



CATALOGUE OF THE NOMINAL TAXA OF MESOAMERICAN PACHYCHILIDAE (MOLLUSCA: CAENOGASTROPODA)

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Abstract

The caenogastropod family Pachychilidae Troschel, 1858 is a monophyletic group of freshwater snails that is distributed in the tropical regions of the world, where they exhibit high levels of endemism at the species and generic levels. There are many uncertainties regarding generic affiliation and species names in the Mesoamerican Pachychilidae owing to their relatively variable shells, the lack of distinctive anatomical features and the intricate taxonomic histories. In an attempt to consolidate the knowledge of this taxon in the Neotropics, we provide here a catalogue of all available names of the Mesoamerican pachychilid fauna, laying the foundation for future taxonomic revisions. Primary types were located for 56 species-group taxa, and lectotypes for 22 nomina were designated. 102 nominal taxa of Mesoamerican pachychilids were originally described. We consider that six of these taxa belong to other cerithioidean families. Two nomina are considered to be unnecessary replacement names (*Melania renovata* Brot, 1862; *Pachychilus tristrami* Crosse & Fischer, 1892). Two taxa are South American species that were incorrectly associated with Mesoamerican taxa (*Pachychilus laevis* sensu Reeve, 1860; *Melania laevis* var. *decollata* Brot, 1875). The exact type locality of *Pachycheilus dalli* Pilsbry, 1896 and *Melania mexicana* were identified, and we accept *Pachychilus hinkleyi* (Marshall, 1920) as replacement name of the invalid *Sphaeromelania hinkleyi* Marshall, 1920.

Key words: Molluscs, nomenclature, taxonomy, freshwater, *Pachychilus*, Central America, Cerithioidea

Introduction

The family Pachychilidae Troschel, 1858 is a monophyletic group of freshwater snails that are distributed in the tropical regions of Africa, the Americas, Australia and Asia (Glaubrecht 1996; Lydeard *et al.* 2002; Köhler *et al.* 2004; Köhler & Glaubrecht 2007).

Within the Pachychilidae, 11 genera with about 250 species are currently recognized (F. Köhler pers. obs.). Although pachychilid faunas of the Old World and Australia have been recently studied in detail (Brown 1994; Rintelen & Glaubrecht 2005; Köhler & Dames 2009; Köhler & Glaubrecht 2010), the Neotropical members of this family have not been subject of modern revisions. The taxonomy of Neotropical pachychilids has been poorly resolved mainly because of the inconsistent usage of available names and the paucity of studies that delimit natural groups. Furthermore, it was recently found that shell and radula characteristics are unsuitable for distinguishing Mesoamerican pachychilid species (Gomez 2009).

Most members of Neotropical pachychilids were originally allocated to the genus *Melania* Lamarck, 1799, a junior synonym of *Thiara* Röding, 1798. These species were subsequently transferred to thiarid or pleurocerid genera (e.g. Morrison 1954; Glaubrecht 1996; Simone 2001), and more recently defined as members of the monophyletic Pachychilidae (Gomez 2009). Of more than 140 nominal species-group taxa of Pachychilidae that have been described from Mexico to Argentina (including the Antilles), some 71% occur in Mesoamerica. Encompassing all subtropical and tropical ecosystems from central Mexico to the Isthmus of Panama, Mesoamerica has been identified as one of earth's biodiversity hotspots and provides an important area for the study of biogeography and evolu-