Catalogue of Recent and fossil “worm-snail” taxa of the families Vermetidae, Siliquariidae, and Turritellidae (Mollusca: Caenogastropoda)

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The taxonomy of the uncoiling “worm-snails” belonging to the marine gastropod families Vermetidae, Siliquariidae and Turritellidae is notoriously confused and their nominal species frequently mixed (in the literature as well as in type specimens) with members of superficially similar tube-building polychaete worms or members of unrelated molluscan groups. A long history of introducing and using infrasubspecific names and the rampant employment of homonymous names for unrelated taxa had contributed to a system that became unworkable. The current catalogue researches nearly 1,500 names that have been cited in conjunction with Recent and fossil taxa worm-snail taxonomy (six names above family-group level, 18 family-group names, 195 genus-group names, 1,278 species-group names). Each name’s validity and availability (in the sense of the I.C.Z.N. Code) was investigated and current placement within or outside the mentioned worm-snail families is suggested. 560 species-group names are interpreted as available for members of the worm-snail groups here under discussion. Of these, approximately 280 species-group names are available for extant taxa. Various formal First-Reviser actions are taken to resolve priority issues. The type species for Tulaxoda Blainville, 1828 is herein designated to be Serpulorbis polyphragma Sasso, 1827, making Tulaxoda an objective junior synonym of Thylacodes Guettard, 1770. Magilus Montfort, 1810 is declared a nomen protectum over Campulotus Guettard, 1770, a nomen oblitum. Recurring nomenclatural issues and those too complex to treat within the regular catalogue entries are discussed in 22 taxa notes. The catalogue is fully referenced in 766 literature titles and eight associated literature notes.

Key words: Nomenclature, taxonomy, biodiversity, Vermicularia, Tenagodidae, marine, polychaete

Introduction

Diversion from the regular, tightly wound, helical type of shell coiling is not uncommon among gastropods, with various groups displaying degrees of uncoiling (e.g., Architectonicidae, Hydrobiidae, Caecidae). In a few groups of sessile suspension-feeding gastropods this uncoiling is induced by contact with substratum, by crowding situations, and the need to keep the shell aperture unimpeded and in feeding position in a rapidly changing environment. This allogenic derailing (Seilacher & Gunji 1993) of normal spiral growth produces a more or less irregular shell form convergent (and often confused) with that of serpulid polychaete worms. Among modern caenogastropods, this irregular growth pattern is a hallmark of the families Vermetidae, Siliquariidae, and of certain members of the Turritellidae (genus Vermicularia), with the latter two families closely related (Morton 1953). Vermetids differ from the others in anatomical features such as the presence of a pair of pedal tentacles involved in mucous-net feeding, and the fact that even the earliest post-larval whorls derail from a regular helical coiling pattern and attach to the substratum. Most siliquariids live in close association, often embedded, with sponges and their shells usually have