A NEW SPECIES OF *MORUM* (GASTROPODA: HARPIDAE) FROM THE LOWER MIOCENE CANTAURE FORMATION OF VENEZUELA

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The Cantaure Formation is exposed in a series of arroyos about 500 meters south of an abandoned house known as "Casa Cantaure," which is 14 km west of the village of Pueblo Nuevo in the Paraguaná Peninsula, Venezuela. Since the Cantaure Formation was first monographed by Jung (1965), a trickle of new species have been described in the literature thanks to collecting done in the 1970's by Mr. and Mrs. Jack Gibson Smith, then of Caracas, now of Surrey, England. My interest aroused by their reports, I visited the locality in 1992 and returned in 1995. My own collecting produced numerous new and unusual shells, one of which is described here.

SYSTEMATIC PALEONTOLOGY

Class GASTROPODA
Order NEOGASTROPODA
Superfamily VOLUTOIDEA
Family HARPIDAE Bronn, 1849
Genus MORUM Röding

Morum 'BOLTEN' RÖDING, 1798, Mus. Boltenianum, pt. 2, p. 53.

Type species: *Morum purpureum* Röding, 1798 [= *Strombus oniscus* Linnaeus, 1767], by monotypy.

Subgenus ONISCIDIA Mörch

Oniscidia MÖRCH, 1852, Cat. Conch. Yoldi, pt. 1, p. 111.

Type species: *Oniscia cancellatum* Sowerby, 1824, by monotypy.

MORUM (ONISCIDIA) JUNGI
Landau, n. sp.
Plate 1, figures 1, 2

Description: Shell small for subgenus, solid, barrel-shaped, reaching a maximum height of about 30 mm and diameter about 20 mm; body whorl large, forming five-sixths of the total height, with a small scalate spire. Protoconch turbinate, smooth, consisting of about one and one-quarter whorls. Five postnuclear whorls with a sharply angled peripheral shoulder just below a well-defined suture. Space above shoulder wide. Body whorl rapidly constricting about two-thirds of the distance from suture, forming well-defined, posteriorly-twisting, anterior canal. Sculpture of body whorl above shoulder consisting of strong axial ribs with a roughly concave area between them, crossed by numerous axial incremental threads; spiral sculpture very weak, two spiral cords bearly discernable. Sculpture below shoulder cancellated by eleven sharp, narrow axial ribs, free edges fluted by spirals; in later whorls distinctly laminated, rising at shoulder to form sharp points. Incrementals between axial ribs numerous, appearing as thin threads. Nine well-rounded, spiral cords, subequal and regularly spaced. Spirals separated by concave interspaces about twice width of cords. Aperture almost as long as body whorl, nearly elliptical in form, outer lip thickened by a raised rib and denticulated along inner margin. Parietal callus wide, reflected onto body wall and siphonal canal, edge free. Surface of callus coarsely granulated, granulations irregular but tending to be elongated and oriented normal to axis along oblique inner margin of aperture. Siphonal canal broad and well demarcated, twisting posteriorly.

Holotype: Naturhistorisches Museum Basel H 17763; height 26.5 mm, diameter 18.0 mm (Plate 1, fig. 1).

Type locality: NMB 17516, Cantaure Formation; series of arroyos about 500 meters south of "Casa Cantaure," which is 14 km (by road) west of Pueblo Nuevo, Paraguaná Peninsula, Falcón, Venezuela.

Paratype: Naturhistorisches Museum Basel H 17764; height 24.2 mm, diameter 15.8 mm (Plate 1, fig. 2).

Unfigured paratype 1: Bernard Landau collection; height 29.5 mm, diameter 19.5 mm.

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Unfigured paratype 2: Bernard Landau collection; height 25 mm, diameter 17 mm.

Locality of all, same as holotype.

Etymology: named for Peter Jung of the Naturhistorisches Museum, Basel, Switzerland, in recognition of his work on the Cantaure Formation.

Discussion: Morum (Oniscidia) jungi is a rare species in the Cantaure Formation. Four type specimens are known, two at the Naturhistorisches Museum Basel and two in my personal collection. Five additional specimens were collected by Mr. and Mrs. Jack Gibson Smith and donated to the Basel Museum (Peter Jung, pers. comm.).

The new species is most closely related to *Morum (Oniscidia) chipolanum* Dall *in* Maury, 1925, from the Chipola Formation of northern Florida, but differs from that species in being smaller with a squatter, broader outline, having a more constricted body whorl, fewer axial ribs (11 as opposed to 15 in *M. chipolanum*) and more numerous, weaker denticles on the inner aspect of the outer lip, which do not correspond to the spiral cords as they do in *M. chipolanum* (compare pl. 1, figs. 1, 3).

