



Article

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***Hemicycla (Hemicycla) fuenterroquensis* (Gastropoda: Helicoidea: Helicidae), a new species from La Palma, Canary Islands**

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The rugged, volcanic oceanic island of La Palma (Fig. 1), with the oldest subaerial rocks dated at 1.7 Ma, is one of the youngest islands of the Atlantic Canarian Archipelago. La Palma is an elongated island with North-South orientation (about 45 km long and near 28 km wide in the northern half, then tapering towards its southernmost tip), with an area of 708 km² and an altitude of 2426 m above sea level (a.s.l.). The island is in the second stage (“emergence and subaerial construction”) out of the six phases of the hotspot island’s life cycle (Fernández-Palacios & Whittaker, 2010). The most recent volcanic eruption occurred at the Teneguía volcano in 1971. The island exhibits a considerable range of habitats (from arid lowland shrub zones to humid highland evergreen forests) generated by high mountains that intercept the moist trade winds. This great variety of habitats has enhanced land snail radiation and speciation, so the island accommodates about 30 validly described endemic species of land snails, most of them belonging to the main genera (e. g., *Napaeus* Albers, 1850, *Canariella* Hesse, 1918, *Insulivitrina* Hesse, 1923) living today in the archipelago. The genus *Hemicycla* Swainson, 1840 is second land gastropods in terms of species richness within the Canary Islands, with about 40 known living species (Neiber et al., 2011). Only two of these *Hemicycla* species are present in La Palma, *H. vermiplicata* (Wollaston, 1878) and *H. granomalleata* (Wollaston, 1878) (Fig. 2 A, E), which were merely studied conchologically back in the 19th century. Moreover, Odhner (1937) mentions the presence in Santa Cruz de La Palma of *H. ethelema* Mabilie, 1882, a species viewed as endemic to the Gran Canaria Island, in basis to three shells placed at his disposal by Count C. Strömfelt, Stockholm, and he compares these shells with those of *H. granomalleata*, indicating that he finds the best concordance in all essential characteristics, but having the *H. granomalleata* shells finer granulation than those of *H. ethelema*.

A new species is described in the present study and compared with the two previously known species (*H. vermiplicata* and *H. granomalleata*) and also with *H. ethelema*, using (1) shell features (Figs. 2, 3), (2) genital system anatomy (Fig. 4), and (3) geographical distribution (Fig. 1) data combined. The presence of other, as yet undescribed species on La Palma, was already presumed by Wollaston (1878, p. 358): “Mousson's monograph does not enumerate a single Palman representative of the great section *Hemicycla*; nevertheless, seeing that Gomera is so rich in insular forms, we can hardly suppose that Palma, with its superior elevation and more extensive area, is deficient in them, but must merely conclude that the smaller amount of research which has been expended on it accounts for the fauna having been less investigated”.

The studied land snail specimens here were drowned in water and fixed in 80% ethanol. The methodology employed is described in Kerney *et al.* (1979) and Yanes *et al.* (2009a, b). “Proximal” and “distal” refer to the position in relation to the ovotestis.