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PLIOCENE MOLLUSCA
OF
SOUTHERN FLORIDA

WITH SPECIAL REFERENCE TO THOSE FROM
NORTH SAINT PETERSBURG

By Axel A. Olsson and Anne Harbison

WITH SPECIAL CHAPTERS ON
TURRIDAE

By William G. Fargo

and

VITRINELLIDAE
and Fresh-water Mollusks

By Henry A. Pilsbry

PHILADELPHIA

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PROSOBRANCHIATA

Superorder *NEOGASTROPODA*

Order TOXOGLOSSA

Family *TEREBRIDAE*Genus *TEREBRA* Bruguière, 1789

Type by monotypy. Lamarck, 1799: *Buccinum subulatum* Linné. Recent, Indo-Pacific.

Shell large or medium size, solid, very long and slender, with numerous whorls. Early spire-whorls small, the upper half with 2 large noded cords bordering the suture, the lower half constricted and nearly smooth. The sutural cords fade out gradually on the middle spire-whorls and entirely so on the later ones, the profile of the surface becoming straight or nearly so as well as nearly smooth. Columella straight, no folds except for the keel at end of pillar bordering the edge of the siphonal canal. Anterior canal short, recurved, with a wide siphonal notch which forms a short, fasciolar band which rotates upward into the aperture and is margined by a small but sharp keel. Surface of the adult whorls smooth, or with sub-obsolete spirals, no sutural fasciolar band, in life with revolving bands or brown blotches.

No species of *Terebra* sensu stricto are known from the Florida Pliocene.

Subgenus *STRIOTEREBRUM* Sacco, 1891

Type by original designation: *Terebra basteroti* Nyst. Miocene of Italy.

This subgenus includes the slender, strongly reticulate species with a well-marked sutural fasciolar band. Parietal wall with a thin callous wash. Columella usually with 2 folds which may be strong or merely swellings of the pillar wall, or wholly absent in some species. Outer lip thin, somewhat wider in front, ending forward in a short but well-formed, recurved anterior canal with a wide siphonal canal producing a basal fasciole margined above by a sharp keel (nassoid) which connects with the upper columellar fold, if one is present.

Terebra (*Strioterebrum*) *dislocata* (Say)

Cerithium dislocatum Say, 1822, Journ. Acad. Nat. Sci. Phila., vol. 2, p. 235.

Terebra dislocata (Say), Holmes, 1858, Post-Pl. Fos. S. Car., p. 70, pl. 11, fig. 12.

Terebra (*Acus*) *dislocata* (Say), Dall, 1890, Trans. Wagner Free Inst. Sci., vol. 3, pt. 1, p. 24.

Terebra (*Strioterebrum*) *dislocata* (Say), Perry, 1940, Bulls. Amer. Pal., vol. 26, no. 95, p. 160, pl. 37, fig. 251.

This is the largest and commonest *Terebra* at St. Petersburg and will be recognized by its coarse, subregular, finely noded spiral sculpture and

wide, strongly ribbed or noded fasciolar band, sharply dislocated below by a groove, as deep and sharp as that of the suture above. The spiral cords are typically three in number on the spire-whorls, with 6 others appearing on the base of the last whorl. Columella twisted with 2 folds, the uppermost continued outside as a sharp keel defining the forward edge of the basal sulcus. Anterior canal forms a short recurved beak.

As fossil, this species extends back into the Upper Miocene and becomes common in the Pliocene. As a Recent species, its range extends from Maryland southward to Florida and throughout the West Indian-Caribbean region.

St. Petersburg, ANSP 18046.

***Terebra (Strioterebrum) protexta* (Conrad)**

Cerithium protextum Conrad, 1846, Proc. Acad. Nat. Sci. Phila., vol. 3, p. 26.

Acus protextus (Conrad), Dall, 1889, Bull. Mus. Comp. Zool., vol. 18, pp. 63, 65.

Terebra (Acus) protexta (Conrad), Dall, 1890, Trans. Wagner Free Inst. Sci., vol. 3, pt. 1, p. 25.

Terebra (Strioterebrum) protexta (Conrad), Gardner, 1948, Prof. Paper 199-B, U. S. Geol. Surv., p. 277, pl. 38, fig. 31.

Shell smaller than *dislocata*, usually between 18 to 25 mm., the sculpture finer and more irregular. On an average specimen, the last whorl has about 18 to 30 sharp, flexuous ribs which are more or less equal in size and equally spaced. Spiral sculpture consists of small but distinct, subequal impressed lines which generally do not cut through the ribs. On the spire-whorls there are from 4 to 7 spirals and about 15 to 20 on the body-whorl where they spread over the base and onto the canal. Sutural fasciolar band usually distinct at all stages. Columella with a small fold at end; above it the pillar wall is smooth and often swollen.

