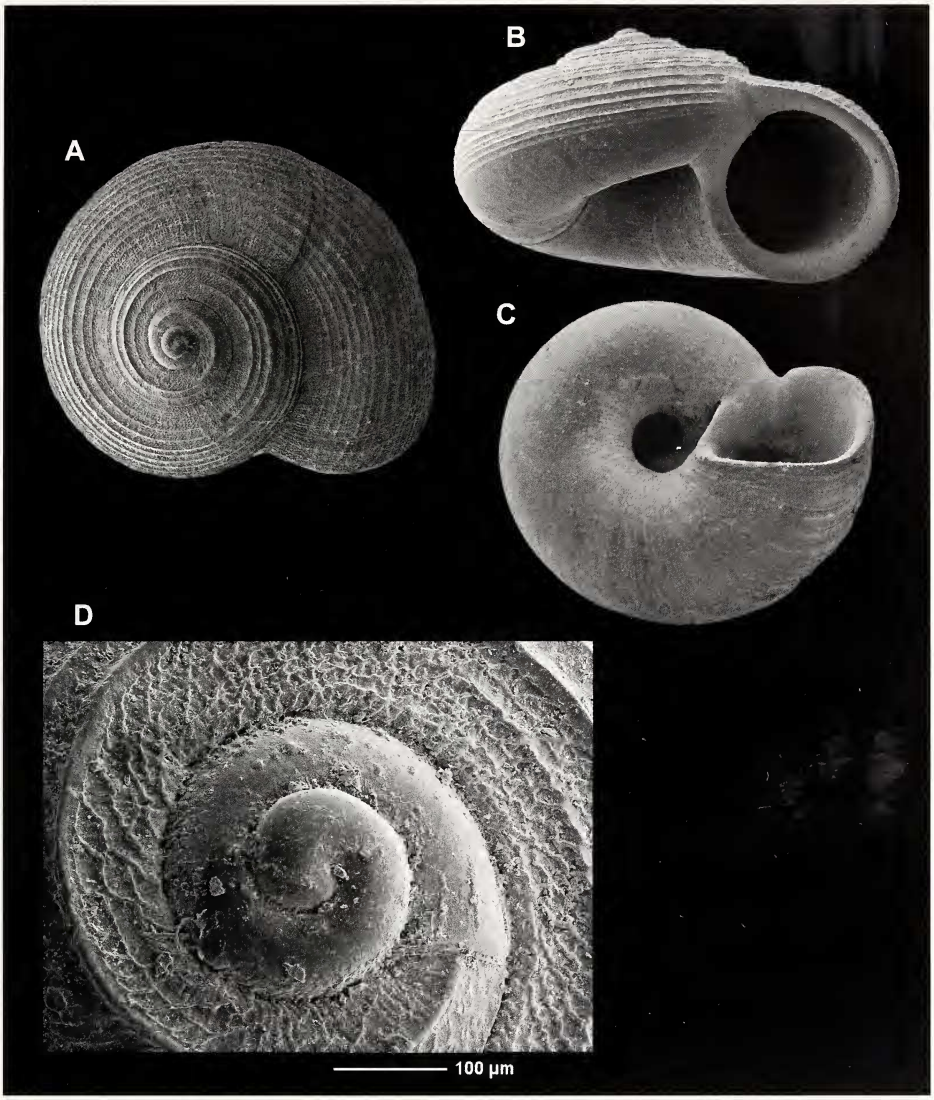


Figures 2A-D. *Circulus orbignyi* (P. Fischer, 1857). A: neotype, 2.5 mm (MNHN); B: shell, 2.7 mm, shell, Rancho Luna Beach, Cuba (CFG); C: 2.4 mm, Cayo Witties, Nicaragua (MHNS); D: protoconch.

Figuras 2A-D. Circulus orbignyi *(P. Fischer, 1857). A: neotipo, 2,5 mm (MNHN); B: concha, 2,7 mm, concha, Playa Rancho Luna, Cuba (CFG); C: 2,4 mm, Cayo Witties, Nicaragua (MHNS); D: protoconcha.*

Discussion: FISCHER (1857) in the original description of *Adeorbis orbignyi* said: "It is distinguished from congeneric species by the regularity of the ornamentation constituted by a dozen of transversal ribs placed at equal distance". MOORE (1964: 70-71) treated it as a *nomen dubium* only because the type was not found. This taxon cannot be considered as *nomen nudum* with a good description like the one available. The type, supposedly in the MNHN, is considered lost (Virginie

Héros pers. comm.). In our opinion there is no doubt that the description of this species corresponds to the shells we have from Cuba (type locality), where it is relatively common. For this reason and also because the taxon has been accepted by other taxonomists (e.g., www.malacolog.org) we have designated a neotype in order to maintain nomenclatural stability.

This species can be distinguished from *C. semisculptus* by the great number of spiral cords and the dense microsculpture between them.

Circulus liratus (A.E. Verrill, 1882) (Figures 3A-E)

Cyclostremiscus pentagonus auct. non Gabb, 1873.

Omalaxis lirata A.E. Verrill, 1882. *Transactions of the Connecticut Academy of Arts and Sciences* 5: 529. In Bush, 1893, pl. 1, fig. 11-12]. [Type locality: USFC sta. 770, off Newport, Rhode Island, 16 m].

Type material: Holotype in USNM (406741). Not examined.
Other material examined: Florida, USA: 1 s, Atlantic Beach, Duval Co. (CHL); 4 s, 30 m, 35 mi E St. Augustine, St. Johns Co. (CHL); 2 s, 53 m, 75 mi E St. Augustine, St. Johns Co. (CHL); 4 s, 16th Ave. S, Jacksonville Beach, Duval Co. (CHL).

Description: After Moore (1964: 74): *"Shell depressed, rather thick, whorls rounded, inner half of base smooth. Spiral sculpture of about eight to ten spiral ridges separated by grooves only slightly wider. Umbilicus wide and deep"*. Protoconch projecting with nearly 2 ¾ smooth whorls, about 530 μm in maximum diameter. Teleoconch with only 1 ½ whorls, ornamented with 10 spiral cords distributed between the dorsum and the outer base. The interspaces are wider, without axial sculpture except fine growth lines. Base flat, without sculpture. Umbilicus wide, the previous whorls being visible in its interior, and delimited by a strong cord and 2-3 more on its inner wall.

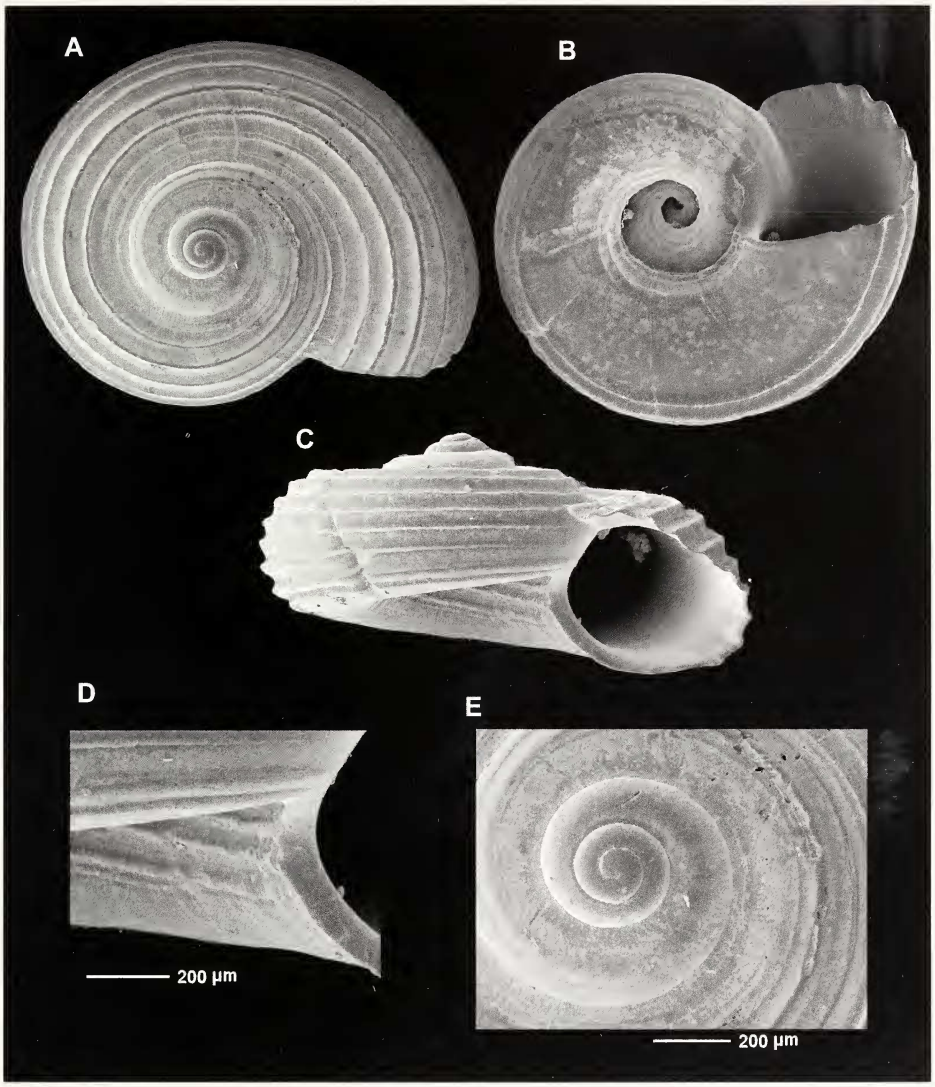
Holotype measures 2.1 mm. The figured shells are 2.3-2.7 mm in diameter and about 1.01 mm in height.

Habitat: This species seems to be found living in depths of a few meters (Moore, 1964). The bathimetry reported in the literature is between 7 and 165 m.

Distribution: East coast of Florida to Rhode Island. Recorded from Newport, Rhode Island (Verrill, 1882); from off Cape Hatteras, North Carolina (Bush, 1897); from Rockaway, New York and off Lantana, Florida (Moore, 1964); from St. Lucie Co., Florida (Lyons, 1989), from Atlantic Beach, Jacksonville Beach, Batten Island and St. Augustine, Florida (Lee, 2009).

Remarks: *C. liratus* is the only species of *Circulus* from the West Indies similar in morphological characters to *Circulus striatus* (Philippi, 1836) type species of the genus. *C. liratus* has been placed in the genera *Lydiphnis* and *Skenea*. *Circulus liratus* differs from *C. semisculptus* by its projecting protoconch while *C. semisculptus* is almost planispiral.

Solariorbis mooreana (Vanatta, 1904) is similar but it has a narrow umbilicus and lacks the thickening of the umbilical wall, which is typical of the *Solariorbis*; also this latter species lacks ornamentation in the interspaces between cords, and these cords do not extend to the base.



Figures 3A-E. *Circulus liratus* (A.E. Verrill, 1882). A-C: shells, 2.18, 2.14, 2.33 mm, Jacksonville Beach, Florida (CHL); D: detail of the umbilicus; E: protoconch.
Figuras 3A-E. Circulus liratus *(A.E. Verrill, 1882). A-C: conchas, 2,18, 2,14, 2,33 mm, Jacksonville Beach, Florida (CHL); D: detalle del ombligo; E: protoconcha.*

Circulus texanus (Moore, 1965) (Figures 4A-F)

Vitrinella texana Moore, 1965. *The Nautilus*, 78: 76-77, pl. 7 figs. 4-6. [Type locality: Mustang Island, near Port Aransas, Texas].
Vitridomus texanus (Moore, 1965), auct.

Type material: Holotype from Mustang Island, near Port Aransas, Texas, diameter, 1.72 mm, height, 0.78 mm. Deposited in the Division of Mollusks, USNM (636311). Not examined.

Other material examined: Brazil: 1 s, Itaparica (MHNS). Florida, USA: 1 s, Delray Beach, Palm Beach Co. (CHL); 1 s, Longboat Key, Sarasota Co. (CHL).

