


SHORT COMMUNICATION


NOTES ON THE TAXONOMY OF A FORGOTTEN  
TREE SNAIL: *DRYMAEUS CUTICULA* IS A JUVENILE  
*COCHLORINA AURISLEPORIS* (GASTROPODA:  
BULIMULIDAE)

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**ABSTRACT:** We propose that *Drymaeus cuticula* (Pfeiffer, 1855) is a junior synonym of *Cochlorina aurisleporis* (Bruguière, 1792) based on an analysis of their conchological characters. Aside from appearing on a few species checklists, *D. cuticula* has been relegated to taxonomic oblivion for decades, likely due to new specimens being readily attributed to its more well-known synonym. By synonymising the two species, we clarify the status of *D. cuticula* and contribute to ongoing efforts to revise the taxonomy of the genus *Drymaeus*.

**KEY WORDS:** Brazil; Orthalicoidea; Stylommatophora

The genus *Drymaeus* Albers, 1850 stands out as one of the most diverse land snail genera in the Neotropics, with approximately 300 species ranging from southern Florida to northern Argentina (BREURE 1979, BREURE & ESKENS 1981, MOLLUSCABASE 2024). Although remarkably diverse, this large number of species is also related to the fact that *Drymaeus* has been used as a “wastebasket genus” almost since its inception, with numerous species described and classified into it based on superficial shell characters (SALVADOR 2019a, MACHADO et al. 2023, SALVADOR et al. 2024).

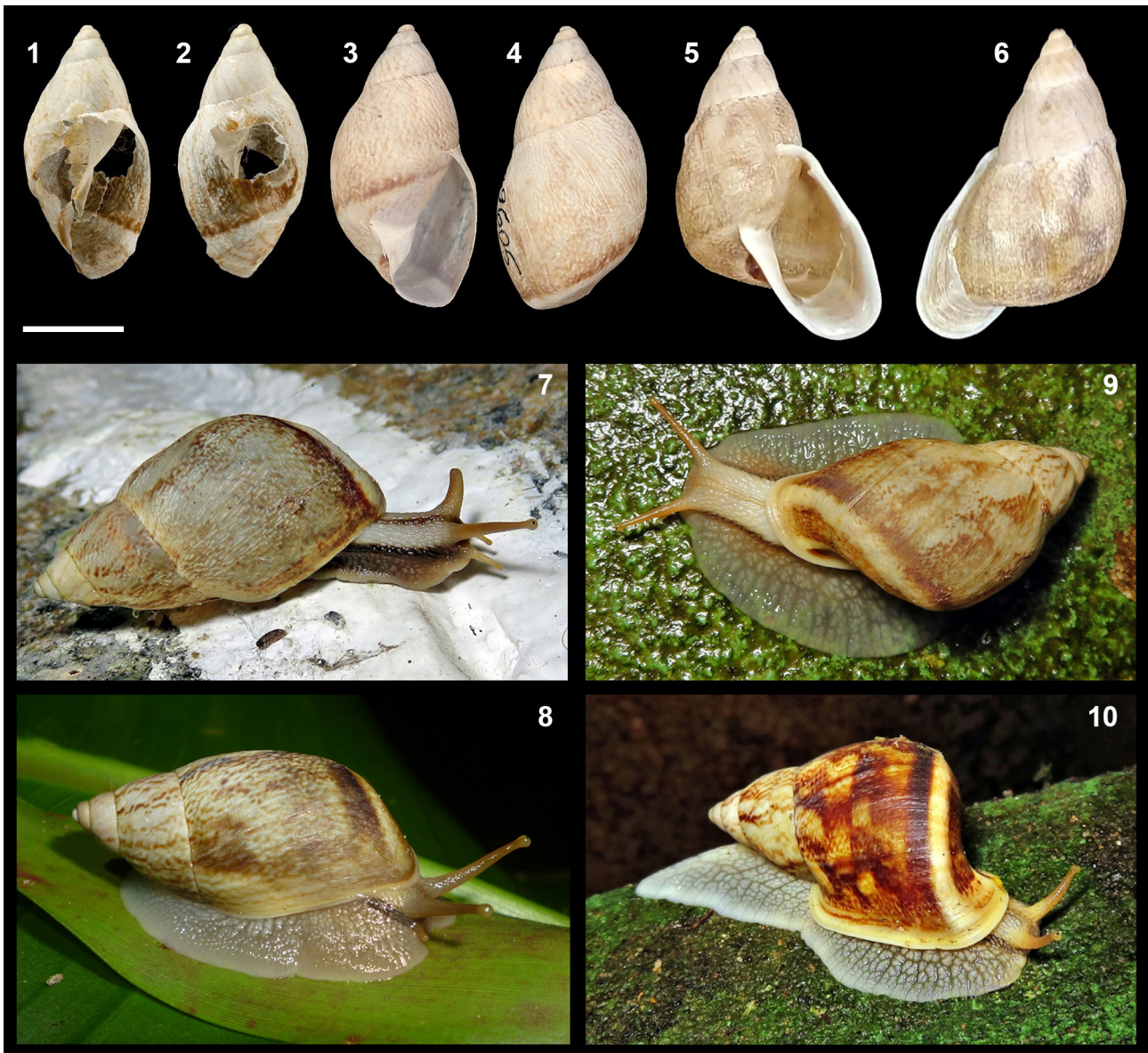
As it stands, the taxonomy of *Drymaeus* species remains largely based on shell characters, despite continuous efforts to incorporate additional anatomical characters and genetic data into taxonomic studies (BREURE 1979, BREURE & ESKENS 1981, BREURE & BORRERO 2019, MACEDO et al. 2023, BREURE et al. 2024). Part of this problem lies in the fact that sever-

