



## RESEARCH NOTE

### On the spawning of *Melanella eburnea* (Gastropoda, Eulimidae)

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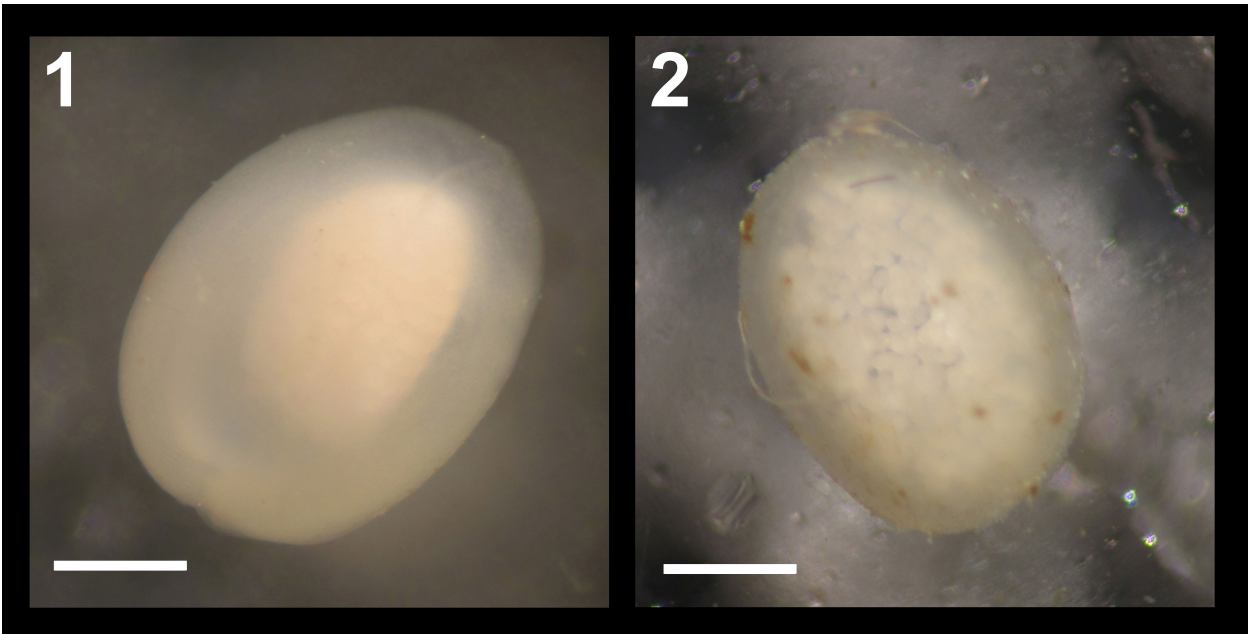
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Eulimids are marine snails known to live in parasitic association with all echinoderm classes (WARÉN 1983). There are about 4,000 species of eulimids (WARÉN & GITTENBERGER 1993) distributed from the poles to the Equator (REDFERN 2001; SCHIAPARELLI *et al.* 2007; NEKHAEV 2011).

Although relatively well-known when compared to other parasitic snails (*e.g.*, Cerithiopsidae, Triphoridae, Pyramidellidae), the spawning and larval stages of Eulimidae are still poorly understood. Most of the available information is presented as additional data in taxonomic works (TIKASINGH 1961; KINCAID 1964; WARÉN 1980; 1981; 1983; PASTORINO & ZELAYA 2001; DGBUADZE *et al.* 2012). Studies in which larval aspects (spawning and development) are the main subject are scarce. The first study addressing exclusively eulimid larval stages was conducted in 1844, with *Eulima distorta* Verrill, 1881 (LOVÉN 1844). Almost a century later, Lebour (1932, 1935) investigated the following species: *Stilifer stilifer* (Bloch, 1790), *Melanella alba* (da Costa, 1778) and *Vitreolina philippi* (de Rayneval & Ponzi, 1854).

*Melanella* Bowdich, 1822 is the largest genus of eulimids, comprising about 211 species (GOFAS 2013). There are eleven species of *Melanella* in Brazilian waters, *M. eburnea* (Mühlfeld, 1824) being the most recent record (QUEIROZ *et al.* 2013). This species occurs from the USA to Brazil; it is generally found in association with aspidochirote or dendrochirote sea cucumbers, but can be found in free-living state (QUEIROZ *et al.* 2013). Data on its spawning are still lacking.

Three specimens of *M. eburnea* associated with *Holothuria grisea* were collected on 12/x/2011 at the São Sebastião Channel, São Paulo state, Brazil (as in QUEIROZ *et al.* 2013), and transferred to an aquarium along with their hosts. A single egg capsule was spawned on the aquarium wall a few days later (Figure 1), on 27/x/2011. The egg capsule has an elliptical outline (3.5 by 2.6 mm) and is translucent. The eggs are pinkish and closely aggregated in the egg capsule (egg mass 2.1 by 1.4 mm; Figure 2). In later stages, before hatching (01/xi/2011), the egg capsule remained translucent even when the embryos had already reached the larval stage. Larvae that had already hatched swam freely inside the capsule (Figure 2). The larvae could not be measured, as they died before leaving the capsule.



**Figure 1.** Early stage of egg capsule (on 27/x/2011). **Figure 2.** Late stage of egg capsule (on 01/XI/2011).  
Scale: 1 mm. Scale: 1.1 mm.

Most of the egg capsule features observed here compares fittingly with those observed in *M. alba* (LEBOUR, 1935). It was laid on the aquarium wall and this is in accordance with the statements of Warén (1983) about *Melanella frielei* (Jordan, 1895). The egg capsule of *M. eburnea* seems to be single-layered. The species studied by Warén (1983) and Lebour (1935) have two or more layers, respectively. Nevertheless, more studies are needed to elucidate this question.

The spawning's size is very large if compared to eulimids' size: about 3.5 mm in length, which corresponds to more than half the overall length of the adult specimen (6 mm). This is also in line with the findings of Lebour (1935). The data on the developmental stages of yet another species of *Melanella* provided herein corroborate and complement the previous findings of Lebour (1935) on the genus.

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