Description: Original description (MOORE, 1965): "*The shell is depressed, and has a flattened apex. The umbilicus is narrow but deep, and is almost flat sided. Sides of the shell curve out and down gently so that the periphery forms an angle with the base of the shell. The aperture is oblique.*

"*The protoconch consists of 1 ¾ glassy whorls. The teleoconch consists of about 1 ¼ whorls, and is sculptured on the upper side with fine spiral grooves and on the lower side with numerous short radiating riblets. These riblets are crossed by a few weak spiral grooves, and there are several stronger spiral grooves in the umbilicus. The ventral side is flattened, and, in the holotype, bears about 36 radiating riblets. The riblets become indistinct on the last half of the whorl, and become difficult to count*".

"*The aperture is oblique, and is broadly ovate. The peristome is deeply notched at the upper inner angle. The parietal wall is rather thick, and is extended a little forward of the aperture. The umbilicus is narrow and almost flat sided, but there is no angle with the base of the shell. The shell itself is quite thin and fragile, and only the holotype and one immature paratype are unbroken. One paratype is actually only half of the body whorl of a broken shell*".

After BIELER & MIKKELSEN (1988): "*Shell small (1.7-1.8 mm in diameter, 0.55-0.65 mm in height). With about 1 ½ teleoconch whorls; almost planispiral, sculptured dorsally and ventrally with about 18 fine spiral ribs; transparent when alive, opaque after death. Ribs slightly stronger, more widely spaced just below suture on dorsum and at periphery, where about 3 ribs form rounded keel below lateral midline. Suture impressed. Ventral surface below keel less convex. Often with 30-40 widely-spaced, low axial ribs which are primarily evident from inside of body whorl. Umbilicus wide. Outer lip very slightly reflected; some specimens with one former varix. Aperture at oblique angle to dorsoventral axis. Sutural sinus shallow. Periostracum thin, transparent, with spiral grooves more numerous than on shell surface. Protoconch smooth, 0.5 mm diameter, about 2 whorls. No sculptural demarcation separating protoconch I and protoconch II.*

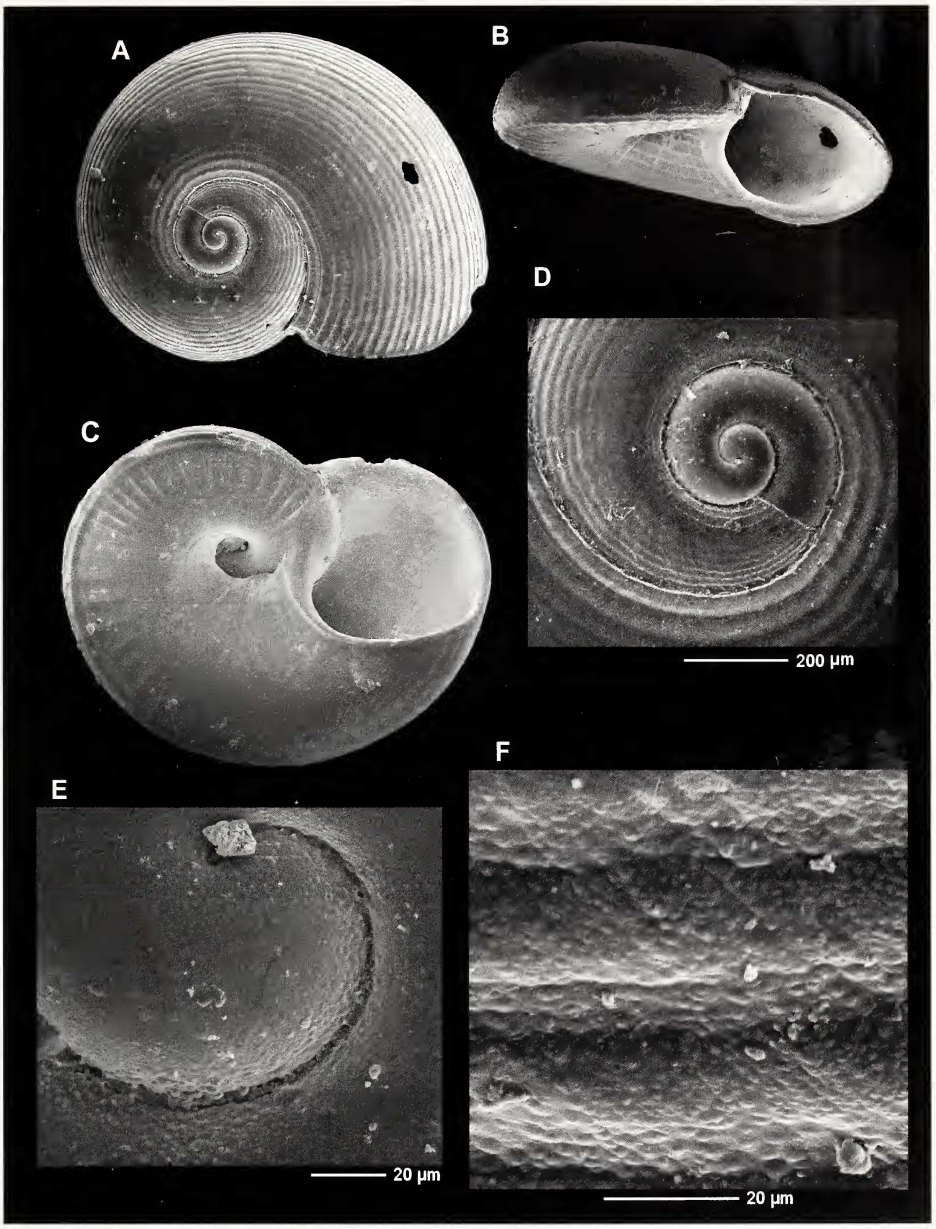
Maximum reported size: 2.1 mm".

We can add to this description the following: The protoconch (Figs. 4D-E) is about 340 μm in diameter, and it has a little more than 1 ½ whorls. Apparently it is smooth, but its nuclear portion is covered by very small tubercles of various sizes. This kind of microsculpture is also present on the dorsum of the teleoconch (Fig. 4F).

Habitat: Living specimens were taken from stomatopod burrows in shallow-water sand flats in the Indian River lagoon, St. Lucia County, eastern Florida (BIELER & MIKKELSEN, 1988). It prefers a rather narrow range of temperature and salinity, and is probably most abundant in shallow coastal waters. Its bathymetric range is between 0 and 44 m in depth, and it was found alive between 0 and 0.5 m.

Distribution: USA: Florida: East Florida; Texas. Reported from Port Aransas, Texas (MOORE, 1964); from Texas (ODÉ, 1987b); from the northwestern Gulf of Mexico (BIELER & MIKKELSEN, 1988).

Remarks: This species was described in the genus *Vitrinella* (MOORE, 1965). BIELER & MIKKELSEN



Figures 4A-F. *Circulus texanus* (Moore, 1965). A-C: shell, 1.78 mm, Sarasota Co., Florida (CHL); D: protoconch; E: detail of the protoconch; F: detail of the microsculpture of the teleoconch.
Figuras 4A-F. Circulus texanus *(Moore, 1965). A-C: concha, 1,78 mm, Sarasota Co., Florida (CHL); D: protoconcha; E: detalle de la protoconcha; F: detalle de la microescultura de la concha.*

(1988) placed it in the genus *Circulus* sensu lato because it agrees in shell shape and sculpture with the type species, *Circulus striatus* from the eastern Atlantic. It differs from all other western Atlantic Circulinae principally in having radiating riblets on the ventral side.

Subfamily Teinostomatinae Cossmann, 1917

Genus *Teinostoma* H. & A. Adams, 1853

Teinostoma H. & A. Adams, 1853. *Genera of Recent Mollusca* 1: 122.
Type species: *Teinostoma politum* H. & A. Adams, 1853 (by monotypy). *Proc. Zool. Soc. Lond.* pl. 10, figs. 1-3.

Diagnosis: Shell minute, depresed-turbiniform, thin, glassy, smooth, umbilicate. Protoconch of about 1.3 convex whorls. Teleoconch whorls convex, base and umbilical rim angulate. Multispiral operculum. Rádula: Central tooth cutting area broadly "V" shaped, serrated, 2 basal denticles, ventral process "U" shaped. Lateral tooth cutting area at inner third, broadly angulated and serrated. Inner marginal cutting area very broad, comb-like. Outer marginal cutting area short.

Moore (1964) defines the species as: *"Shell small to minutecompact, depressed, low spired, few flattened whorls which are rounded or carinate; smooth or sculptured by fine striations, suture not impressed, umbilicus covered partly or entirely by a heavy callus pad which is extended over the parietal wall, columella concave, thick. Animal very similar to* Vitrinella *but with a longer foot"*.

Remarks: According to Pilsbry (1953) the species included in the genus *Teinostoma* are known from the Upper Cretaceous to Recent, being very common in many Tertiary deposits. The genus *Teinostoma* has been subdividided by some authors into several subgenera (*Annulicallus, Pseudorotella, Idioraphe)*; unfortunatly, the types of the type species of two of these subgenera are lost or in such poor condition that identification is uncertain. As the objective of this work is not supraspecific classification, we will group all the studied species in the genus *Teinostoma*.

Identification key

In order to make schematic the separation of the species in this group with so many species we present the following identification key for the genus pointing out the most important characters for each species:

1 - Shell with protoconch visible 2
- Shell with protoconch fully or partially covered by a thin coat 3

2 - Shell with rounded micropits spirally aligned 4
- Shell with spiral incised lines 5
- Shell completely smooth 6

3 - Shell with spiral cords 7
- Shell completely smooth 8

4 - Shell globose and fragile . . . . . *T. ciskae*
- Shell globose with low spire . . . . . *T. baldingeri*
- Shell with strong peripheral keel . . . . . *T. goniogyrus*
- Shell angular at the periphery . . . . . *T. lenticulare*
- Shell subangular . . . . . *T. reclusum*

5 - Shell obtusely subangular . . . . . *T. incertum*
- Shell with spiral irregular microcordlets fused between them in the first whorl . . . . . *T. anastomosis*
- Shell with spire slightly elevated and striated callus . . . . . *T. panamense*

6 - umbilicus completely covered by callus 9
- umbilicus partly covered by callus 10

7 - Shell totally covered by spiral cords . . . . . *T. semistriatum*
- Shell dorsally covered by fine spiral cordlets . . . . . *T. nesaeum*
- Shell with dorsum and umbilicus surrounded by a strong spiral carina *T. carinicallus*
- Shell with dorsum and umbilicus surrounded by a strong spiral carina and weak spiral striae . . . . . *T. lituspalmarum*

8 - Shell strongly depressed, transversely dilated . . . . . *T. obtectum*
- Shell with expanded aperture . . . . . *T. expansum*
- Shell minute, flattened above and below . . . . . *T. minusculum*
- Shell more elongated by extension (outwards from the outer lip . . . . . *T. lerema*
- Shell transversely ovate . . . . . *T. megastoma*
- Shell with periphery very rounded and strong umbilical callus . . *T. umbilicatum*

9 - broadly ovate aperture, rather strongly oblique . . . . . *T. biscaynense*
- protoconch placed below the next whorl, rounded aperture, peristome almost continuous . . . . . *T. cienfuegoensis*
- peristome externally reflected toward back . . . . . *T. helicinum*
- Shell pyriform, umbilical callus very large . . . . . *T. megacallum*
- a fine groove separates the umbilical callus from the columella . . . *T. parvicallum*

10 - a triangular callus at end of the columella . . . . . *T. solidum*
- no groove of separation between columella and callus . . . . . *T. cocolitoris*
- spire moderately elevated, callus with half moon shape . . . . . *T. lunense*
- a groove separating the umbilical callus from the columella . . . . . *T. altum*

Teinostoma ciskae Faber, 1995 (Figures 5A-C)

Teinostoma millepunctata Nowell-Usticke, 1969 non *T. millepunctatum* Pilsbry & Olsson, 1945. *A Supplementary Listing of New Shells, to be Added to the Check List of the Marine Shells of St. Croix*: 10, pl. 2, fig, 307.

Teinostoma millepunctata Nowell-Usticke, 1971. *A Supplementary Listing of New Shells, to be Added to the Check List of the Marine Shells of St. Croix, revised edition*: 6. [Type locality: Antigua, Secret Harbor, 40 ft].