Morum (Oniscidia) jungi, by its cancellate sculpture, also resembles the chronologically younger *M. domingense* (Sowerby, 1850), from the Cercado and Gurabo formations (Mio-Pliocene) of the Dominican Republic. The Dominican species has a narrow, well-defined sulcus at the posterior commisure absent in *M. jungi.* This has led to its placement in the subgenus *Herculea* by various authors; however, as pointed out by Beu (1976, p. 224), the deep posterior sulcus is not a consistent distinguishing feature for the subgenus *Herculea* and it is better placed within the subgenus *Oniscidia* by virtue of its strongly cancellate sculpture. *Morum jungi* is also smaller and less elongated than *M. domingense* with a lesser number of spiral cords and axial ribs (compare pl. 1, figs. 1, 4).

I would like to thank Emily Vokes, Tulane University, Louisiana, for her help and encouragement.

LOCALITY DATA

The following are Tulane University fossil locality numbers:

554. Chipola Fm., east bank of Chipola River at power line crossing (SW 1/4 Sec. 17, T1N, R9W), Calhoun Co., Florida.

1215. Gurabo Fm., Rio Gurabo, bluffs on both sides, from the ford on Los Quemados-Sabaneta road, upstream to approximately 1 km above the ford, Dominican Republic.

LITERATURE CITED

BEU, A.G., 1976, Revision of the southwest Pacific species of *Morum (Oniscidia)* (Gastropoda:Cassidae): Jour. Malac. Soc. Aust., v. 3, nos. 3-4, p. 223-321, 15 text-figs.

PLATE 1

Figures

1-2. *Morum (Oniscidia) jungi* Landau, n. sp.
1. (x 2.5) NMB H 17763 (holotype); height 26.5 mm, diameter 18 mm.
2. (x 2.5) NMB H 17764 (paratype); height 24.2 mm, diameter 15.8 mm.
Locality of both: NMB 17516, Paraguaná Peninsula, Venezuela; Cantaure Formation.

3. *Morum (Oniscidia) chipolanum* Dall *in* Maury
(x 2) PRI 45248; height 25.4 mm, diameter 17.6 mm.
Locality: TU 554, Chipola River, Florida; Chipola Formation.

4. *Morum (Oniscidia) domingense* (Sowerby)
(x 1.5) PRI 45254; height 33.0 mm, diameter 20.7 mm.
Locality: TU 1215, Gurabo River, Dominican Republic; Gurabo Formation.