Common at St. Petersburg. ANSP 18045, 18885.

***Terebra (Strioterebrum) concava* (Say)**

Plate 58, figs. 9, 9a.

Turritella concava Say, 1827, Journ. Acad. Nat. Sci. Phila., 1st series, vol. 5, p. 207.

Acus concavus (Say), Dall, 1889, Rept. Blake Gastropods, Bull. Mus. Comp. Zool., vol. 18, pt. 2, p. 63.

Terebra (Acus) concava (Say), Dall, 1890, Trans. Wagner Free Inst. Sci., vol. 3, pt. 1, p. 24.

Terebra (Strioterebrum) concava (Say), Gardner, 1948, Prof. Paper 199-B, U. S. Geol. Surv., p. 277, pl. 38, fig. 32.

Shell small or medium-sized, the middle portion of each whorl typically deeply depressed or concave, while the sutural zones on each side are convex or vaulted. The sculpture of the shell divides itself into 4 zones. The upper edge of each whorl is formed by a large, strongly noded fasciolar cord free from spirals, or nearly so; the depressed middle zone is without ribs, and marked with 3 or more smooth, spiral cords; the third zone of the periphery is a narrow belt of small axial nodes, their intervals sculptured with three, incised lines, the combination of the ribs and spirals producing a fine, basket-weave pattern; on the body-whorl a noded-spiral

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cord angulates the periphery, while on the whorls of the spire it forms a narrow band bordering the lower suture; and fourthly, the sculpture of the base composed of fine spirals without ribs. Base strongly contracted, with a short, produced, twisted anterior canal, the columella with one fold. Aperture semiovate, the lip thin.

Common, St. Petersburg, ANSP 18044; 18882 (figured).

Terebra (Strioterebrum) vertebralis new species

Plate 58, figs. 8, 8a.

Shell small, relatively stout, the band bordering the anterior side of the suture rather prominently noded and with the central portion of each spire-whorl widely but not deeply contracted. On the body-whorl, a rather narrow zone on the periphery bears a series of small elongated axial nodes, and as the coil of the whorls follows this line, the nodes show on the posterior side of the suture and on the earlier turns merely as small points. The spiral sculpture is principally developed as wide and rather flat, smoothish bands, defined by small, incised spiral lines. On the sutural fasciole, there are two spiral bands, the central incised line not cutting into the axial nodes. The central contracted zone has three bands, two others are present on the noded peripheral bands; and four others on the base and basal sulcus. Aperture rather large, semiovate with a definite posterior sinus at the upper end. Base sloping, not contracted, the basal sulcus hardly defined. Pillar straight, with one hardly distinct fold.

Length 13.7 mm., diameter 3.1 mm. (Holotype ANSP 18883).

This species shares with *T. concava* the distinctive character of having the middle zone of the whorls contracted, and the restriction of the axial nodes to a central peripheral band, and to a sutural fasciolar band. It differs from *concava* by its shorter, less tapering form, wider but less prominently noded fasciolar belt, and by its more evenly sloping, non-contracted base.

St. Petersburg, holotype, ANSP 18883, paratype, ANSP 18884.