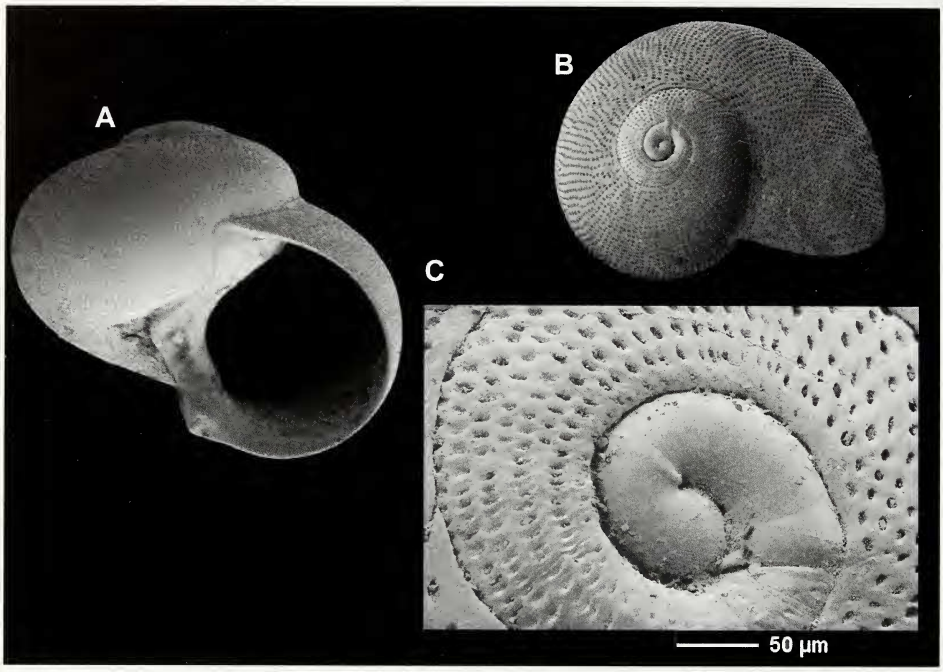
Teinostoma ciskae Faber, 1995. *De Kreukel*, 31: 62 [replacement name for *T. millepunctata* Nowell-Usticke, 1969].

Type material: Represented in NOWELL-USTICKE (1969, pl. 2, fig. 307). The lectotype of *T. millepunctata* was deposited in AMNH (nº 195413) (BOYKO & CORDEIRO, 2001). Not examined.

Other material examined: Cuba: 5 s, Bahía de Cienfuegos, 20-30 m (MHNS); 20 s, Rancho Luna Beach, 20-54 m (MHNS). Trinidad and Tobago: Tobago, 1 c, Horseshoe reef, 15 m, from shell grit (CJP). Virgin Islands: 1 s, Peter Island, 18 m, shell grit (CHL). Bahamas: 1 s, Olympus Reef, NNW West End, Grand Bahama Island, 36 m, from coralline algal fragments (CHL). Florida, USA: 2 s, APAC Pit, Sarasota Co. Plio-Pleistocene (CHL).

Description: Shell (Figs. 5A-B) globose, fragile, whitish and with its surface totally covered by punctiform incisions aligned spirally.

Protoconch (Fig. 5C) of about one whorl, with a finely granular surface at its beginning and smooth in the subsequent part, about 166 μm in diameter, and with two strong varices separating the two stages. Teleoconch of about 2 ¼ globose whorls, totally covered by the microsculpture mentioned above (Fig. 5C). Aperture rounded, external lip fine, inner lip and columella thickened.



Figures 5A-C. *Teinostoma ciskae* Faber, 1995. A-B: shells, 1.8, 1.2 mm, Rancho Luna Beach, Cienfuegos, Cuba; C: protoconch.
Figuras 5A-C. Teinostoma ciskae *Faber, 1995. A-B: conchas, 1,8, 1,2 mm, Playa Rancho Luna, Cienfuegos, Cuba; C: protoconcha.*

Umbilicus totally closed by an extension from the columella.

Dimensions: Holotype 1.59 mm in diameter. We have shells with about 2.5 mm in maximum dimension. Maximum reported size: 2.6 mm

Habitat: The species is distributed in the deep infralittoral, found between 15 and 54 m deep, on coralline bottoms.

Distribution: Known from Antigua, its type locality (Nowell-Usticke, 1969 and 1971; Faber, 1995); from Aruba (de Jong & Coomans, 1988); from Abaco, Bahamas (Redfern, 2001) and from Virgin Islands, Bahamas, Tobago, and Cienfuegos, Cuba, in the present work.

Remarks: Nowell-Usticke (1969) described *Teinostoma millepunctata*. This name was preoccupied by *T. millepunctatum* Pilsbry & Olsson, 1945, from Ecuador, for this reason Faber (1995) proposed the replacement name *Teinostoma ciskae*, for Nowell-Usticke's species. *T. ciskae* may be distinguished from the other known species of *Teinostoma* by the more globose and fragile shell, by its peculiar protoconch, and mainly by its typical microsculpture of punctiform incisions. No similar species exists in the Caribbean region.

Teinostoma goniogyrus Pilsbry & McGinty, 1945 (Figures 6A-G)

Teinostoma goniogyrus Pilsbry & McGinty, 1945a. *The Nautilus*, 59: 3, pl. 1, figs. 8. [Type locality: Off Destin, west Florida].

Rotella carinata H. C. Lea, 1846. *Trans. Amer. Philos. Soc.*, 9: 263, pl. 36, fig. 78. (non d'Orbigny, 1842) [Type locality: Petersburg, Virginia, Neogene fossil].

Type material: Represented in PILSBRY & MCGINTY (1945a). Not examined.
Other material examined: Cuba: 1 s, Guajimico, 15 m (MHNS); 1 s, Cienfuegos Bay, stn. 12a, 22°07'N – 80°26'W, 4 m (MHNS); 12 s, Cienfuegos Bay, 10 m (CFG); 5 s, Rancho Luna Beach, 10-54 m (CFG). Florida, USA: 1 s, 65 mi. E St. Augustine, St. Johns Co., Fl., 53 m, dredged (CHL); 3 s, 32 mi. E St. Augustine, St. Johns Co., Fl., 30 m, dredged (CHL); 1 s, 23 mi. ENE Mayport, Duval Co., Fl., 26 m. (CHL); 1 s, Caloosahatchee Formation, La Belle, Hendry Co., Plio-Pleistocene (CHL).

Description: Shell (Figs. 6A-D) subconical, depressed, solid, whitish, and with a strong keel at the periphery. Protoconch (Figs. 6E-G) of about 2 whorls and about 360 μm in diameter, with a smooth surface at its beginning and fine lateral granulation and 5-6 spiral lines of small perforations on the subsequent part, varix scarcely marked. Teleoconch of about 1 ¼ whorl, rapidly expanding, dorsally convex and ventrally concave in the umbilical area; surface totally covered by very fine clearly separated perforations, spirally aligned (Figs. 6G-H) and with a prominent cord-like keel at the periphery. A fine callus completely covers the umbilicus; a fine groove runs between the columella and the callus. Aperture ovoid, a little depressed, with the upper part of the external lip sharp and advanced.

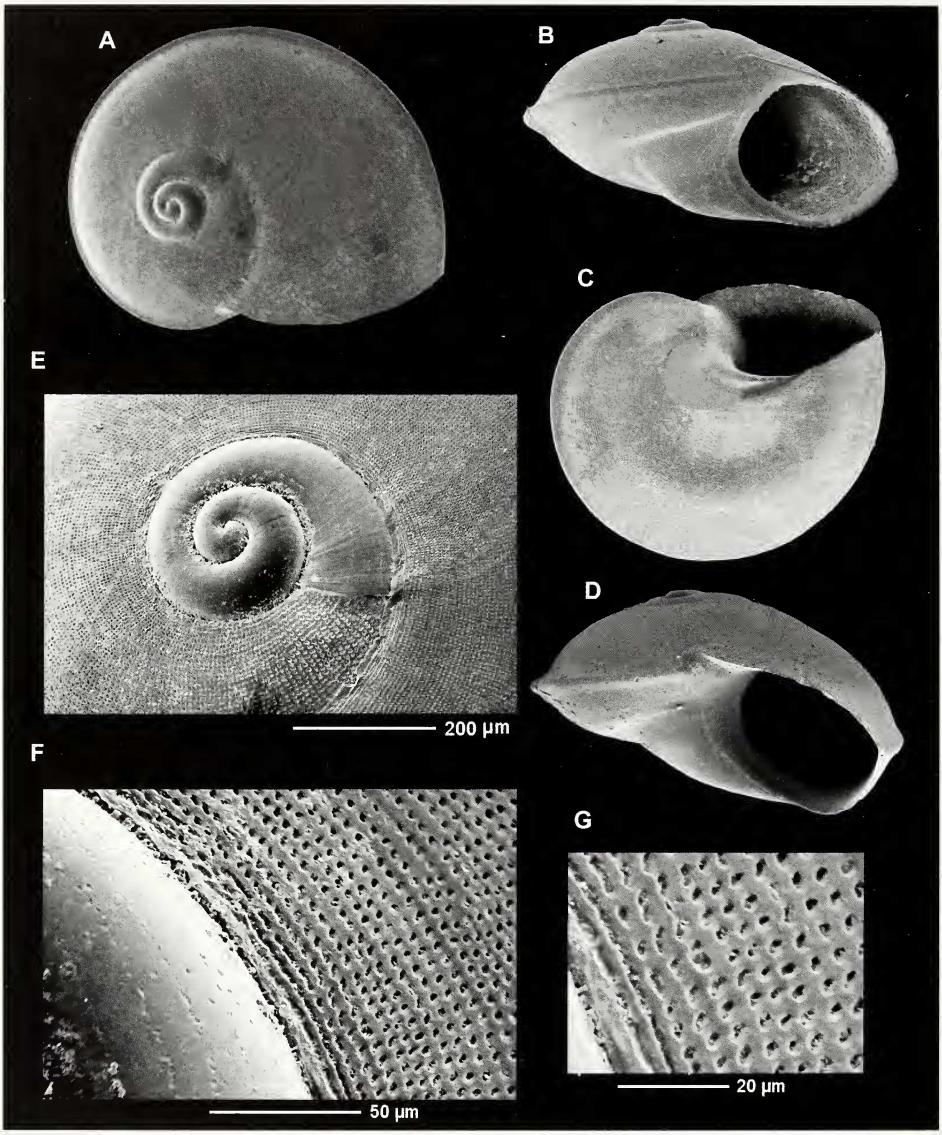
Dimensions: Holotype measures 1.95 mm in diameter. We have shells about 1.3 mm in maximum diameter.

Habitat: Marl Bottom, in 18-20 fms (32-56 m) (Pilsbry & McGinty, 1945a). It has been found alive between 42 and 59 m, but shells have been found in sediments collected between 10 and 100 m.

Distribution: It has been recorded from off Destin, west Florida (PILSBRY & MCGINTY, 1945a); from Bocas island, Panama (OLSSON & MCGINTY, 1958); from off northwest Florida, southern Haiti and Panama (MOORE, 1964); from northwest Gulf of Mexico (ODÉ, 1987); from Florida to Caribbean Panama (LYONS, 1989; LEE, 2009); from Colombia (DÍAZ MERLANO & PUYANA HEGEDUS, 1994); also from Cuba.

Remarks: PILSBRY & MCGINTY (1945a) mention that *Teinostoma goniogyrus* resembles *Rotella carinata* (d'Orbigny) from St. Thomas in shape, but instead of the small umbilical callus of that species, has a remarkable, extremely thick callus, exceeding that of any other *Teinostoma* except *T. pilsbryi*. Under high power some faint traces of close spiral striation can be seen in a few places on the unique type. MOORE (1964) commented that this species is also similar to *T. incertum* in the spiral punctiform lines and in the shape of the umbilical callus. *T. incertum* is more depressed and has a strong peripheral keel. The stratigraphic distribution of this species is from the Upper Miocene to Recent. There is a considerable variation of size between the fossil shells from the Miocene and Plio-Pleistocene and the recent ones.

