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## A new species and subgenus of *Elseya* (Testudines: Pleurodira: Chelidae) from New Guinea

SCOTT THOMSON<sup>1</sup>, YOLARNIE AMEPOU<sup>2</sup>, JIM ANAMIATO<sup>3</sup> & ARTHUR GEORGES<sup>2</sup>

<sup>1</sup> Museu de Zoologia da Universidade de São Paulo, Divisão de Vertebrados (Herpetologia), Ipiranga, 04263-000 São Paulo, SP, Brazil. ([scott.thomson321@gmail.com](mailto:scott.thomson321@gmail.com))

<sup>2</sup> Institute for Applied Ecology, University of Canberra, Canberra ACT 2601, Australia ([georges@aerg.canberra.edu.au](mailto:georges@aerg.canberra.edu.au), [amepou@aerg.canberra.edu.au](mailto:amepou@aerg.canberra.edu.au))

<sup>3</sup> PNG National Museum and Art Gallery, P.O. Box 5560, Boroko, NCD, Papua New Guinea ([janamiato@museumpng.gov.pg](mailto:janamiato@museumpng.gov.pg))

### Abstract

The New Guinea freshwater turtle, *Elseya novaeguineae* (sensu lato) is a long-term, widespread resident of New Guinea and has been subject to substantial vicariance in one of the most geologically dynamic regions on earth. Thus, it should come as no surprise that the taxonomy of this turtle is poorly resolved. *Elseya novaeguineae* has long been recognized as a species complex, though which elements of this taxon warrant recognition as separate species has been debated. In this paper, we restrict *Elseya novaeguineae* to the Birds Head region of New Guinea, west of the Langguru Thrust and Fold Belt; we resurrect from synonymy *Elseya schultzei* for the populations north of the Central Ranges; and we describe a new species for the populations to the south of the Central Ranges. We revisit the classification of the genus *Elseya* throughout its range in the light of our work and recently published reports, and erect three subgenera that recognize the three major clades within this genus. Subgenus *Elseya* is the nominate subgenus, to which we assign *Elseya dentata*, *E. branderhorsti* and undescribed *E. sp. aff. dentata* [Sth Alligator]. *Elseya novaeguineae*, *E. schultzei* and our new species are assigned to a new subgenus, *Hanwarachelys*. Species of northern and eastern Queensland, *E. albagula*, *E. irwini*, *E. lavarackorum* and the fossil taxa *E. uberrima* and *E. nadibajagu*, are assigned to subgenus *Pelocomastes*, resurrected from synonymy.

**Key words:** *Elseya*; *Hanwarachelys*; *Pelocomastes*; Vogelkopf; Kikori; snapping turtles, New Guinea.

### Introduction

The Chelidae is a family of side-necked turtles restricted to the continents of South America and Australia, including the islands of New Guinea, Timor and Roti. No representatives are known from outside their current range as fossils (Pritchard 1979), so the family is of clear Gondwanan origin. Chelid taxonomy until relatively recently was in drastic need of review (Cogger 2000). Surprisingly, given its remoteness, knowledge of species level taxonomy in New Guinea was long in advance of that of the larger and more accessible Australian continent to the south. The various taxa quickly came to the notice of science because they were food items regularly traded by the local peoples and so very familiar to them. Chelid turtles of the Australasian region reach their highest diversity in New Guinea, with three species of long-necked turtle (*Chelodina novaeguineae*, *C. reimanni* and *C. pritchardi*), two species of snake-necked turtle (*C. parkeri* and *C. oblonga* (formerly *rugosa*)), two species of snapping turtle (*E. novaeguineae*, and *Elseya branderhorsti*) and one species of short-necked river turtle (*Emydura subglobosa*) (Rhodin & Genorupa 2000; Georges & Thomson 2010). Six of these eight species are found in the Fly River drainage (Georges *et al.* 2006), all but one have clear and close affinities with sister species in Australia (Georges & Adams 1992;1996; Georges *et al.* 2002; Le *et al.* 2013; Todd *et al.* 2014), and all but one are restricted to the region of New Guinea south of the central ranges (Georges & Thomson 2010). The exception is *Elseya novaeguineae*, whose affinities within Australasia are less than clear and whose distribution extends throughout