al species in this genus are rather obscure and have not been collected or studied after their original descriptions, which are often based only on a few century-old shells (BREURE & BORRERO 2019, MACEDO et al. 2023).

It is clear that the genus *Drymaeus* is in need of extensive taxonomic revisions and some recent works have only started to address this issue (e.g., BREURE & BORRERO 2019, MACEDO et al. 2023, SALVADOR et al. 2023b, BREURE et al. 2024). Notably, the genus was recently split following a molecular phylogenetic analysis, with species formerly assigned to *Drymaeus* having been moved to the related and resurrected genera *Mesembrinus* and *Antidrymaeus* (SALVADOR et al. 2023b). A few other species have also been assigned to these newly re-established genera based on morphological features (MACEDO et al. 2023, BREURE et al. 2024) and genetic data (ROSA et al., in press).

The large number of species currently classified into *Drymaeus* still makes a comprehensive review of this genus an enormous challenge. This is especially true for the rare or obscure species that have not been found after their original descriptions, which are very difficult to study and classify within the ongoing efforts to revise the genus (BREURE & BORRERO 2019, BREURE et al. 2024). Thus, a careful review of the lesser-known *Drymaeus* species is essential to clarify the problematic taxonomy of this highly diverse genus.

Here, we provide a short review of the species *Drymaeus cuticula* (Pfeiffer, 1855). This species was originally described in the genus *Bulimus* Bruguière, 1789, and later transferred to *Drymaeus* Albers, 1850 (PILSBRY 1898, BREURE 1979). Its description is based on a single shell collected in Rio de Janeiro, Brazil; it is unclear whether this locality refers to the city or the state of Rio de Janeiro. BREURE (1979) and BREURE & ESKENS (1981) identified the specimen described by PFEIFFER (1855, NHMUK 1975451) in the



Figs 1–10. Shells (1–6) and live specimens (7–10) of *Cochlorina aurisleporis*: 1–2 – lectotype of *Bulimus cuticula* Pfeiffer, 1855 (NHMUK 1975451; photos publicly available by the Natural History Museum, London); 3–4 – juvenile specimen of *C. aurisleporis* from Angra dos Reis, Rio de Janeiro (MZSP 29605; photos by NATAN C. PEDRO); 5–6 – adult specimen of *C. aurisleporis* from Rio de Janeiro (MZSP 127536; photos by FERNANDA S. SILVA). 7–8 – live juvenile specimens of *C. aurisleporis*, highlighting their similarity to NHMUK 1975451 (iNaturalist observations <https://www.inaturalist.org/observations/70228838> and <https://www.inaturalist.org/observations/227905356> by ROGERIO DIAS and DOUGLAS MEYER, respectively); 9–10 – live adult specimens of *C. aurisleporis* (iNaturalist observations <https://www.inaturalist.org/observations/66717985> and <https://www.inaturalist.org/observations/72739700> by ROGERIO DIAS). Scale bars for shells: 10 mm

collection of the Natural History Museum (London, UK) and designated it as the lectotype of this species (no further syntypes were found, however). This specimen, which is the only known specimen of *D. cuticula*, is very damaged, its aperture is broken, and it represents a subadult individual, making its diagnosis difficult (BREURE & ESKENS 1981, BREURE & ABLETT 2014). No further specimens were collected or reported after the original description, with the species only being mentioned in broader species checklists (e.g., BREURE & ESKENS 1981, SIMONE 2006, SALVADOR et al. 2024).

Upon analysing the lectotype of *D. cuticula*, we found it remarkably similar to subadult specimens of *Cochlorina aurisleporis* (Bruguière, 1792), which is a common and widespread land snail in southeastern Brazil (SIMONE 2006). The taxonomy of *C. aurisleporis* is also riddled with problems of its own, as its type specimens are lost and its type locality is mistakenly described as Madagascar (BREURE & ARAUJO 2017). Nonetheless, *C. aurisleporis* is an easily recognisable species that is very common in Rio de Janeiro, from where *D. cuticula* was originally described.