PILSBRY & MCGINTY (1945a) described *T. goniogyrus* on the basis of a single shell, citing the wider umbilical callus as the specific difference from *R. carinata*. PILSBRY (1953) figured fossil shells of *T. goniogyrus* from Smithfield, Virginia and St. Petersburg, Plio-Pleistocene of southern Florida and kept the size of the umbilical callus as the only difference between species. We have examined shells from Florida and Cuba and found very little difference between them. We have also examined shells from the Pliocene, Caloosahatchee Formation, from La Belle, Florida, and we have not observed important differences in the size of the umbilical callus. K.J. BUSH (1897) identified two specimens from station 2278, off Cape Hatteras, in 16 fathoms (29 m), as the *R. carinata* of d'Orbigny.



Figures 6A-G. *Teinostoma goniogyrus* Pilsbry & McGinty, 1945. A-D: shells, 1.5, 1.5, 1.4, 1.5 mm, Cienfuegos Bay, Cuba; E: protoconch; F-G: microsculpture.
Figuras 6A-G. Teinostoma goniogyrus *Pilsbry & McGinty, 1945. A-D: conchas, 1,5, 1,5, 1,4, 1,5 mm, Bahía de Cienfuegos, Cuba; E: protoconcha; F-G: microescultura.*

In our opinion, *R. carinata* and *T. goniogyrus* may be the same species, and the different size of the umbilical callus is not enough for a specific separation. The problem is that the shells identified by K.J. Bush as *R. carinata* in USNM were not found. So, lacking comparative material, we keep both species-level taxa waiting until more material from the type locality is obtained in the future in order to decide if there is any specific difference.

Teinostoma lenticulare (H.C. Lea, 1846) (Figures 7A-K)

Rotella lenticularis H.C. Lea, 1846. *Trans. Amer. Philos. Soc.*, 9: 264, pl. 36, fig. 79. [Type locality: Petersburg, Virginia, Neogene fossil].

Type material: Type material in ANSP. Not examined.
Other material examined: Cuba: 12 s, Cienfuegos Bay, 22°07'N 80°27'W, 9 m (MHNS); 5 s, Cienfuegos Bay, sta. 12a, 22°07'N 80°26'W, 4 m; 19 s, Cienfuegos Bay, 10 m (MHNS); 1 s, Cienfuegos Bay, 20-30 m (MHNS); 15 c, Cienfuegos Bay, 10 m; 6 c, Cienfuegos Bay, 12 m (MHNS).

Description: This is the short original description: "*Shell lenticular, depressed, thin, smooth, polished, spire very short, sub-ovate; obtuse; sutures small, linear; whorls four, convex; last whorl angulate; base smooth; callus small; mouth sub-rotund; columella broad, curved*". At same time H.C. Lea comments: "*The angle of the last whorl is very variable. It sometimes amounts almost to a carina. The mouth is nearly round. The callus is slightly depressed below the surrounding surface. This shell is, in part, allied to both the preceding species* [Rotella carinata], *but differs in the number of whorls, shape of the columella and spire, and the angle on the last whorl. They also differ much in thickness*".

The shell (Figs. 7A-H) has the shape of a small trochoid, relatively solid, with a shagreen appearance due to minute punctae. Protoconch (Figs. 7I-J) of about 1 ¾ whorls and with about 310 μm in diameter, ornamented with very small and dispersed tubercles and 4-5 very fine spiral threads. Teleoconch of about 1 ½ whorls, rapidly expanding; the whorls are totally covered by very small punctiform pits, clearly separated from each other, spirally aligned and very dense. The middle of the last whorl is angular, and this angle is almost at the periphery, fading progressively and almost disappearing near the aperture. In adult specimens, from the last ½ whorl a thickening of the inner lip is present extending and projecting over the umbilicus nearly totally covering it and forming the characteristic callus of this species (Figs. 7 E-F). This callus can be observed in several degrees of development (Fig. 7K). The different forms of umbilical occlusion are related to the age and development of the individual.

Dimensions: Holotype 1.6 mm in diameter by 0.95 mm in height. Our largest shells measure 1.3 mm in diameter and 0.80 mm in height.

Habitat: The shells studied were collected in sediments between 4 and 30 m in depth, on a coralline sand bottom.

Distribution: Only known as recent species from Cienfuegos, Cuba.

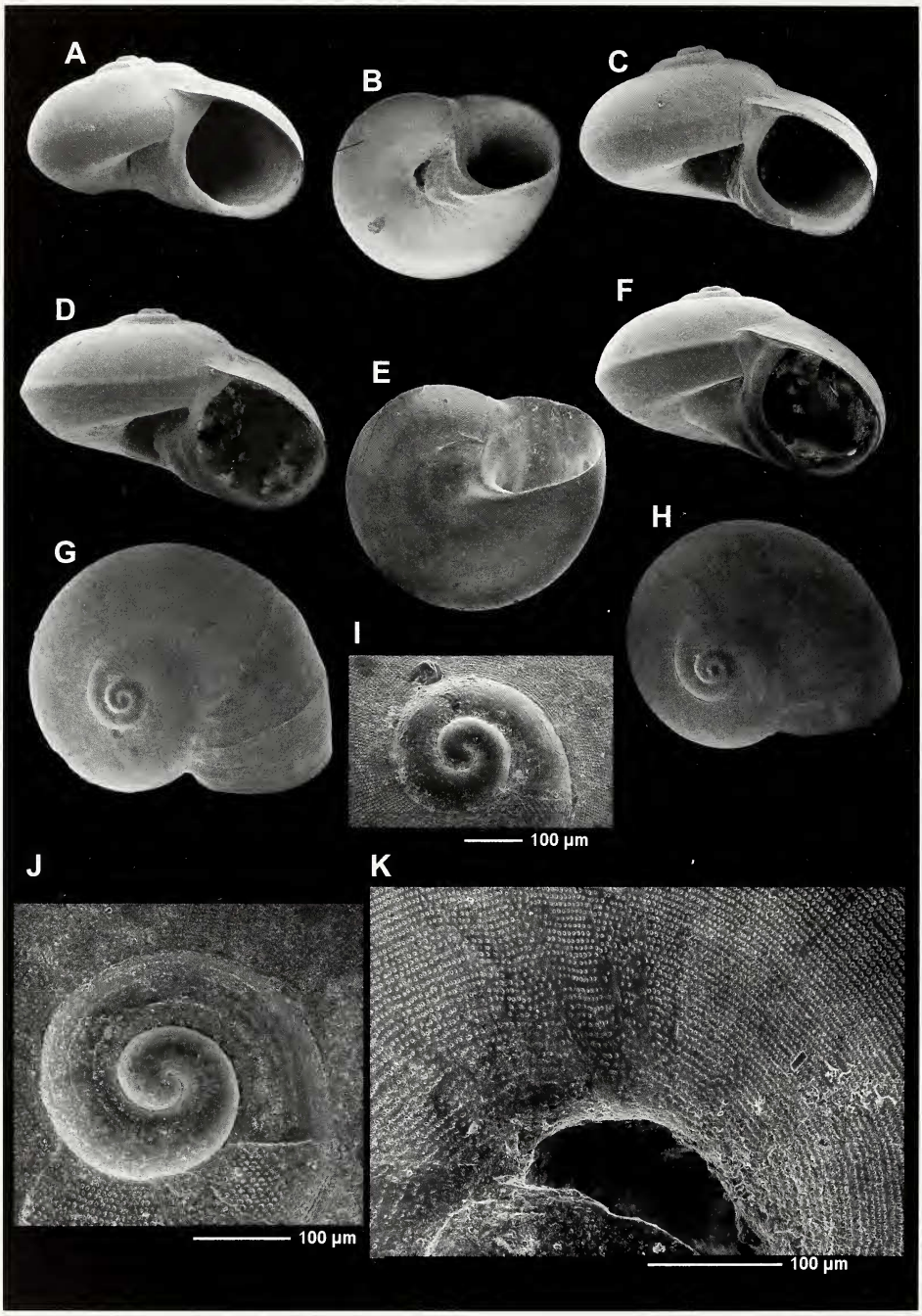
Remarks: *T. lenticulare* is a fossil species described from the Miocene of Smithfield, Virginia, Yorktown Formation.

PILSBRY (1953: pl. 50, figs. 3-3d), figured shells of *T. lenticulare* with sizes between 1.65 mm and 1.80 mm, and compared them to the type of Lea, with the intention of making a comparison with shells of *T. goniogyrus*. He did not mention any similarity to *T. incertum*, commenting that it is less depressed than *T. goniogyrus*, which in the first half of the last whorl is clearly angled, rather than keeled, and the angulation becomes obscure near the labrum. The columella is not clearly marked towards the external part from the umbilical callus.

MOORE (1964) also did not mention *T. lenticulare*. Further, he made no reference to *T. lenticulare* in his discussion of *T. incertum* only making a comparison to *T. parvicallum*.

In this species as well as others the callus form is very variable, and this is due to different developmental stages of the shell.

Teinostoma lenticulare as well as *T. goniogyrus, T. reclususm, T. ciskae* and *T. baldingeri* spec. nov. (see below), have a microsculpture formed by very small punctiform pits, clearly separated from each other, and spirally aligned. In contrast *T. incertum*, has punctiform pits at the beginning of the teleoconch, but they immediatly become incised spiral lines or sulci.



Figures 7A-K. *Teinostoma lenticulare* (H.C. Lea, 1846). A-H: shells in several positions, 1.1-1.3 mm, all from Cienfuegos Bay. I: protoconch; J: detail of the protoconch; K: detail of the umbilicus and microsculpture.

Figuras 7A-K. Teinostoma lenticulare *(H.C. Lea, 1846). A-H: conchas en diferentes posiciones, 1,1-1,3 mm, todas de la Bahía de Cienfuegos. I: protoconcha; J: detalle de la protoconcha; K: detalle del ombligo y microescultura.*

Teinostoma reclusum (Dall, 1889) (Figures 8A-G, 9A-F)

Ethalia reclusa Dall, 1889. *Bull. Mus. Comp. Zoology*, 18: 361, pl. 28, figs. 7. [Type locality: Yucatan Strait, 640 fms (1157 m); North Carolina, 12-63 fms (22-113 m)].

Type material: Syntype in MCZ (007552), from off Yucatan Strait, in 640 fms (1157 m) (Figs. 8A-G). This shell is here designated as the lectotype.
Other material examined: Florida, USA: 11 s, 32 mi. E St. Augustine, St. Johns Co., dredged 30 m (CHL); 1 s, 65 mi. E St. Augustine, St. Johns Co., dredged 53 m (CHL); 4 s, 29 mi. E Mayport, Duval Co., 23 m (CHL).

Description: This is the original description in DALL (1889a): "*Shell small, when fresh, vitreous transparent white, of three visible whorls, the last much the largest, smooth and polished above, or with only faint incremental lines below; periphery rounded, spire and base moderately rounded; margin of last whorl appressed at the suture so that the thin edge runs up over the preceding whorl and the real suture is almost invisible in fresh specimens; the outline of the preceding whorl being visible through the shell, the appearance of a suture is presented much nearer the periphery than the suture really is. Aperture nearly circular, oblique; the columella thick, appressed; umbilical callus sparse, not polished, in adolescent specimens not quite complete*".

We add: The shell (Figs. 8A-D, 9A-C) has 3 ¾ whorls, 2 corresponding to the protoconch and 1 ¾ to the teleoconch. The protoconch (Fig. 8F, 9D) is relatively large, about 260 μm in diameter, apparently smooth and two phases can be observed separated by a varix. The teleoconch is totally covered by rounded micropits clearly separated from each other, spirally aligned (Fig. 8G, 9E-F). The periphery of the last whorl is slightly angled near the base. Aperture quadrangular and peristome thick. Parietal callus wide. Columella and external lip wide and reflected outward. Base slightly convex, with a wide callus covering all the umbilicus.

Dimensions: The figured lectotype measures 1.7 mm in maximum diameter and 0.9 mm in height (ratio H/D= 0.52).

