A NEW GENUS AND SPECIES OF FORAMINIFER FROM THE EARLY MIOCENE OF PUERTO RICO

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INTRODUCTION

The purpose of this paper is to describe the foraminifer *Riveroinella martinezpicoi*, gen. et sp. nov. from the Lower Miocene Ponce Formation of Puerto Rico.

This work is part of the Research Project 22-66 of the Center of Investigations of the University of Puerto Rico at Mayaguez, Puerto Rico. Thanks are given to Mr. Bengt Sonesson and Mr. L. Valls from the Puerto Rican Cement Company from Ponce, Puerto Rico, for the facilities for sampling the quarries.

Family CERATOBULIMINIDAE Cushman, 1927

Genus RIVEROINELLA, gen. nov.

Type species: *Riveroinella martinezpicoi*, gen. et sp. nov.

Description: Test free, small, planispiral, lobate, periphery subacuneate, not carinate. Chambers gradually enlarging, one side plane and the opposite inflated, alternating plane and inflated sides in successive chambers; early chambers are generally covered by the inflated side of later chambers. Sutures rather depressed and sometimes curved backward on periphery on the plane side of the chambers. Wall aragonitic, transparent with slightly elongated white spots, finely and uniformly perforated. Aperture, elongated, peripheral, provided with a lip; foramen an elongated slightly oblique slit provided with a lip; the lips of older apertures are so well marked on sutures that in some specimens the latest suture appears to have an accessory aperture.

Age: Early Miocene.

Remarks: This genus is distinguished from all other genera by the planispiral test, aragonitic wall, peripheral aperture and alternating inflated and plane sides in successive chambers. The wall of this genus has the milky white "drawings" on transparent or semitransparent walls that are characteristic of aragonitic tests. The "drawings" of *Riveroinella* consist of elongated white spots.

The most similar genus in relation to the shape is *Ganella* Aurouze and Boulanger, 1954; however, it has a calcitic test and has been included in the family Anomalinidae. With the exception of the aragonitic test, *Riveroinella* is distinguished by its depressed sutures, non carinate periphery and alternating inflated and plane sides in successive chambers.

The name of the genus is dedicated to Dr. Frances Charlton Rivero from the Universidad Central de Venezuela, Caracas, Venezuela.

RIVEROINELLA MARTINEZPICOI, gen. et sp. nov.

Plate 1, figs. 1-6

Description: Test free, small, planispiral, lobate, periphery subacuneate, not carinate. Chambers arranged in one and a half whorls, in adult specimens five chambers per whorl, gradually increasing in size as added, one side nearly plane and the opposite inflated, alternating nearly plane and inflated sides in successive chambers. Sutures rather depressed and sometimes curved backward on periphery on the plane side of the chambers. Wall aragonitic, transparent with slightly elongated white spots, finely and uniformly

perforated. Aperture elongated, peripheral, provided with a more or less nodose lip; foramen, an elongated slightly oblique slit provided with a lip; the lips of older apertures are so well marked on sutures that in some specimens the latest suture appears to have an accessory aperture. Maximum diameter: 0.15 mm to 0.33 mm.

Holotype and paratypes: Holotype and paratypes of this species were deposited at the U. S. National Museum, Washington D.C. Holotype (USNM 687203) and paratypes (USNM 687204 to 687208) are illustrated in the plate. The maximum diameter of the holotype is 0.33 mm.

Type locality: The type locality is the base of Quarry no. 2 of the Puerto Rican Cement Company at Ponce, Puerto Rico.

Age and formation: This species occurs in the early Miocene, *Globigerinatella insueta* Zone.

The age was determined by the occurrence of *Globigerinatella insueta* (Cushman and Stainforth), *Porticulasphaera glomerosa glomerosa* (Blow), *P. glomerosa curva* (Blow), *Globigerinoides sicanus* de Steffani, *Globorotalia barisanensis* Le Roy and others.

The species was found in the base of the Ponce Formation in a thin, gray bed consisting of a "globigerina ooze" with a high content of a black mineral.

Remarks: As this species is the only one known of the genus, it may be distinguished by its generic characteristics.

Riveroinella martinezpicoi is a rare deep water species. The sample has a very high percentage of planktonic foraminifers. The most common associated benthonic foraminifers are: *Pullenia quinqueloba* Reuss, *Hanzawaia mantaensis* (Galloway and Morrey), *Valvulineria gasparensis* Bermúdez, *Sphaeroidina bulloides* (d'Orbigny), *Plectofrondicularia floridana* Cushman, *Pleurostomella alternans* Schwager, *Compressigerina coartata* (Palmer), *Cibicides yaguatensis* Bermúdez, *Bulimina rostrata* Brady, *Bolivina marginata* Cushman, *B. tongui* Cushman, *B. ventricosa* Galloway and Hemingway, *Uvigerina carapitana* Hedberg and *Orthophragmina* spp.

