



Diversity of Australasian freshwater turtles, with an annotated synonymy and keys to species

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Abstract

There have been many substantial advances in our knowledge of Australasian freshwater turtle biodiversity in the last three decades, but the classification of genera and species is in dire need of review. The proliferation of names in unpublished manuscripts and in taxonomic works published in ephemeral (often privately printed) magazines, journals or books, without the benefits of peer review and often with little justification and scant diagnoses, many of which are not allowable nomenclatural actions under the International Code of Zoological Nomenclature, has led to considerable confusion. Taxonomy is punctuated by timely and rigorous revisions that bring a check on the proliferation of names for unsubstantiated taxa. This paper is not a comprehensive revision, but in it we provide an assessment of the current taxonomy of Australasian freshwater turtles, focusing on information available to establish the validity of taxa as biological entities (as opposed to the validity of the names). We include an annotated list of species, an outline of the taxonomic issues for those taxa that are controversial (leading in some cases to synonymies), keys to the identification of genera and species, and updated information on their distributions. We call upon the International Commission on Zoological Nomenclature to incorporate effective measures into the Code to prevent the destabilizing influence of the proliferation of names for taxa that have not been established as real biological entities through the normal processes of peer reviewed publication. The provision by the ICZN of a list of journals in which nomenclatural acts must appear in order to be valid, in addition to meeting the other provisions of the Code, is suggested as such a measure. Without such action, destabilization of our taxonomy will continue, the traditional Linnaean binominal nomenclature will be undermined, and credibility will build for other forms of nomenclature that are on a firmer scientific footing, but in other ways inferior.

Key words: Reptilia, Testudinata, Chelidae, Trionychidae, Carettochelyidae