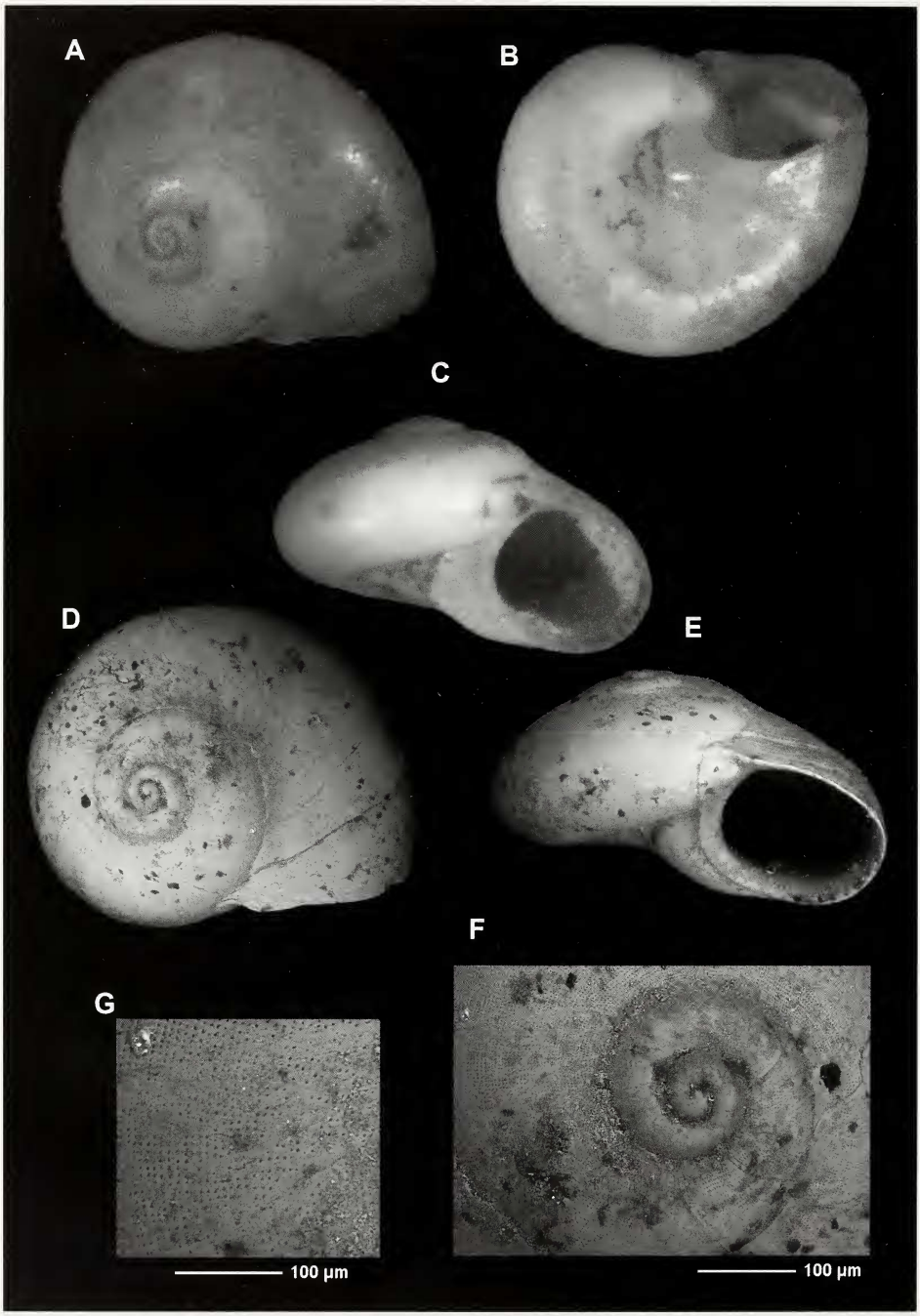
Habitat: This species is considered as being from deep water, having been described from shells collected in the Yucatan Strait in 1152 m depth (640 fathoms). In North Carolina (DALL, 1889) it was collected between 12 and 63 fms (22-113 m), on sandy and gravelly bottom in the warmer area. ODÉ (1987) recorded it at 22 m from North Carolina. LEE (2009) recorded it at 65 miles east of St. Augustine, St. Johns Co., Florida, dredged at 53 m.

Distribution: USA: North Carolina (JOHNSON, 1934; ODÉ, 1987a); Florida (LEE, 2009); Gulf of Mexico, 640 fms 1057 m; Yucatan Strait, Gulf of Mexico, 640 fms (1057 m) (DALL, 1889a).

Remarks: DALL (1889) reported the following: "This species is nearest to *Ethalia diaphana* d'Orbigny, so far as the base is concerned, but resembles *E. anomala* d'Orbigny in its upper surface, and was inadvertently referred to that species in my Preliminary Report (Bull., IX, p. 52). It has, however, a more elevated shell and a proportionately larger last whorl, while *E. anomala* has no basal callus over the umbilicus".

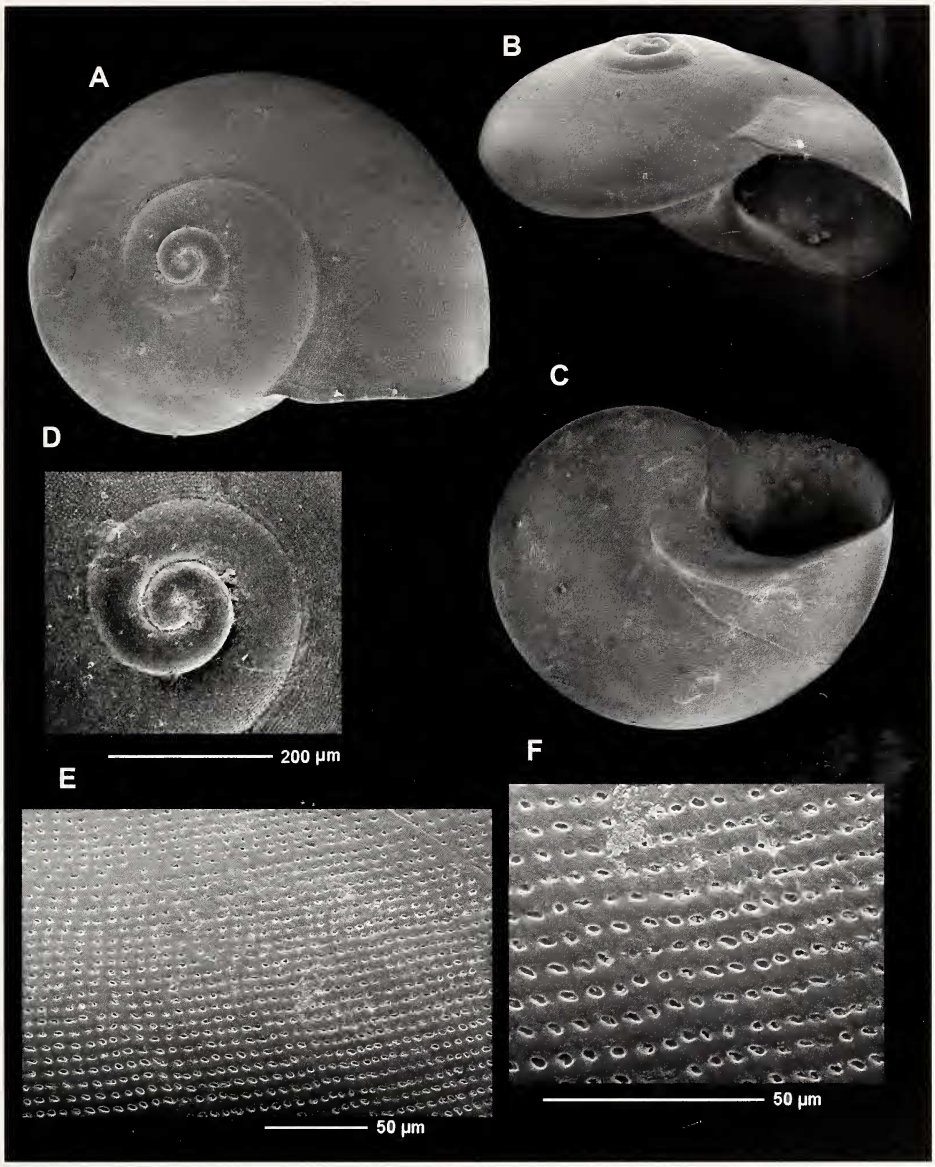
The figure in PILSBRY (1953, pl. 56, fig. 5) of the holotype of *T. subconicum* (H.C. Lea) is very similar to that of the holotype of *Ethalia reclusa* Dall, differing in the size of the callus, which does not totally cover the umbilicus and also because it lacks any microsculpture on the shell.

One of the distinguishing characters of *T. reclusum* are the micropits aligned spirally, which completely cover the shell. This character was not mentioned by DALL (1889) in the original description but was mentioned by LEE (2009, fig. 328) despite the companion shell figure appearing a little different from the lectotype.



Figures 8A-G. *Teinostoma reclusum* (Dall, 1889), lectotype from Yucatan Strait, 1.7 x 0.9 mm (MCZ 007552). A-C: optical photographs; D-E: SEM micrographs; F: protoconch; G: detail of the microsculpture.

Figuras 8A-G. Teinostoma reclusum *(Dall, 1889), lectotipo del Estrecho de Yucatán, 1,7 x 0,9 mm (MCZ 007552). A-C: fotografías ópticas; D-E: microfotografías MEB; F: protoconcha; G: detalle de la microescultura.*



Figures 9A-F. *Teinostoma reclusum* (Dall, 1889). A-C: shells, St. Augustine, St. Johns Co., Florida (CHL); D: protoconch; E-F: microsculpture.
Figuras 9A-F. Teinostoma reclusum *(Dall, 1889). A-C: conchas, St. Augustine, St. Johns Co., Florida (CHL); D: protoconcha; E-F: microescultura.*

T. reclusum could be grouped with *T. ciskae-T. goniogyrus-T. lenticulare*, all of which have their surface covered by pits.

T. ciskae is more globose and has fewer, larger micropits.

From *T. goniogyrus* and *T. lenticulare* it differs in having a smooth protoconch, the lack of spiral lines of micropits and the peripheral keel.

LEE (2009: 69; no. 328) figured this species (SEM).

Teinostoma baldingeri spec. nov. (Figures 10A-I)

Type material: Holotype (Figs. 10A-G) in MCZ (243769).
Type locality: At 3-4 miles S of Fort de France, St. Louis, Martinique, in 25-29 m.
Etymology: The specific name honors Adam J. Baldinger, Molluscs Collections Manager at the MCZ for his help in this paper.

Description: Shell (Figs. 10A-C) of very small size, whitish in color, almost transparent, shining, with a low spire, rounded periphery and globose appearance. The minute protoconch (Fig. 10I) has about 1 whorl, is apparently smooth, and measures 180 μm in diameter. The teleoconch has about 2 whorls, the suture is distinct, the periphery rounded, and is totally covered by micropits spirally aligned. The last whorl covers approximately 2/3 of the penultimate. Aperture oblique, subcircular; columella arched. Umbilical area concave, umbilicus completely covered by a thick callus that extends from the columella and which is characteristic of the species.

Dimensions: Holotype is 1.0 mm in maximum diameter.

Habitat: Dredged in 25-29 m.

Distribution: Only known from St. Louis, Martinique, the type locality.

Remarks: Despite its small size, we believe that the shell studied corresponds to an adult, if we consider the formation of the outer lip and columella, as well as the development of the umbilical callus.

Teinostoma baldingeri spec. nov. could be confused with other species of the genus *Teinostoma* such as *T. ciskae*, *T. goniogyrus*, *T. lenticulare* , *T. anastomosis* and *T. reclusum*, which have the same ornamentation, formed by micropits spirally aligned.

T. ciskae is more globose and its micropits are larger.

T. goniogyrus has a peripheral keel.

T. lenticulare has a peripheral keel and a protoconch with sculpture.

T. reclusum, is more depressed (ratio H/D= 0.52), has a different umbilical callus, and the spiral microsculpture is formed by aligned micropits.