In their redescription of *C. aurisleporis*, LANZIERI & ALMEIDA (1964) describe the following shell characters: (I) shell colour brownish to dark grayish, covered with irregular dark blotches; (II) shell spire conic and slightly oblique, with ~5 whorls; (III) suture lines well-defined, slightly irregular and inclined; (IV) final whorl more convex than the others and covered by a dark band on its anterior region; (V) aperture elongated and triangular. These characters are also

easily seen on the lectotype of *D. cuticula* (Figs 1–2), which sports a similar colour pattern (including the dark band on its anterior region), a conic and slightly oblique spire and irregular suture lines. Although the protoconch of the lectotype of *D. cuticula* is slightly worn, it bears a discernible reticulated sculpture (ABLETT, pers comm.), matching the pattern seen in shells from both *Drymaeus* and *Cochlorina* (LANZIERI & ALMEIDA 1964, BREURE 1979). Moreover, we also highlight the coarse teleoconch sculpture and sub-sutural constriction shared by both the lectotype of *D. cuticula* and other specimens of *C. aurisleporis*, further supporting their similarity.

The lectotype of *D. cuticula* belongs to a juvenile specimen, in which the aperture is not fully developed. It has 4 whorls and 27.5 mm in length, while adults of *Cochlorina aurisleporis* have around 5 whorls and 40 mm in length (LANZIERI & ALMEIDA 1964). Thus, the lectotype of *D. cuticula* is a good match to juveniles of *C. aurisleporis*, including the less developed aperture and peristome (Figs 1–4, 6–7).

Considering these conchological similarities, we propose that the lectotype of *D. cuticula* is actually a juvenile specimen of *C. aurisleporis* and, thus, the former should be considered a junior synonym of the latter. The absence of additional specimens of *D. cuticula* beyond its lectotype is likely due to all further specimens being readily identified as *C. aurisleporis*, relegating the former species to taxonomic oblivion. By synonymising the two species, we clarify the status of *D. cuticula* and contribute to the ongoing efforts to revise the taxonomy of *Drymaeus* and its related genera.

## SYSTEMATICS

### Superfamily Orthalicoidea

### Family Bulimulidae

### Genus *Cochlorina* Jan, 1830

### *Cochlorina aurisleporis* (Bruguière, 1792)

Figs 1–10

*Bulimus aurisleporis* BRUGUIÈRE 1792: 346, REEVE 1849: n.p., species 259 (pl. 41, figs. 259 a, b), HIDALGO 1870: 46, HIDALGO 1872: 70, HIDALGO 1893a: 93, HIDALGO 1893b: 190.

*Bulimus cuticula* PFEIFFER 1855: 95.

*Otostomus aurisleporis* – SEMPER 1874: 155 (pl. 15, fig. 11; pl. 17, figs. 11–19).

*Drymaeus* (*Zaplagius*) *aurisleporis* – PILSBRY 1898: 189 (pl. 28, figs. 1–4).

*Drymaeus cuticula* – PILSBRY 1898: 253, BREURE 1979: 108 (lectotype designation), SIMONE 2006: 136 (fig. 446), BREURE & ABLETT 2014: 55 (figs. 42G–I), ABLETT & BREURE 2024: 40, SALVADOR et al. 2024: 157.

*Zaplagius aurisleporis* – PILSBRY 1902: pl. 50, fig. 3; pl. 54, fig. 38; pl. 58, figs. 70–74, THIELE 1931: 657 (fig. 716), MORRETES 1949: 152.

*Cochlorina aurisleporis* – ZILCH 1960: 492 (fig. 1733), LANZIERI & ALMEIDA 1964: 26 (figs. 1–31), BREURE 1979: 97 (fig. 159), BREURE & ESKENS 1981: 94 (figs. 319–320), SIMONE 2006: 133 (fig. 431), BREURE & ARAUJO 2017: 71 (fig. 28D), SALVADOR 2019b: 85, SALVADOR et al. 2023a: 61, SALVADOR et al. 2024: 156.

*Drymaeus* (*Drymaeus*) *cuticulus* – BREURE & ESKENS 1981: 20, SALGADO & COELHO 2003: 161.

**Vernacular name:** Hare's ear tree snail (“caracol orelha-de-coelho” in Portuguese).

**Types:** Not located (BREURE & ARAUJO 2017).

**Type locality:** “l'île de Madagascar” (BRUGUIÈRE 1792), in error (see BREURE & ARAUJO 2017).

**Distribution:** Eastern Brazil, reported in the states of Bahia, Minas Gerais, Espírito Santo and Rio de Janeiro (SIMONE 2006).



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