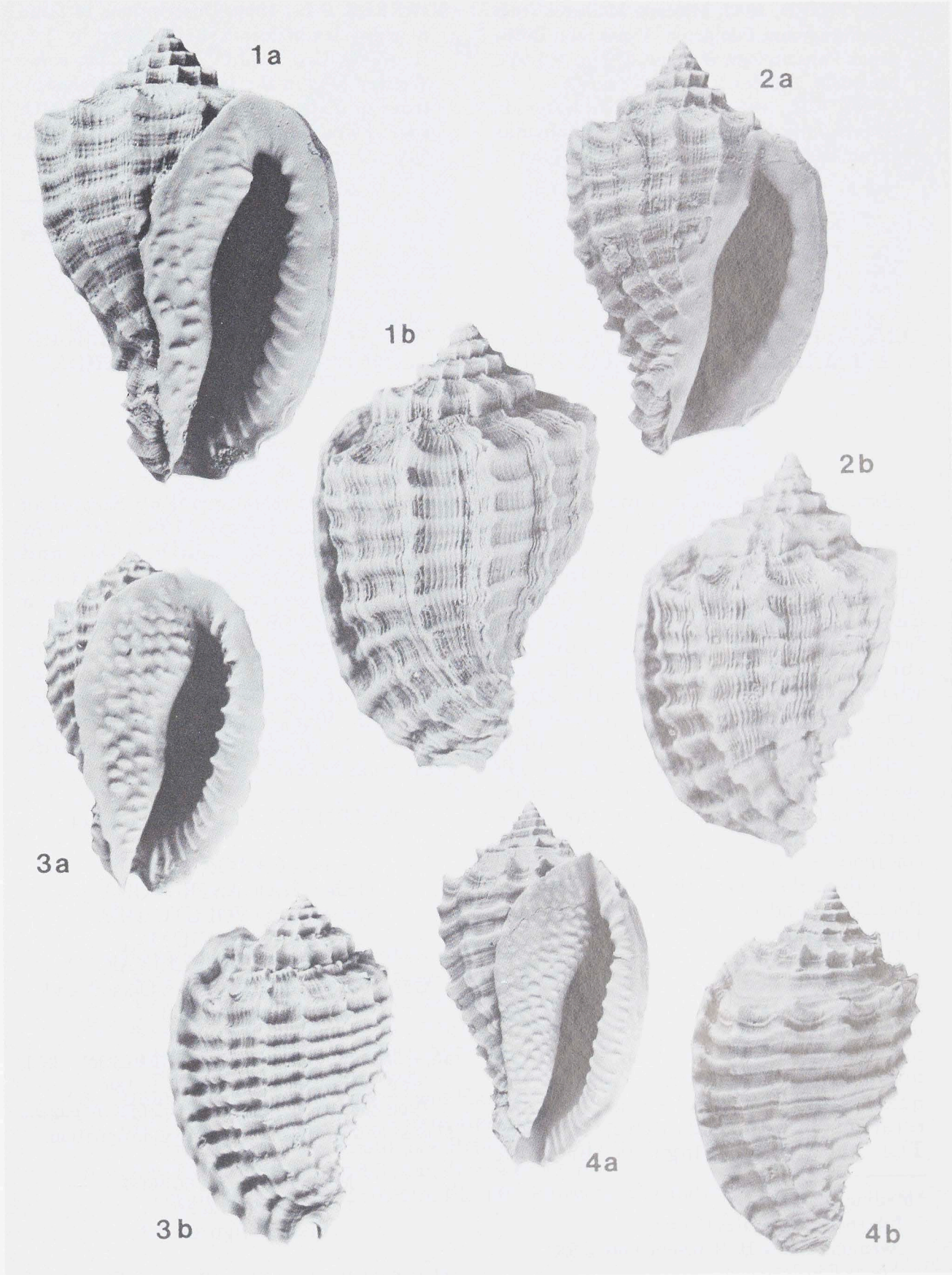

PLATE 1

JUNG, PETER, 1965, Miocene Mollusca from the Paraguana Peninsula, Venezuela: Bulls. Amer. Paleontology, v. 49, no. 223, p. 385-652, pls. 50-79, 2 tables, 2 text-figs.

MAURY, C.J., 1925, Fósseis Terciarios do Brasil, con descripção de novas formas Cretaceas: Serv. Geol. Min. Brasil, Mon. 4

SOWERBY, G.B., 1850, Descriptions of some new species of fossil shells found by J.S. Heniker, Esq., in J.C. MOORE, On some Tertiary beds in the Island of San Domingo; from notes by J.S. Heniker, Esq., with remarks on the fossils: Geol. Soc. London, Quart. Jour., v. 6, p. 39-53, pls. 9, 10.

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A NEW SPECIES OF *MANSFIELDELLA* (GASTROPODA: OLIVIDAE: OLIVELLINAE) FROM THE PLEISTOCENE BERMONT FORMATION OF SOUTHERN FLORIDA

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Mansfieldella, an olivelline gastropod genus, was erected by Olsson and Harbison (1953, p. 188). It is distinguished from other genera within the Olivellinae by a heavily developed parietal callus, which spreads thickly over the surface of the spire-whorls covering the sutures except the final half of the last whorl, and a strongly lirate pillar structure in which the anterior and posterior lirations are enlarged and tooth-like. Until now the genus included a single species, *Olivella (Mansfieldella) pugilis*, described by the authors in the same work. *Mansfieldella pugilis,* a relatively common and distinctive shell, was originally described from the Pliocene of St. Petersburg and is common in the Pliocene Pinecrest Beds at Sarasota, Florida.

During a field trip in November, 1992, to Palm Beach County, Florida, Palm Beach Rock Co. quarry was visited on several occasions. The quarry is situated on the north side of U.S. Highway 441, three miles west of Loxahatchee. Most of the quarried rock consists of whitish coral and coral rubble with sands rich in molluscs. The shell assemblage is Bermont Formation, characterised by *Strombus evergladesensis* Petuch, 1991, *Jenneria loxahatchiensis* M. Smith, 1936, and *Zonaria (Prozonaria) portelli* (Petuch, 1990). In the centre of the quarry were a few mounds of finer grey sands, dredged from below the coral-rich layer. Within these sands were large numbers of *Mansfieldella robbieae,* n. sp., in association with *Niveria pediculus pediculus* (Linné, 1758) and *Nitidella nitida* (Lamarck, 1822).

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SYSTEMATIC PALEONTOLOGY

Class GASTROPODA
Order NEOGASTROPODA
Superfamily VOLUTOIDEA
Family OLIVIDAE
Subfamily OLIVELLINAE
Genus MANSFIELDELLA Olsson and Harbison, 1953

Mansfieldella OLSSON and HARBISON, 1953, Acad. Nat. Sci. Phila., Mon. 8, p. 188.
Type species: *Olivella (Mansfieldella) pugilis* Olsson and Harbison, by original designation.

MANSFIELDELLA ROBBIAE
Landau, n.sp.
Plate 1, figures 1-3

Mansfieldella cf. *pugilis* (Olsson and Harbison). PETUCH, 1994, Atlas of Florida Fossil Shells, pl. 84, fig. E.