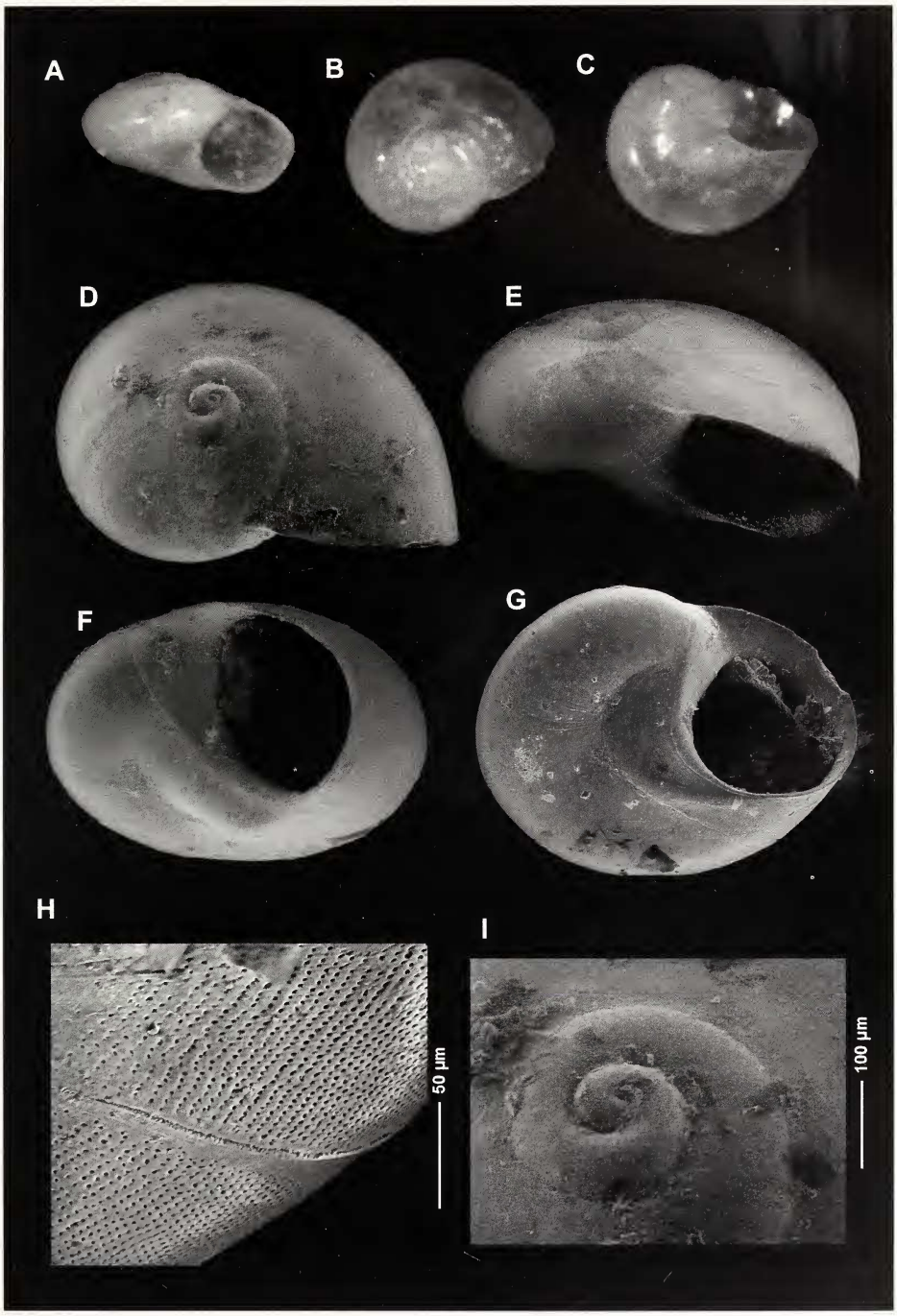
T. anastomosis spec. nov. (see below) has its first whorl totally covered by spiral irregular interdigitating microcordlets.

Teinostoma incertum Pilsbry & McGinty, 1945 (Figures 11A-E)

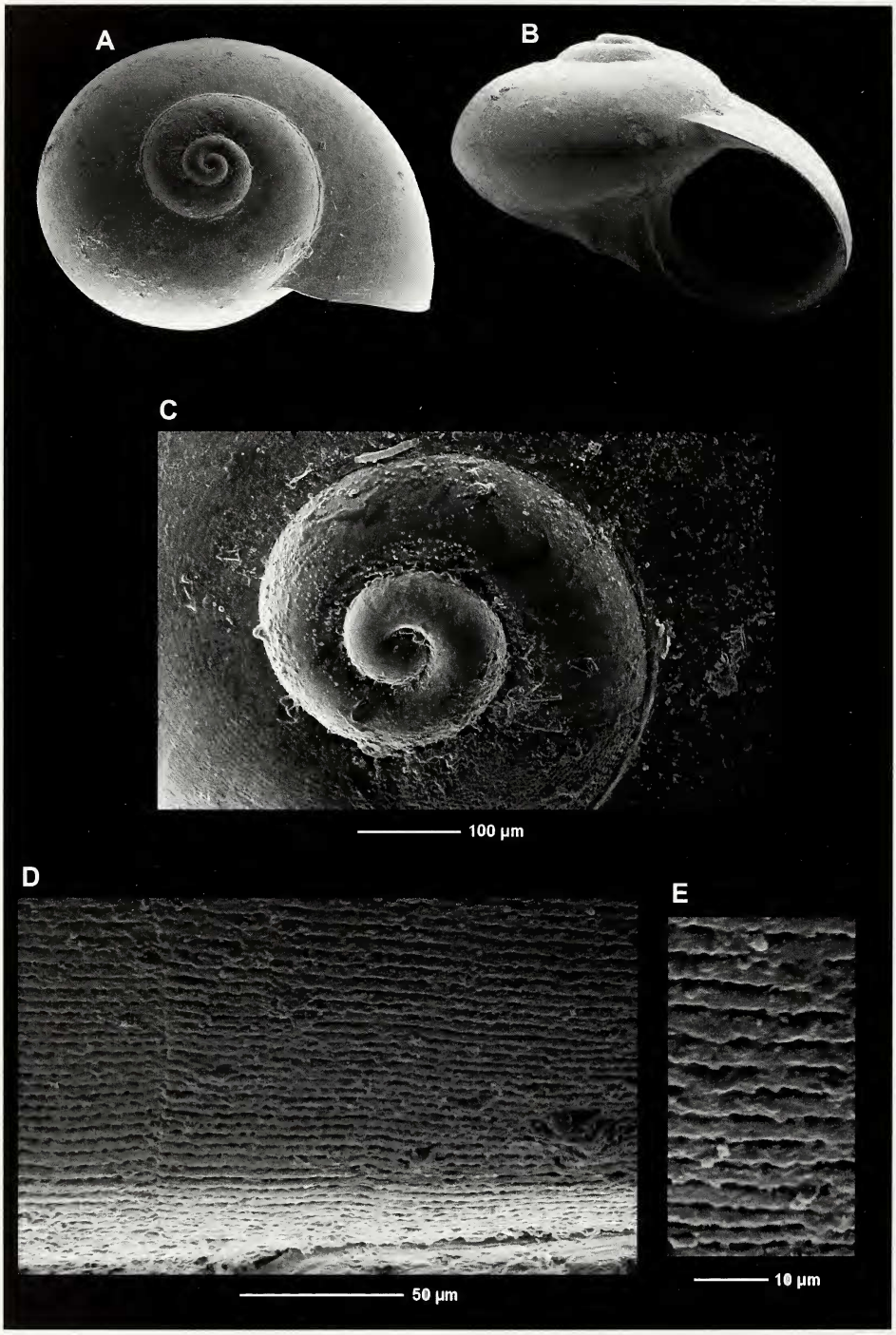
Teinostoma (Idioraphe) incertum Pilsbry & McGinty, 1945a. *The Nautilus*, 59: 7, pl. 1, fig. 7. [Type locality: Off Destin, northwest Florida].

Type material: Holotype of *T. incertum* in ANSP (181118). Not examined.
Other material examined: Florida, USA: 2 s, 1 m, Shoals reef, Shoals, Key West, Monroe Co. (CHL); 1 sp and 7 s, 32 mi E. St. Augustine, St. Johns Co., 30 m. dredged (CHL); 3 s, 23 mi ENE Mayport, Duval Co., 28 m (CHL); 2 s, 29 mi. ESE Mayport, Duval Co., 29 m, sand shell bottom (CHL).

Description: This is the original description: "*The shell is depressed but with a low-conic spire with distinct suture, a bluntly subangular periphery, microscopic spiral striation and very little umbilical callus. Whorls 3, convex, with impressed linear suture, the periphery of last whorl very obtusely subangular. The base is moderately convex, concave around the center. The oblique, circular aperture is somewhat angular above. Peristome blunt but rather thin outwardly; the columella very thick, passing into a moderate parietal callus. Behind the columellar thickening an umbilical callus closes the umbilicus, its edge ill-defined except towards the front of the shell, where it terminates in a rather deep*



Figures 10A-I. *Teinostoma baldingeri* spec. nov. A-C: holotype, 1 mm, optical photographs (MCZ 243769); D-G: holotype, SEM micrographs; H: microsculpture; I: protoconch.
Figuras 10A-I. Teinostoma baldingeri *spec. nov. A-C: holotipo, 1 mm, fotografías ópticas (MCZ 243769); D-G: holotipo, microfotografías MEB; H: microescultura; I: protoconcha.*



Figures 11A-E. *Teinostoma incertum* Pilsbry & McGinty, 1945. A-B: shell, 1.44 mm, Pelican Shoals, Florida (CHL); C: protoconch; D-E: microscupture.
Figuras 11A-E. Teinostoma incertum *Pilsbry & McGinty, 1945. A-B: concha, 1,44 mm, Pelican Shoals, Florida (CHL); C: protoconcha; D-E: microescultura.*

crease. Diameter 1.6 mm, height 0.95 mm".

There is a better and more complete description for *T. incertum* in MOORE (1964: 88-89).

The shell (Figs. 11A-B) is small, trochoid, relatively solid, with a shagreen appearance due to minute punctae. Protoconch (Fig. 11C) of about 2 whorls and about 380 μm in diameter, ornamented with randomly distributed tubercles and a line of tubercles close to the suture, the varix at the transition to the teleoconch is not thickened. Teleoconch of about 1 ½ whorls, increasing rapidly; whorls totally covered by pits in spiral lines connected by shallow grooves which transform them into incised lines. Periphery subangular, not angulated or keeled. Umbilicus totaly covered by numerous layers of callus originating behind the columella.

Dimensions: Holotype 1.6 mm in diameter by 0.95 mm in height. Our largest shells measure 1.44 mm in diameter.

Habitat: Marl bottom, in 32-36 m (PILSBRY & MCGINTY, 1945a).

Depth: 11 to 55 m. The shells studied were collected in sediments obtained at 1 m near the base of the reef. MOORE (1964) considered it as "a shallow shelf species along the Florida coasts".

Distribution: Known from the USA: East Florida, West Florida, Texas (PILSBRY & MCGINTY, 1945a; MOORE, 1964; LYONS, 1989; LEE, 2009); Florida and the east of Brazil (RIOS, 1994).

Remarks: PILSBRY & MCGINTY (1945a) mention, based on the incomplete callus and the final suture, that the name "*incertum*" does not refer to the validity of the species but to its systematic placement. They also comment that the minute spiral striation is too small to be shown in the figure of the holotype, suggesting that it is not present in beached shells.

It is curious to see that PILSBRY (1953, in OLSSON *ET AL.*, 1953) figured shells of *T. lenticulare* in comparison with *T. goniogyrus* but did not mention the existence of *T. incertum*, a species described by himself (PILSBRY & MCGINTY, 1945a: 7) which has a significant similarity in shell shape. MOORE (1964) also did not mention *T. lenticulare*. Further, he considers *T. incertum* close to *T. parvicallum*, from which it is differentiated by the spiral sculpture and the deeper suture. The umbilical callus, which is projected onto the lower part of the peristome, can also help in the identification.

