

FIG. 1, *Ocenebra minirosea* Abbott, holotype. FIG. 2, *Ocenebra muricoides* C. B. Adams [holotype of *Tritonalia caribbaea* Bartsch and Rehder]. FIG. 3, *Ocenebra empoulusi* Abbott, holotype. FIG. 4, *Terebra arcas* Abbott, holotype. FIGS. 5-6, *Terebra floridana stegeri* Abbott, (fig. 5) paratype; (fig. 6), holotype. FIG. 7, *T. floridana* Dall (off Sambo Reef, Fla.).



THE NAUTILUS

Vol. 68

OCTOBER, 1954

No. 2

NEW GULF OF MEXICO GASTROPODS (TEREBRA AND OCENEBRA)*

By R. TUCKER ABBOTT

Associate Curator, Division of Mollusks, U. S. National Museum

The Gulf of Mexico is still relatively unexplored for mollusks, and despite the occasional acquisition of new forms from shrimp fishermen, the subfaunal regions and subspeciation problems are as yet poorly understood. As more specimens from new localities appear, the morphological boundaries between some species become less pronounced, especially in such families as the Muricidae (*M. beau* versus *branchi*), Conidae (*C. clarki* versus *C. frisbeyae*) and the Volutidae.

During the past several years, we have had an attractive and unknown *Terebra* sent for identification by several private collectors. The unusually fine series submitted by Barbara and Dan Steger of Tampa, Florida, has prompted us to describe what we believe is a new subspecies of *Terebra floridana* Dall. The shells are quite variable in color, sculpture and proportions, but despite the obvious differences seen in the most divergent specimens, there is sufficient overlap of characters to consider it only as a subspecies. Typical *T. floridana* is known from 5 to 118 fathoms of water along the east coast from South Carolina to Key West, Florida; the subspecies described here is known from the region north of Campeche Banks, Yucatan Peninsula, Mexico.

Dall originally described *floridana* in very meager terms.

* Published by permission of the Secretary of the Smithsonian Institution.

Therefore, we are giving a fuller description and some additional records.

TEREBRA (MYURELLA) FLORIDANA Dall. Pl. 2, fig. 7

Terebra (Subula) floridana Dall 1889, Bull. Mus. Comp. Zool., vol. 18, pt. 2 ("Blake Report"), p. 63; 1902, Proc. U. S. Nat. Mus., vol. 24, no. 1264, p. 503, pl. 29, fig. 9; 1903, reprint of Bull. 37, U. S. Nat. Mus., pl. 75, fig. 9.

Description.—Shell from 50 to 75 mm. (2 to 3 inches) in length, very slender, its width being about $\frac{1}{4}$ of its length; with 24 to 30 whorls; angle of spire about 10° ; color a semi-glossy, uniform, pale lemon-yellow to yellowish white; 2 nuclear whorls smooth, opaque-white, the last being slightly larger than the first postnuclear whorl. Sculpture between sutures consists of two spiral rows of short, retractively slanting axial riblets which occupy the upper two-thirds of the whorl. The ribs in the upper row (immediately below the suture) are twice as long as those in the lower row. The lower one-third area of the whorl is concave, usually smoothish, but may have very weak, protractively slanting riblets or growth lines or bear three to six weak, spiral threads or incised lines. Outer lip with a fairly strong sinuation at the periphery of the whorl. Siphonal canal fairly short and slightly twisted to the left. Columella with two very weak folds, the upper one being almost obsolete. Operculum horny, translucent-brown, quadrate unguate.

This species is characterized by its long, slender, yellowish shell and relatively straight siphonal canal. It belongs to the subgenus *Myurella* Hinds 1845.

Records.—SOUTH CAROLINA: 63 miles S.E. of Charleston, 45 fms., *Pelican* station 195-7. FLORIDA: just off Grecian shoals, east side of Key Largo, 56 fms., coral sand bottom, April 9, 1886, *Albatross* station 2640 (holotype, U.S.N.M. 87222); about 6 mi. due south of Key West, 45 fms., coral bottom, bottom temp. 75° F, Jan. 15, 1885, *Albatross* station 2318 (paratype, U.S.N.M. 93678); $2\frac{1}{2}$ mi. off Fowey Rocks, 36 fms., sand, bottom temp. 74° F, Mar. 30, 1903, *Fish Hawk* station 7517; off Sambo Reef, 118 fms., 1916, *Eolis* station 331; off Miami, 5 fms., 20 fms., 25 fms., 30 fms., 40 fms., all *Eolis* stations.

TEREBRA (MYURELLA) FLORIDANA STEGERI n. subsp.