Family CONIDAE

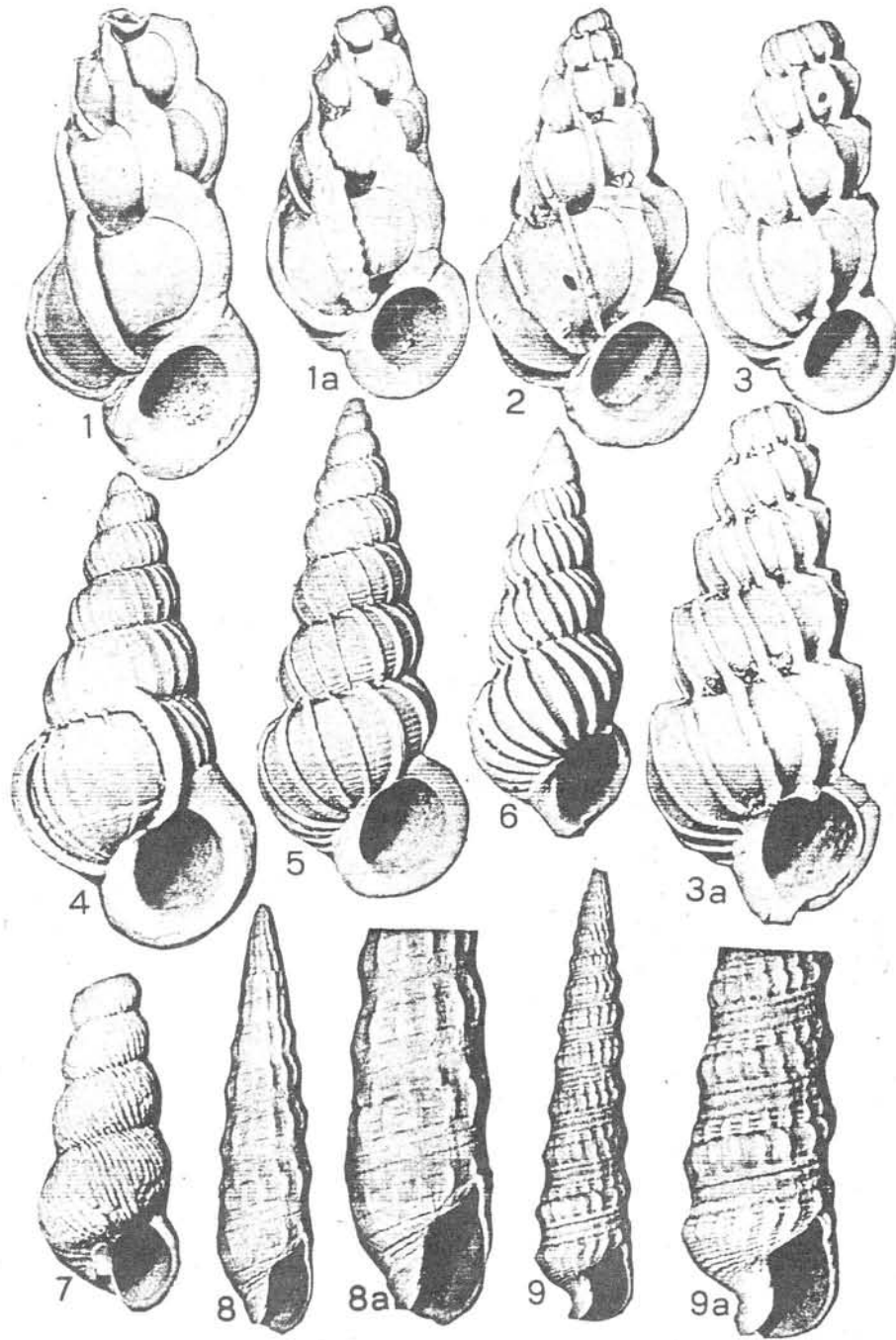
Genus *CONUS* Linné, 1758

Type by subsequent designation, Children, 1823: *Conus marmoreus* Linné. Recent, Indo-Pacific.

Shell cone-shaped or pyriform, the body-whorl large, its sides sloping in towards the end of the anterior canal, with an angled or rounded shoulder opposite the posterior end of the aperture. Spire low or high. Aperture long, generally narrow, the outer lip thin and sharp, unthickened, straight or curving towards the shoulder angle. Pillar may be straight or a little twisted, with a straight or slightly recurved siphonal canal. The surface of the whorl between the shoulder and the suture may be flat, slightly convex or deeply excavated, with the posterior sinus shallow or deep and reflected in the extent of the sinuosity of the lines of growth. Surface completely smooth or with spiral threads or cords in variable development in different

PLATE 58

- Fig. 1. *Epitonium helikum* new species p. 335.
Holotype, length 23.8 mm. St. Petersburg, ANSP 19079.
- Fig. 1a. *Epitonium helikum* new species p. 335.
Paratype, length 19.1 mm. St. Petersburg, ANSP 19079.
- Fig. 2. *Epitonium* cf. *foliaceicostum* (d'Orbigny) p. 336.
Length 11.2 mm. St. Petersburg, ANSP 19080.
- Fig. 3. *Epitonium fargoii* new species p. 337.
Paratype, length 9.7 mm. St. Petersburg, ANSP 18890.
- Fig. 3a. *Epitonium fargoii* new species p. 337.
Holotype, length 13 mm. St. Petersburg, ANSP 18890.
- Fig. 4. *Clathrus (Pictoscala) rupicolum* (Kurtz) p. 338.
Length 11.2 mm. St. Petersburg, ANSP 18891.
- Fig. 5. *Clathrus (Cinctiscala) antillarum* (de Boury) p. 337.
Length 12.7 mm. St. Petersburg, ANSP 18892.
- Fig. 6. *Clathrus obtusum* new species p. 338.
Holotype, length 5 mm. St. Petersburg, ANSP 19322.
- Fig. 7. *Clathrus junceum* (Gardner) p. 337.
Length of imperfect shell 3.5 mm. St. Petersburg, ANSP 19113.
- ✓ Figs. 8, 8a. *Terebra (Strioterebrum) vertebralis* new species p. 169.
Holotype, length 13.7 mm. St. Petersburg, ANSP 18883; fig. 8a enlarged view of same specimen.
- ✓ Figs. 9, 9a. *Terebra (Strioterebrum) concava* (Say) p. 168.
Length 22.4 mm. St. Petersburg, ANSP 18882; fig. 9a, enlarged view of same specimen.



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