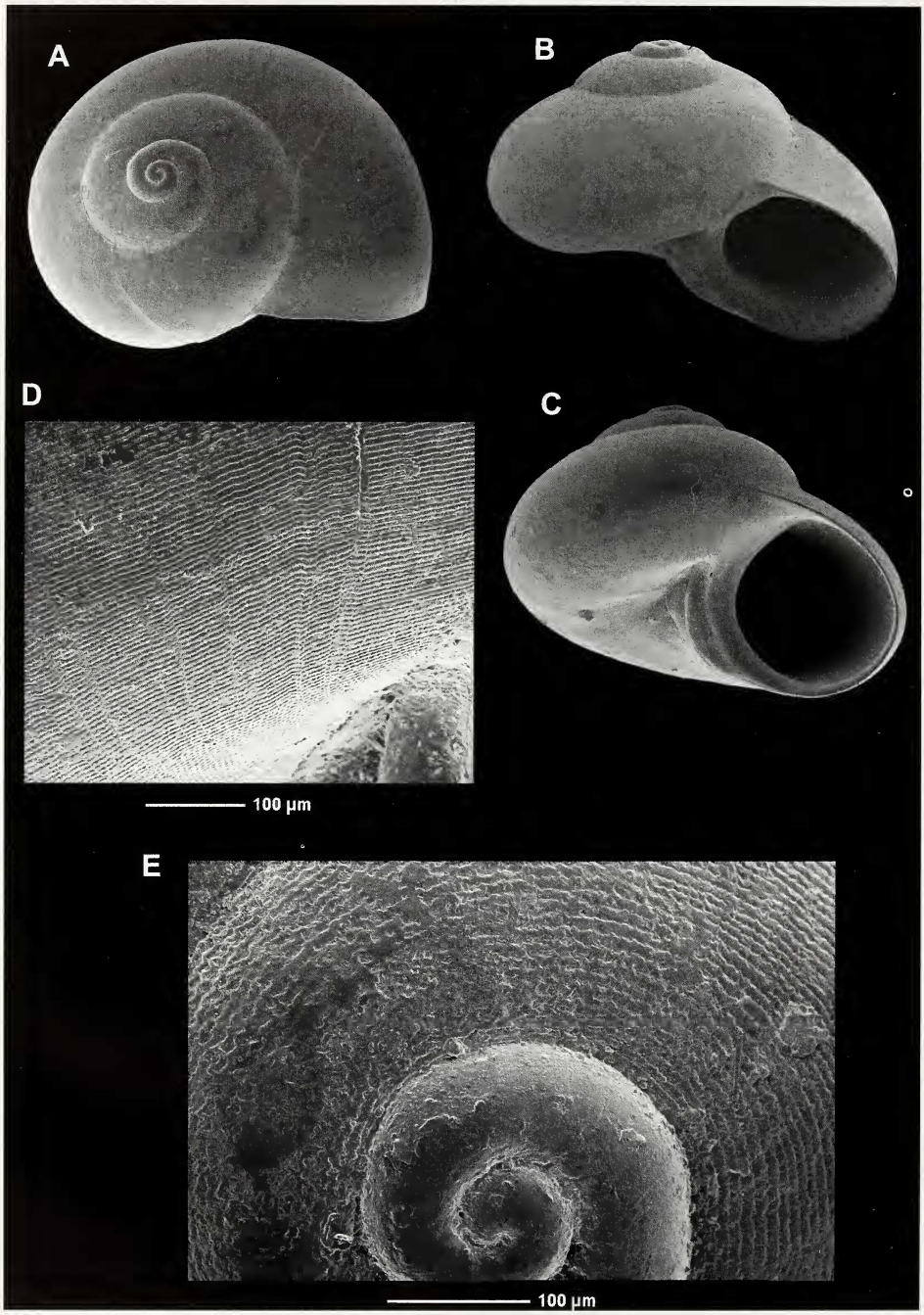
We think that the characteristic callus of *T. incertum* is simply due to the consideration of less than fully-developed specimens.

T. incertum is a species characterized by the microsculpture of the teleoconch, beginning with connected, vs. isolated, pits which promptly transform themselves into spiral lines completely covering the shell. *T. ciskae, T. goniogyrus, T. lenticulare, T. reclususm,* and *T. baldingeri* are different because the microculpture is formed by discrete punctiform pits spirally aligned but distinctly isolated from their neighbors.

LEE (2009: 68; no. 324) provided a SEM of a specimen missing some of its outer lip.

Teinostoma anastomosis spec. nov. Rubio, Rolán & Lee (Figures 12A-E)

Type material: Holotype (Figs. 12A-C) deposited in FLMNH (448607).
Type locality: Channel east of Seahorse Key, Cedar Keys, Levy Co., Florida, dredged 4.5-7 m.
Etymology: The specific name is in reference to the interdigitating sculpture on the early postnuclear whorls.



Figures 12A-E. *Teinostoma anastomosis* spec. nov. Rubio, Rolán & Lee. A-C. holotype, 1.79 mm, Channel east of Seahorse Island, Cedar Keys, Levy Co., Florida (FLMNH); D: microsculpture; E: microsculpture and protoconch.

Figures 12A-E. Teinostoma anastomosis *spec. nov. Rubio, Rolán & Lee. A-C. holotipo, 1,79 mm, Canal este de Seahorse Island, Cedar Keys, Levy Co., Florida (FLMNH); D: microescultura; E: microescultura y protoconcha.*

Description: Shell (Figs. 12A-C) solid, with trochoid aspect, a little wider than high (H/D= 0.75), and spire formed by 4 whorls. Protoconch (Fig. 12E) apparently smooth, measuring about 370 μm in diameter, with 1 ¾ whorls and with two stages, each delimited by a thick varix. The teleoconch has 2 ¼ whorls, the suture is distinct, the periphery rounded and totally covered by spiral irregular microcordlets (Figs. 12D-E) tend to fuse on the first whorl, producing micropits in their interspaces. Aperture rounded, slightly prosocline; columella thickened behind, without any canal, and with a callus which extends parallel to and behind it, partially closing the umbilicus.

Dimensions: Holotype is 1.79 mm in maximum diameter and 1.34 mm in height (ratio H/D= 0.75).

Habitat: Dredged between 4.5 to 7 m.

Distribution: Only known from the type locality.

Remarks: *Teinostoma anastomosis* spec. nov. may be distinguished from *T. ciskae*, *T. goniogyrus*, *T. lenticulare*, *T. baldingeri* and *T. reclusum*, because all these have a microsculpture formed by rounded micropits spirally aligned.

T. incertum and *T. panamense* have the same ornamentation formed by incised spiral lines, but *T. incertum* has a subangular periphery, and *T. panamense* is ornamented by widely-spaced punctiform incisions and has a striated umbilical callus.

Teinostoma panamense spec. nov. Rubio, Rolán & Lee (Figures 13A-D)

Type material: Holotype (Figs. 13A-B) deposited in FLMNH (448606).
Type locality: Portobello, Panama.
Etymology: The specific name alludes to the country where the species was collected.

Description: Shell (Figs. 13A-B) solid, with trochoid aspect and spire slightly elevated; formed by 4 whorls. Protoconch (Fig. 13C) a little uncleaned in the sutural area, without tubercles or spiral sculpture, measuring about 350 μm in diameter, with 2 whorls, delimited by a weak varix. The teleoconch has 2 whorls, is covered entirely by micropits aligned spirally, which initially are rounded and are closer, becoming somewhat more punctiform incisions (Fig. 13D). Suture covered by a thin horny layer uncemented. Periphery rounded, not keeled, angular, or subangular. Aperture rounded, slightly prosocline. Columella not thickened, separated from the callus by a shallow groove at its outer edge. Base slightly concave. A thick striated callus completely occludes the umbilicus.

Dimensions: Holotype is 1.40 mm in maximum diameter.

Habitat: Unknown. Material studied from drift sample.

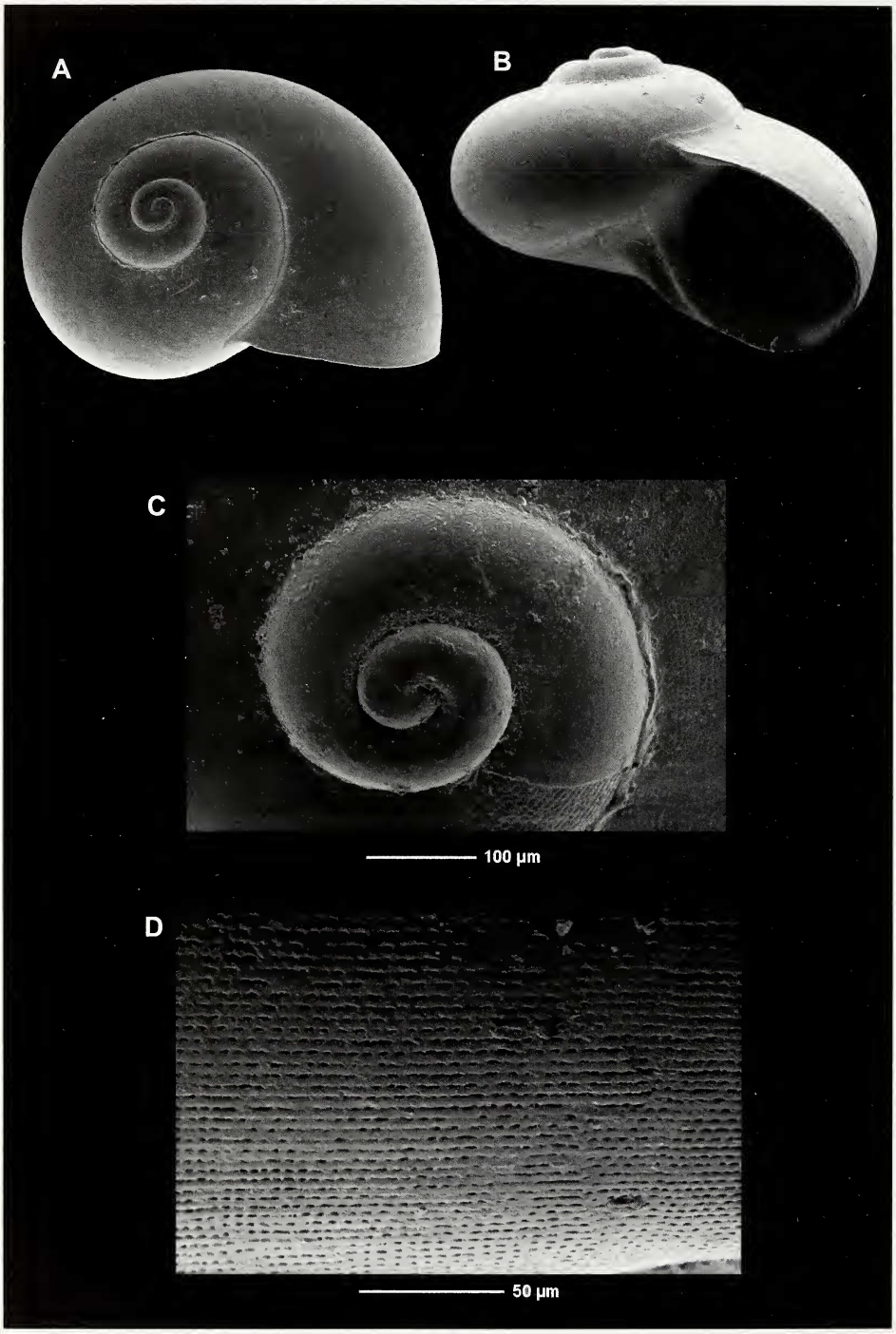
Distribution: Only known from the type locality.

Remarks: *Teinostoma panamense* spec. nov. can be distinguished from *T. ciskae*, *T. goniogyrus*, *T. lenticulare*, *T. baldingeri* and *T. reclusum* because all of these have a microscupture formed by rounded micropits spirally aligned.

T. incertum and *T. anastomosis* have the same ornamentation formed by incised spiral lines. But *T. incertum* has a subangular periphery and *T. anastomosis* is ornamented by spiral irregular microcordlets which are fused occasionally between them on the first whorl, presenting micropits in their interspaces.

Teinostoma biscaynense Pilsbry & McGinty, 1945 (Fig. 14A-D)

Teinostoma (Idioraphe) biscaynense Pilsbry & McGinty, 1945a. *The Nautilus*, 60: 5, pl. 1, fig. 4. [Type locality: Biscayne Bay at Coconut Grove, Florida].