Pl. 2, figs. 5-6

Description.—Shell 50 to 80 mm. (2 to 3 inches) in length, moderately slender, its width being about $\frac{1}{5}$ of its length. Similar to *floridana*, but differing in being stouter, in ranging in color from bright-orange, lemon-yellow to waxy white, in having the siphonal canal considerably more twisted to the left, in having weaker and more numerous axial riblets which increase in number in later whorls, and in lacking the upper fold on the columella in nearly every specimen. Operculum like that of *floridana*.

Length	Width	No. Whorls	
68.0 mm.	13.0 mm.	23	Holotype, U.S.N.M. No. 613884
69.0 mm.	11.5 mm.	25	Paratype, U.S.N.M. No. 613885
66.0 mm.	15.0 mm.	+18	Paratype, U.S.N.M. No. 605184

Types.—The holotype (613884) and seven paratypes (613885) are in the U.S.N.M. Two specimens from the Campeche Banks were kindly donated by Mr. and Mrs. Jack N. Sennott. Eleven paratypes were returned to Barbara and Dan Steger, after whom this subspecies is named, and one is in the Acad. Nat. Sci. Phila. No. 191709.

Type locality.—50 miles west of Campeche, Yucatan Peninsula, Mexico, in 12 fathoms. Collected in 1953 by the Stegers' shrimp boat, the "Sea Hag."

Remarks.—There is a superficial resemblance between *stegeri* and *T. taurina* Solander (formerly *flammea* Lamarck), particularly in the early whorls. However, the much larger *taurina* differs in having a longer and straighter siphonal canal, in being spotted with color, and in having nearly twice as many, much finer, axial riblets that extend from suture to suture. The degree of slant of the riblets is about 40° off the axis of the shell in *taurina*, and about 10° in *stegeri*.

The axial riblets are coarser, larger and fewer in number in *stegeri* than those in *floridana*. In the last whorl, *stegeri* has from 28 to 39, while the latter has from 17 to 23 (rarely up to 26). The angle of spire is more variable in *stegeri*, ranging from 14° to 10° with a mean of 13° , while in *floridana* the range is from 11° to 8° with a mean of 10° . Although these differences

are mathematically small, the resulting obesity of these long shells is quite different to the eye.

We have a single specimen 55 mm. in length which has all the characters of *floridana*, except that it has numerous, brownish color flammules and weaker subsutural riblets. It was dredged in 36 fathoms by the Fish and Wildlife boat, "Pelican," 44 miles southwest of Pensacola, Escambia County, Florida (U.S. N.M. 485734). Until other specimens are collected, we refrain from naming what may be either a color form or possibly a hybrid between *floridana* and *taurina* Solander.

TEREBRA (STRIOTEREBRUM) ARCAS n. sp. Pl. 2, fig. 4

Description.—Shell 15 to 27 mm. (1 inch) in length, moderately slender, its width being about $\frac{1}{4}$ of its length; semi-glossy, usually opaque-white, but may be blushed, particularly on the early whorls, with light yellowish orange; rarely with one wide spiral band of orange; $1\frac{1}{2}$ nuclear whorls smooth, glossy, transparent and clear or tan-orange. Suture sharply impressed and wavy. Whorls convex. Axial ribs strong, smooth, moderately arched and extending uninterrupted from suture to suture; 12 to 16 ribs per whorl, with the interstices concave and with rounded sides. Spiral sculpture consists of 5 to 7 sharply incised lines which are absent or weak in the first few whorls, but become increasing strong in later whorls. Only the uppermost and strongest incised line crosses the crest of the axial ribs in some specimens. Last whorl and base well-rounded and with a total of about 16 incised spiral lines. Lower half of outer lip slightly advancing. Siphonal canal relatively large and only slightly twisted. Siphonal fasciole bordered above by a small, sharp thread. Columella with one weak, spiral fold at the base.

Length	Width	No. whorls	
27.0 mm.	7.0 mm.	15	Holotype, U.S.N.M. No. 613882
24.5 mm.	4.5 mm.	12	Paratype, Steger Collection
7.0 mm.	2.3 mm.	8	Paratype, U.S.N.M. No. 613883

Types.—Twenty-one paratypes were returned to the Steger collection in Tampa, Florida; one is in the Acad. Nat. Sci. Phila., No. 191712, and 8 are in the U. S. National Museum, No. 613883, including the holotype, U.S.N.M. No. 613882.

Type locality.—East of Arcas Cays, southern Campeche Bank, Mexico, 23 to 24 fathoms. 1953. Shrimpboat, "Sea Hag."

The type lot is apparently a mixture of the above locality and two others: 35 miles E.N.E. of Arcas Cays, 17 fathoms; and 25 miles N.N.W. of Arcas Cays, sandy mud, 26 fathoms. I suspect that the 14 young specimens, which show little spiral sculpturing, come from one locality, and that the two orange-banded specimens are from another locality.