The name is given in honor of Dr. José Luis Martínez Picó, Department of Chemistry, University of Puerto Rico, Mayaguez, Puerto Rico.

Reference

Loeblich, A. R. and H. Tappan, 1964, Sarcodina chiefly "Thecamoebians" and Foraminiferida, Part C, Protista 2. Treatise of Invertebrate Paleontology, Vol. 2, p. C511-C900.

November 20, 1967

Plate 1

Riveroinella martinezpicoi, gen. et sp. nov.

All same magnification.

Locality: Quarry no. 2, lower part, Puerto Rican Cement Co., Ponce, Puerto Rico. Lower Miocene.

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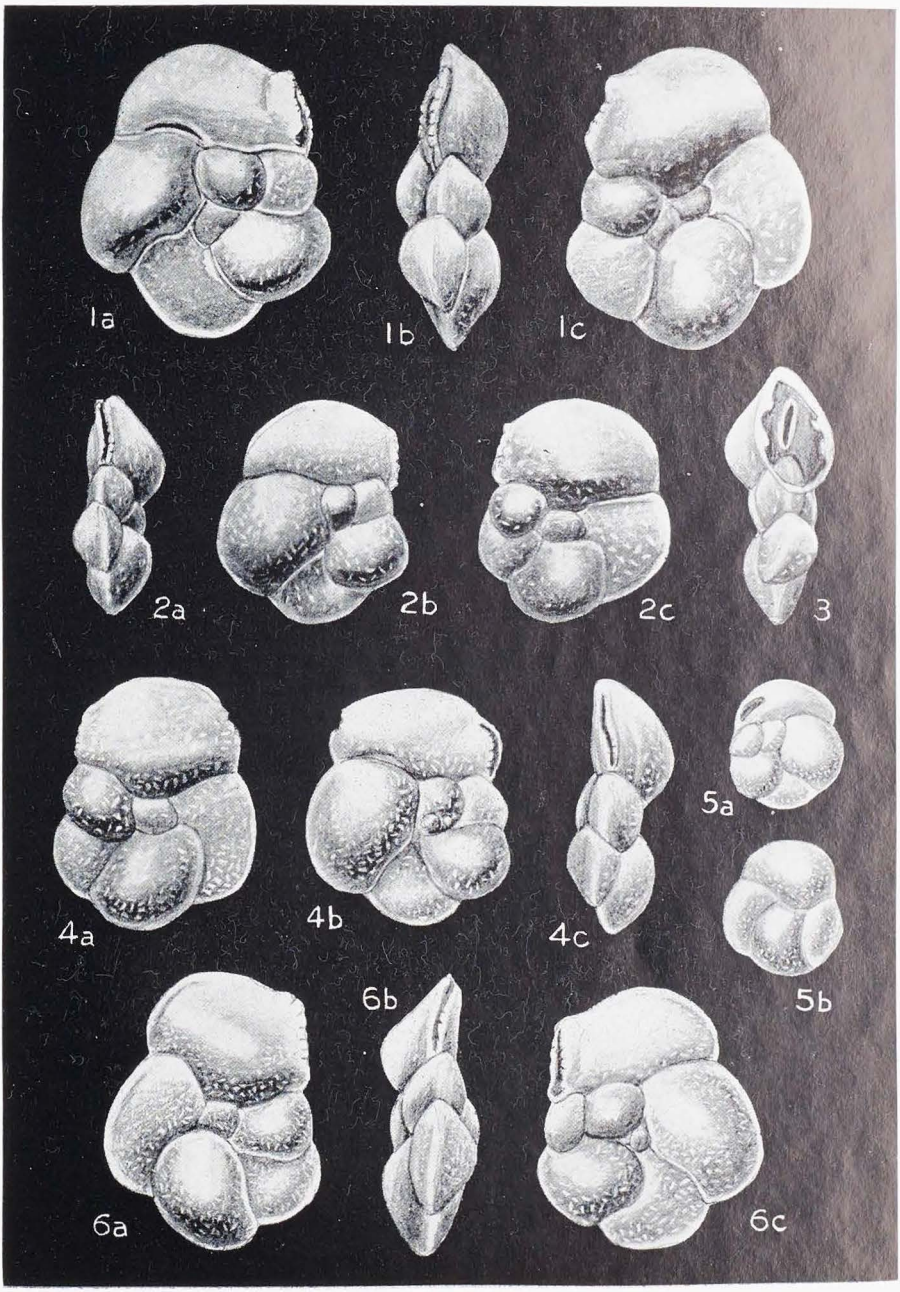

PLATE 1