

**NEOGENE PALEONTOLOGY IN THE NORTHERN DOMINICAN REPUBLIC. 25.**  
**THE SUPERFAMILY CYPRAEOIDEA (FAMILIES CYPRAEIDAE, OVULIDAE,**  
**TRIVIIDAE, AND ERATOIDAE) (MOLLUSCA: GASTROPODA)**

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**ABSTRACT**

As part of the ongoing series of taxonomic monographs published by the Paleontological Research Institution covering the Neogene fossils of the Cibao Valley in the northern Dominican Republic, the present study focuses on the marine gastropod superfamily Cypraeoidea. Thirty-one species of cypraeoideans are documented and figured from Miocene and Pliocene strata of the Cibao Valley, Dominican Republic. Taxa include 13 species of Cypraeidae within eight genera, nine species of Ovulidae in four genera, five species of Triviidae in three genera, and four species of Eratoidae in a single genus, for a total of 31 species in 16 genera. Three Cypraeidae are described as new: *Cypraeorbis alisonkayae* n. sp., *Trona colossus* n. sp., and *Zonaria vokesae* n. sp.; two species are left in open taxonomy; and *Cypraea dominicensis* Gabb, 1872, originally described from Dominican Neogene deposits, is here considered a *nomen inquirendum*. One new species of Ovulidae is described as *Cyphoma guraboensis* n. sp., and two species are left in open taxonomy. One species of Triviidae is left in open taxonomy. Two species of Eratoidae are described as new: *Hespererato canae* n. sp. and *Hespererato praeclosa* n. sp.

This diversity is an important increase from the twelve cypraeoidean species previously described from Dominican Republic strata: the cypraeids *Muracypraea henekeni* (G. B. Sowerby I, 1850), *Macrocypraea dominicensis* (Gabb, 1872), *Luria patrespatriae* (Maury, 1917a), *Pseudozonaria raymondrobertsi* (Pilsbry, 1922), and *Zonaria spurcoides* (Gabb, 1872); the ovulids *Neosimnia wisewoodae* (Maury, 1917a), *Jenneria dominicensis* Olsson, 1967, *Jenneria gabbiana* (Guppy, 1876), and *Jenneria pilsbryi* Olsson, 1967; the triviids *Dolichupis islahispaniolae* (Maury, 1917a) and *Niveria sanctidominici* (Maury, 1917a); and the eratoid *Hespererato domingensis* (Maury, 1917a). *Cypraea gurabonis* Ingram, 1939, was also described previously from the Dominican Republic; however, it is based on a poorly preserved specimen and is herein synonymized with *Naria acicularis* (Gmelin, 1791). In addition, there are six extant Caribbean species that are also found in the fossil record: *Naria acicularis* (Gmelin, 1791), *Macrocypraea zebra* (Linnaeus, 1758), and *Luria cinerea* (Gmelin, 1791) in Cypraeidae; *Cyphoma intermedium* (G. B. Sowerby I, 1828), and *Simnialena uniplicata* (G. B. Sowerby I, 1849a) in Ovulidae; and *Pusula pediculus* (Linnaeus, 1758) in Triviidae. Once unreliable historical records are removed or reassessed, 58% of the species are endemic to the Dominican Republic assemblages. Of note is the presence of the ovulid genus *Jenneria*, represented by three species in these Dominican Republic assemblages; this is a paciphile genus today restricted to the Pacific side of its originally wider Neogene distribution on either side of the Isthmus of Panama.

**RESUMEN**

Este trabajo forma parte de una serie de monografías taxonómicas publicadas por el Paleontological Research Institution sobre los fósiles neógenos del Valle del Cibao en el norte de la República Dominicana. Este presente estudio se centra en la superfamilia de gastrópodos marinos Cypraeoidea. Treintiuna especies de cypraeoideans están documentadas e ilustradas de los estratos Miocenos y Pliocenos del Valle de Cibao, República Dominicana. Estos taxones incluyen 13 especies de Cypraeidae en ocho géneros, nueve especies de Ovulidae en cuatro géneros, cinco especies de Triviidae en tres géneros y cuatro especies de Eratoidae en un solo género; sumando un total de 31 especies en 16 géneros. Tres nuevas especies de Cypraeidae son descritas: *Cypraeorbis alisonkayae* n. sp.,

*Trona colossus* n. sp. y *Zonaria vokesae* n. sp.; dos especies se dejan en taxonomía abierta; y *Cypraea dominicensis* Gabb, 1872, originalmente descrita del Neogeno de la República Dominicana, es aquí considerado como *nomen inquirendum*. Una nueva especie de Ovulidae es descrita, *Cyphoma guraboensis* n. sp., y dos se dejan en taxonomía abierta. Una especie de Triviidae se dejan en taxonomía abierta. Dos nuevas especies de Eratoidea son descritas: *Hespererato canae* n. sp. and *Hespererato praeclusa* n. sp.

