



Taxonomic revision of the genus *Eulimella* (Gastropoda, Pyramidellidae) from Brazil, with description of three new species

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Abstract

A taxonomic revision of the pyramidellid genus *Eulimella* from Brazil was performed based on shell morphology. The holotype of *Eulimella rudis* Watson, 1886 is illustrated and compared to shells from the southeast Brazilian coast, this being the first confirmed record of this species after its original description. *Eulimella smithii* (Verrill, 1880), previously known from northern localities in the western Atlantic, is recorded from the southwestern Atlantic, along virtually the entire Brazilian coast; it is herein considered a distinct taxon from *Eulimella unifasciata* (Forbes, 1844), a very similar species from the eastern Atlantic, given the lack of data on development to consider an amphi-Atlantic distribution. Three new species are described: *Eulimella torquata* **sp. nov.**, diagnosed by a constriction in the middle of each teleoconch whorl caused by a strong spiral furrow, producing a bilobed whorl profile; *Eulimella cylindrata* **sp. nov.**, diagnosed by a large subcylindrical teleoconch; and *Eulimella ejuncida* **sp. nov.**, characterized by its very slender shell, and small protoconch with only one whorl and with an “arc” shaped suture. The shells herein identified as *Eulimella* cf. *calva* from Brazil are conchologically identical to *Eulimella calva* Schander, 1994, from West Africa, but their taxonomic status should remain dubious because of lack of biological information to evaluate a possible amphi-Atlantic distribution pattern. All the species studied (except *Eulimella ejuncida* **sp. nov.**) have characteristic short microscopic axial threads organized in a spiral belt, varying in position and expression among species, but usually located in the middle of each teleoconch whorl or below the suture; this characteristic is also present in some species from the eastern Atlantic. Three South American species, originally or subsequently allocated in *Eulimella*, are herein considered as not belonging to this genus: *Eulimella argentina* Doello-Jurado, 1938; *Eulimella bahiensis* Castellanos, 1982; and *Eulimella xenohyes* (Melvill & Standen, 1912). The holotype of *Eulimella lissa* is illustrated with SEM micrographs.

Key words: Western Atlantic, South America, taxonomic revision, Pyramidelloidea, Mollusca

Introduction

The family Pyramidellidae comprises a diverse group of marine microgastropod ectoparasites of other invertebrates, including other mollusks and polychaetes. The family includes more than 300 generic and subgeneric taxa (Schander *et al.* 1999a, b, 2003), distributed worldwide.

The genus *Eulimella* Forbes & McAndrew, 1846 is usually characterized (*e.g.*, Peñas *et al.* 1996; Schander 1994; Aartsen *et al.* 1998) as having tall, glossy shells, which are devoid of sculpture except for microscopic growth lines; although some authors include species with some kind of spiral sculpture (*e.g.*, Peñas & Rolán 1997). Schander (1994) gave a brief diagnosis of some aspects of the anatomy; and Aartsen (1988) stabilized the nomenclature of the genus, including the definition of the type species and synonymy.

Taxonomic knowledge of *Eulimella* in the eastern Atlantic has been considerably expanded by several contributions from the coasts of Europe and Africa (*e.g.*, Aartsen 1994; Schander 1994; Peñas *et al.* 1996; Peñas & Rolán 1997, 1999, 2002; Aartsen *et al.* 2000); 14 species are now known from the Atlantic coast of Africa (Ardovini & Cossignani 2004). From the western Atlantic, however, especially off the coast of South America, the sparse