Figures 13A-D. *Teinostoma panamense* spec. nov. Rubio, Rolán & Lee. A-B: holotype, 1.4 mm, Portobello, Panama (FLMNH); C: protoconch; D: microsculpture.
Figuras 13A-D. Teinostoma panamense *spec. nov. Rubio, Rolán & Lee. A-B: holotipo, 1,4 mm, Portobello, Panamá (FLMNH); C: protoconcha; D: microescultura.*

Type material: Holotype in ANSP (181104). Not examined.
Other material examined: Florida, USA: 1 s, 50-60 mi. E Ponte Vedra, St. Johns Co., 45 m (CHL); 1 s, Pelican Shoals, Key West, Monroe Co., 1 m, edge of reef (CHL); 1 s, 32 mi. E St. Augustine, St. Johns Co., 30 m (CHL); 1 f, Anclote Key, Pasco Co., sand bar (CHL). ABC: 3 s, off Palm Beach, Aruba, 5 m (CHL). Cayman Islands: 1 s, 100 m off Seven Mile Beach, 30 m, base of coral, Grand Cayman (CHL). Virgin Islands: 2 s, Dead Man Reef, 18 m (CHL). Panama: 1 s, Colín Is., Bocas Islands (CEG). Bahamas: 3 s, South Riding Rocks, Cay Sal Bank, 28 m, base of live coral reef (CHL). Cuba: 7 s, Guajimico (MHNS).

Description: Original description in PILSBRY & MCGINTY (1945a): *"The strongly depressed shell is glossy and smooth except for fine weak growth-lines; about equally convex above and below, with rounded periphery and small umbilical callus. There are about 3 ½ whorls, the first projecting, the next rather narrow and flat, the last whorl increasing very rapidly. The suture is distinct, visibly impressed, not obscured by overlaid callus. The broadly ovate aperture is rather strongly oblique, angular above. The upper margin is thin, arching rather strongly forward. The columella is rather thick, rounded, reflected in a broad callus covering the umbilicus and passing into a rather thin parietal callus, which is thickened in the posterior angle of the aperture. Diameter 1.8 mm, height 0.9 mm"*.

In our material it is possible to see that the largest shell has most of the columellar callus while there is a fine coating covering the suture.

Habitat: It lives in shell sand in Biscayne Bay at Coconut Grove and near Baker's Haulover, also on rocky sand bars (PILSBRY & MCGINTY, 1945a). It is a common inshore and shallow coastal water species in the southeastern United States (MOORE, 1964).

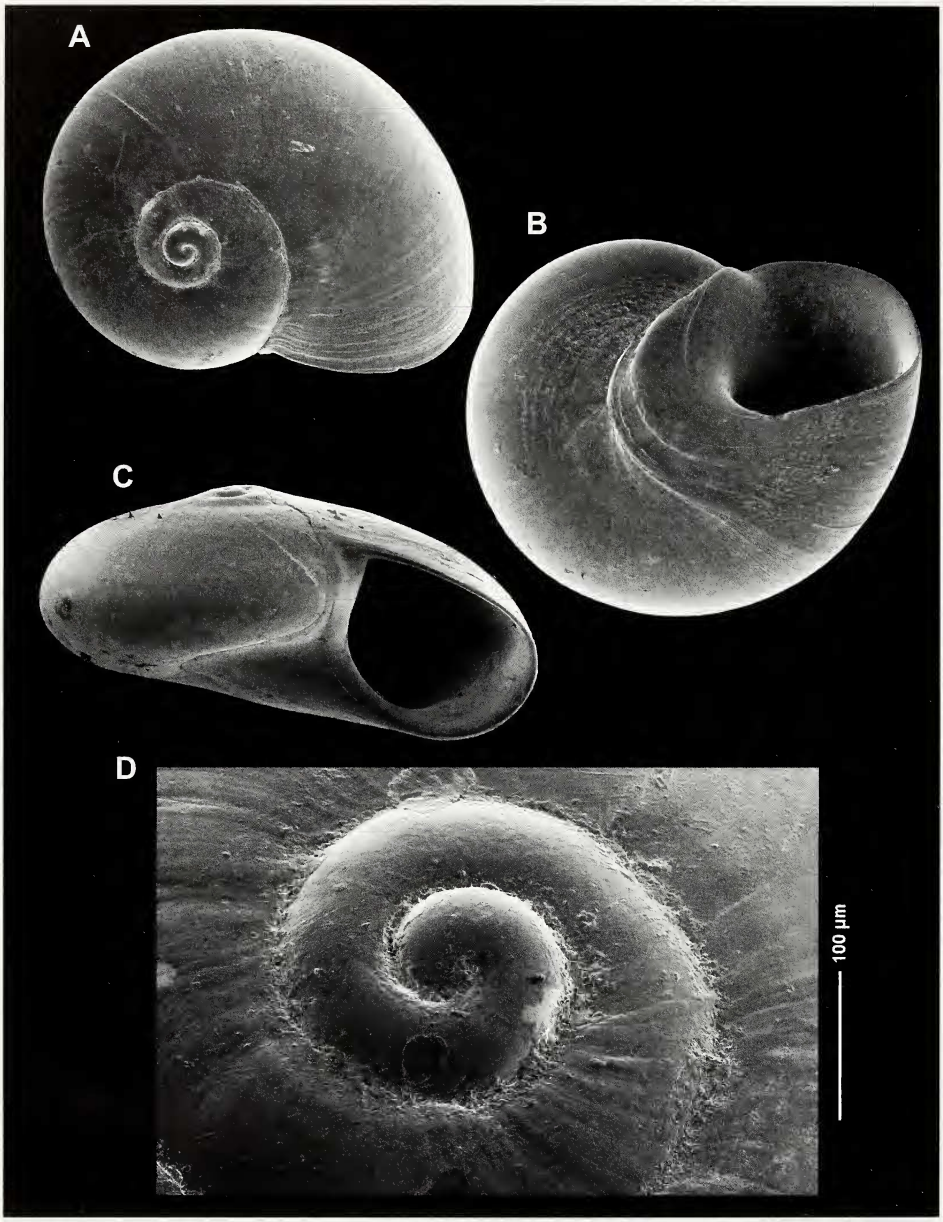
Distribution: *Teinostoma (Idioraphe) biscaynense* has been recorded from Biscayne Bay at Coconut Grove, Florida (PILSBRY & MCGINTY, 1945a); from East Florida, West Florida and Texas (MOORE, 1964); from Florida Peninsula (COOLEY, 1978); from Florida to Texas (EMERSON & JACOBSON, 1976; LYONS, 1989; LEE, 2009); from Mexico: Tabasco (GARCÍA-CUBAS & REGUERO, 1990) and Veracruz (REGUERO *ET AL.*, 1991); from Abaco, Bahamas (REDFERN, 2001). Now recorded from Panama and Cuba.

Remarks: In the original description, PILSBRY & MCGINTY (1945a) make reference to its similarity to *T. reclusum* in size and in the small columellar callus, being different because the spire of the latter species is more elevated, and the upper margin of the lip is also different.

MOORE (1964: 95) remarked that he had examined the types of *T. biscaynense*, *T. nesaeum* and *T. obtectum*, deposited in the ANSP, commenting that the type of de *T. biscaynensis* is a juvenile beached shell which had lost a great part of the dorsal callus; that of *T. obtectum* is also a beached shell but in better condition; finally, that of *T. nesaeum* is a specimen collected alive with soft parts remaining in the shell. After the comparison of the three types with hundreds of shells from Biscayne Bay, he commented that no differences between them were found except those related to variation in size. As for the spiral cordlets on the dorsum present in the shells of *T. nesaeum*, he did not consider them an important taxonomic character, making reference to them as "extremely evanescent". Thus, he concluded that *T. biscaynense*, *T. obtectum* and *T. nesaeum* were the same species giving *T. biscaynense*, the first species published in the same work, priority.

We do not agree with this conclusion, and, as we will show in the description and figures, each one has constant taxonomic characters sufficient to consider them as valid species just as they were described by PILSBRY & MCGINTY (1945a). The shells photographed agree perfectly with the material described and figured by PILSBRY & MCGINTY (1945a: fig. 4).

MOORE (1964) also stated that *T. biscaynense* is different from the other



Figures 14A-D. *Teinostoma biscaynense* Pilsbry & McGinty, 1945. A: shell, 1.3 mm, Florida (CHL); B-C: shells, 1.2, 1.36 mm, Guajimico, Cuba (MHNS); D: protoconch, from Cuba.
Figuras 14A-D. Teinostoma biscaynense *Pilsbry & McGinty, 1945. A: concha, 1,3 mm, Florida (CHL); B-C: conchas, 1,2, 1,36 mm, Guajimico, Cuba (MHNS); D: protoconcha, de Cuba.*

species of the genus *Teinostoma* from shallow water in the West Indies because it has the spire totally covered by a fine callous coat. Also, this character made it similar to *T. cryptospira* (= *T. umbilicatum*), a species from deep water off Cape Hatteras, North Carolina.

We do not agree with this because PILSBRY & MCGINTY (1945a) stated in their original description: *"The suture is distinct, visibly impressed, not obscured by overlaid callus"*. In relation with the protoconch: *"There are about 3 ½ whorls, the first projecting, the next ..."* Based on this passage, the spire of *T. biscaynense* cannot be totally covered by a callous coating, as is emphasized by MOORE (1964: 96, 98). This discrepancy may reflect an error in the identification of the examined types.

T. biscaynense differs from a group of species formed by *T. umbilicatum* (=*T. cryptospira*), *T. nesaeum*, *T. obtectum*, *T. lerema* and *T. clavium*, because in these a fine callous coat covers the spire, partially or totally, the protoconch being hidden in some of them.

Teinostoma obtectum Pilsbry & McGinty, 1945 (Figures 15A-B)

Teinostoma (Idioraphe) obtectum Pilsbry & McGinty, 1945a. *The Nautilus*, 59: 6, pl. 1, fig. 6. [Type locality: "Treasure Island", the first islet south of Singer Bridge, northern end of Lake Worth, Palm Beach, Florida].

Type material: Holotype in ANSP (181121). Not examined.
Material examined: Florida, USA: 1 s, 29 mi. ESE Mayport, Duval Co., Fl., 23 m(CHL); 1 s, just S jetty, Anastasia Island, St. Augustine Beach, St. Johns Co. (CHL); 1 s, beach, Indian Pass, Port St. Joe, Gulf Co. (CHL).

Description: This is the original description of PILSBRY & MCGINTY (1945a): *"The moderately solid smooth shell is strongly depressed, transversely dilated, the spire covered with a translucent glaze through which the suture shows. About three rather rapidly increasing but regularly spiral whorls are visible through the subtransparent callous coat over the spire, which superficially shows no trace of the suture. The periphery is rounded, the base not very convex. Aperture is rounded, but angularly produced and slightly channelled above and with a flattened parietal outline. Outer margin of peristome thin, the concave columella rather thick, passing into the rather large and slightly convex umbilical callus. Parietal callus is rather thick. Diameter 2.2 and 1.65 mm, height 0.95 mm"*.

Maximum reported size: 2.2 mm

Habitat: Shell sand bottom (PILSBRY & MCGINTY, 1945a). Bathymetric range 0 to 500 m.

Distribution: USA: Florida: East Florida (PILSBRY & MCGINTY, 1945a; MOORE, 1964: 4; LEE, 2009: 68); Mexico: Campeche State, Yucatan State, Quintana Roo (VOKES & VOKES, 1984); Venezuela: unlocalized (PRINCZ, 1982a); Puerto Rico (WARMKE & ABBOTT, 1961).

Remarks: After the description of the species PILSBRY & MCGINTY (1945a) mention: *"The elliptical outline, the strong depression, and the callus smoothly covering the spire, distinguish this species, which is known by a single shell. A small nick in the outer lip was restored in the figure"*.

MOORE (1964: 97) stated: *"The types of* Teinostoma biscaynensis, T. nasaeum *and* T. obtectum *have been examined by the writer. That of* T. biscaynensis *is a worn dead shell which has lost most of the dorsal shelly callus. The type of* T. obtectum *is also a dead shell, but is in much better condition. It is near the maximum size of the species. The type of* T. nasaeum *was taken alive, and the soft parts still remain in the shell. The writer has compared all three types with each other and with several hundred specimens from Biscayne Bay, and can find no differences other than those resulting from wear and tear or variation in size. As* T. biscaynensis *is the first species listed in PILSBRY & MCGINTY (1945a), it is given page precedence, and the other two species are placed in synonomy"*.