Esto representa un importante incremento en diversidad comparado con las doce especies de cypraeoideans que se conocían hasta ahora en estos yacimientos de la República Dominicana que incluye los cypreidos *Muracypraea henekeni* (G. B. Sowerby I, 1850), *Macrocypraea dominicensis* (Gabb, 1872), *Luria patrespatriae* (Maury, 1917a), *Pseudozonaria raymondobertsi* (Pilsbry, 1922), y *Zonaria spurcoides* (Gabb, 1872); los ovulidos *Neosimnia wisewoodae* (Maury, 1917a), *Jenneria dominicensis* Olsson, 1967, *Jenneria gabbiana* (Guppy, 1876), y *Jenneria pilsbryi* Olsson, 1967; las trivias *Dolichupis islahispaniolae* (Maury, 1917a) y *Niveria sanctidominici* (Maury, 1917a); y el erato *Hespererato domingensis* (Maury, 1917a). *Cypraea gurabonis* Ingram, 1939, también descrito de la República Dominicana, es basada sobre material en pobre estado de conservación y es aquí considerado como sinonimo de *Naria acicularis* (Gmelin, 1791). Seis de las especies presentes in el Mio-Plioceno de la República Dominicana existen aún en aguas Caribeñas: Cypraeidae: *Naria acicularis* (Gmelin, 1791), *Macrocypraea zebra* (Linnaeus, 1758), *Luria cinerea* (Gmelin, 1791); Ovulidae: *Cyphoma intermedium* (G. B. Sowerby I, 1828), *Simnialena uniplicata* (G. B. Sowerby I, 1849a); and Triviidae: *Pusula pediculus* (Linnaeus, 1758). Una vez reanalizado or rechazado registros históricos poco fiables, 58% de las especies son endémicas al Neogeno de la República Dominicana. Relazamos la presencia del género de ovulido *Jenneria*, representado en la República Dominicana por tres especies, ya que es el único ejemplo en estos yacimientos de un genero pacífico, hoy restringido al lado Pacífico de su más amplia distribución Neógena en ambos lados del Ismo de Panamá.

## INTRODUCTION

This study of the marine gastropod superfamily Cypraeoidea is one of a series of taxonomic monographs on Neogene fossils of the Cibao Valley in the northern Dominican Republic (DR). The earliest collections of mollusks from the Dominican Republic were made by Colonel Thomas S. Heneken of the Geological Society of London in the Yaque River section of the island formerly known as Santo Domingo (see Moore, 1850, 1853). In the material was a cowrie specimen appropriately named *Cypraea henekeni* by G. B. Sowerby I in 1850, but misspelled “*henekeri*” in the original publication. Now known as *Muracypraea henekeni*, it has become one of the most well-known species in the Dominican assemblages and is one of eleven cypraeid species in eight genera here recognized in the late Miocene and early Pliocene fossil record of the Cibao Valley. This collection also includes material added later from the Richard Weyl collection (University of Giessen, Germany). This was reported on by Hans D. Plug (1961), who re-described and re-illustrated *C. henekeni*, and selected a lectotype, but no additional cypraeoideans were added. Other cypraeoidean species described from the Dominican Republic include the cypraeids *Macrocypraea dominicensis* (Gabb, 1872), *Luria patrespatriae* (Maury, 1917a), *Pseudozonaria raymondobertsi* (Pilsbry, 1922), and *Zonaria spurcoides* (Gabb, 1872); the ovulids *Neosimnia wisewoodae* (Maury, 1917a), *Jenneria dominicensis* Olsson, 1967, *Jenneria gabbiana* (Guppy, 1876), and *Jenneria pilsbryi* Olsson, 1967; the triviids *Dolichupis islahispaniolae* (Maury, 1917a) and *Niveria sanctidominici* (Maury, 1917a); and the eratoid *Hespererato domingensis* (Maury, 1917a). Herein, three new species of Cypraeidae, one new species of Ovulidae, and two species of Eratoidea are described.

## FOSSIL CYPRAEOIDEANS IN THE DOMINICAN REPUBLIC NEOGENE: HISTORICAL REVIEW

In 1850, George Brettingham Sowerby I described *Cypraea henekeri*, the first fossil cypraeoidean species described from the northern Dominican Republic. The species name was initially misspelled and was later redesignated *C. henekeni* [= *Muracypraea henekeni*] for collector Colonel T. S. Heneken of the Geological Society of London. Extensive geological reconnaissance and surveys of the Dominican Neogene led by William More Gabb from 1869 through 1871 resulted in the descriptions of two cypraeoideans, the new species *Cypraea spurcoides* [= *Zonaria spurcoides*] and *Cypraea dominicensis* [= *Macrocypraea dominicensis*]. R. J. Lechmere Guppy (1876) reidentified one of Gabb's species—misidentified as *Cypraea pustulata* Lightfoot, 1786 by Gabb—and described it as the first ovulid from the DR, *Cypraea gabbiana* [= *Jenneria gabbiana*]. The most comprehensive works on the geology and paleontology of the Dominican Miocene were published by Carlotta Joaquina Maury; these were her monumental 1917a and 1917b papers on the fossils of the Cibao Valley. In them she described *Cypraea patrespatriae* [= *Luria patrespatriae*], *Cypraea noueli* [= juvenile *C. henekeni*], *Ovula wisewoodae* [= *Neosimnia wisewoodae*], *Trivia islahispaniolae* [= *Dolichupis islahispaniolae*], *Trivia sanctidominici* [= *Niveria sanctidominici*], and *Erato domingensis* [= *Hespererato domingensis*]. In a review and revision of the collections made by Gabb, Henry A. Pilsbry (1922) described *Cypraea raymondobertsi* [= *Pseudozonaria raymondobertsi*] and *Cypraea campbelliana* [= *Luria cinerea* (Gmelin, 1791)]. F. A. Schilder (1932a) reidentified one of the species figured by Woodring (1928) as *Pusula (Niveria) suffusa jamaicensis* [= *Niveria jamaicensis* (Schilder, 1932a)]. Hans D. Pflug (1961) illustrated and updated the taxonomy of many of G. B. Sowerby