



***Hemicycla (Adiverticula) diegoi* (Gastropoda: Pulmonata: Helicidae), a new species from Tenerife, Canary Islands, with a phylogenetic analysis of conchologically similar species in the genus *Hemicycla* Swainson, 1840**

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Abstract

Hemicycla (Adiverticula) diegoi **n. sp.** from the westernmost part of the Teno massif above the Lighthouse at Punta de Teno, Tenerife, Canary Islands is described and compared to conchologically and anatomically similar species in the genus *Hemicycla* Swainson, 1840. The validity of the new species is corroborated by a phylogenetic analysis including several congeneric species, inter- and intraspecific genetic distances and a morphometric comparison by means of a discriminant function analysis. *Hemicycla* cf. *paivanopsis* (Mabille, 1882) and *Hemicycla quadricincta quadricincta* (Morelet, 1864) from La Gomera and *Hemicycla berkeleyi* (R. T. Lowe, 1861) from Gran Canaria are tentatively placed in *Hemicycla s. str.* on the basis of a phylogenetic analysis. Furthermore, *Eobania vermiculata* (O. F. Müller, 1774) is reported as an introduced species in Gran Canaria for the first time.

Key words: Mitochondrial COI gene, phylogeny, Bayesian inference, morphometry, discriminant function analysis, systematics, Teno massif

Resumen

Hemicycla (Adiverticula) diegoi **n. sp.** es descrito de la parte más occidental del Macizo de Teno por encima del faro de Punta de Teno, Tenerife, Islas Canarias y comparado con especies conculológicamente y anatómicamente similar en el género *Hemicycla* Swainson, 1840. La validez de la nueva especie es corroborado con la ayuda de un análisis filogenético incluyendo algunas especies congénicas, las distancias genéticas inter- e intraespecíficas y una comparación morfométrica por un análisis discriminante. *Hemicycla* cf. *paivanopsis* (Mabille, 1882) y *Hemicycla quadricincta quadricincta* (Morelet, 1864) de Gomera y *Hemicycla berkeleyi* (R. T. Lowe, 1861) de Gran Canaria son incluido preliminarmente en *Hemicycla s. str.* en base al análisis filogenético. Además, *Eobania vermiculata* (O. F. Müller, 1774) esta reportado como una especie introducida por primera vez en Gran Canaria.

Palabras claves: Gen mitocondrial COI, filogenia, inferencia Bayesiana, morfometría, análisis discriminante, sistemática, Macizo de Teno

Introduction

The Canarian archipelago is located in the Atlantic Ocean between 29° 24' 40" N and 27° 38' 16" N in north-south direction and 13° 19' 54" E and 18° 09' 38" E in east-west direction. Its easternmost island is separated from the African mainland off southern Morocco by a distance of only 110 km. The archipelago consists of seven major islands (El Hierro, La Palma, La Gomera, Tenerife, Gran Canaria, Fuerteventura and Lanzarote) and several