomenclature, the Natural Science and Engineering Research Council of Canada for financial support and Miss Erin Smith for typing the manuscript.

LITERATURE CITED

- Bustard, H. R. 1970. Australian Lizards. Sydney: Collins. 162 pp.
 Cogger, H. G. 1967. Australian Reptiles in Colour. Sydney: A. H. & A. W. Reed. 112 pp.
 ———. 1975. Reptiles and Amphibians of Australia. Sydney: A. H. & A. W. Reed. 584 pp.
 Kluge, A. G. 1964. A revision of the South American gekkonid lizard genus *Homonota* Gray. Amer. Mus. Novitates. 2193:1–41.
 ———. 1967a. Higher taxonomic categories of gekkonid lizards and their evolution. Bull. Amer. Mus. Nat. Hist. 135:1–60 + 5 plates.
 ———. 1967b. Systematics, phylogeny, and zoogeography of the lizard genus *Diplodactylus* Gray (Gekkonidae). Aust. J. Zool. 15:1007–1108.
 Underwood, G. L. 1954. On the classification and evolution of geckos. Proc. Zool. Soc. London 124:469–492.
 Wermuth, H. 1965. Liste der rezenten Amphibien und Reptilien: Gekkonidae, Pygopodidae, Xantusiidae. Das Tierreich 80. Berlin: Walter de Gruyter & Co. xxii + 246 pp.

ANTHONY P. RUSSELL, Department of Biology, The University of Calgary, Calgary, Alberta T2N1N4, Canada.

Accepted 10 April 1980

Copyright 1980 Society for the Study of Amphibians and Reptiles