Remarks.—In morphological characters, *Terebra arcas* is closest to *T. glossema* Schwengel 1940 and 1942 (see NAUTILUS, vol. 53, pl. 12 and vol. 56, p. 65, pl. 6). The latter was recorded from off Pelican Shoal, Florida Keys, and the National Museum now has specimens from 1 to 3 fathoms from Cardenas Bay, Cuba, collected by the Tomas Barrera Expedition. *T. glossema* differs in having more and less arching axial ribs (27 on the last whorl) and in having much flatter-sided whorls. Both of these species (or subspecies) somewhat resemble *T. nassula* Dall from the West Indies and the shallow-water *T. protezta* Conrad of southeast United States.

OCENEBRA (OCINERRINA) EMIPOWLUSI n. sp. Pl. 2, fig. 3

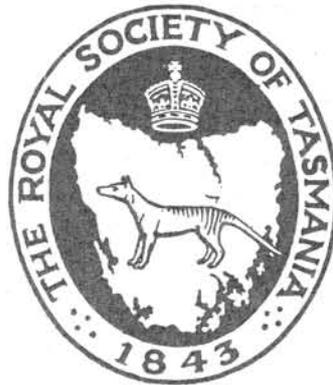
Shell.—Small, from 7 to 8 mm. in length, broadly fusiform, and somewhat resembling a *Favartia*; color white throughout; $3\frac{1}{2}$ post-nuclear whorls; last whorl with 6 rounded axial, varix-like ribs; penultimate whorl with 7 to 8 similar ribs; the spiral sculpture consists of strongly raised, squarish, slightly fimbriated cords of which there are 17 to 20 on the last whorl, and 4 to 7 showing on the apical whorls. The one nuclear whorl is pronounced, glossy-white and bearing on the first half turn a strong, smooth spiral, carina, which gives the nucleus an obliquely carinate appearance; last half or third of nucleus without the carina, and succeeded abruptly by the well-sculptured post-nuclear whorls. Aperture oval, almost complete and somewhat spout-like, with a thin, sharp inner and outer lip. No anal fasciole present. Inside of outer lip with 5 or 6 weak, elongate, glossy-white teeth of spiral origin. Outer lip slightly crenulate. Siphonal canal well developed, and almost closed along its length, except for a narrow slit. To its left are the ends of 3 or 4

PAPERS AND PROCEEDINGS

OF

The Royal Society
of Tasmania

Volume 89



Edited by William Bryden

PUBLISHED BY THE SOCIETY
The Tasmanian Museum and Art Gallery, Hobart

1955.

A Systematic List of the Mollusca of Tasmania, Australia

By

RONALD C. KERSHAW

Launceston, Tasmania

ABSTRACT

This "List" offers an up-to-date revision of Tasmanian Molluscan systematics. The aim in preparation has been to take advantage, as far as possible, of all the research done since the "Checklist" of W. L. May (1921), and to include every mollusc at present known from Tasmania. The list is designed to be used in conjunction with the "Illustrated Index" of W. L. May (1923). A new sub-genus, *Hisseya-gibbula* nov. with type *Littorina hisseyana* Tenison Woods 1876 is introduced, and new names have been provided for shells apparently wrongly named in the "Index". These are *Ethminolia mayi* sp. nov. and *Zalipais laseroni* sp. nov.

INTRODUCTION

During the thirty years which have elapsed since the publication of the "Checklist" and "Illustrated Index" by W. L. May (1921-1923) a considerable transformation has taken place in molluscan systematics. The study of the molluscan radula or "lingual ribbon" has provided the basis for Professor Thiele's "Handbuch" (1931) setting out the systematic arrangement now in general use. The recent remarkable book "Australian Shells" by the noted conchologist Miss Joyce Allan (1950) reveals the extent of the revision undertaken by Australian workers since the publication of Mr. May's memorable and pioneering "Index". Although the "Checklist" has become obsolete, it remains a useful reference work, while Mr. May's "Illustrated Index" will continue to provide the only work of its kind, a fitting monument to the memory of Tasmania's greatest conchologist.

The recent and very considerable contribution to the study of intertidal ecology in Tasmania by Dr. Eric Guiler, (1950, et seq.) reveals the need for further study of the mollusca in Tasmania, notably in the problems of correct nomenclature. The present list it is hoped, will further aid students of ecology through the difficult maze of molluscan systematics and the identification of species. Affinity of the Tasmanian Mollusca.

A relationship with the molluscan fauna of New South Wales has long been recognised. Recent workers have tended to place this relationship on a generic footing, although specific associations still exist amongst the fauna of the Continental Shelf of the East Coast. Similar remarks may be made concerning relationship with South Australia, while recog-

972. *esperanza* May 1911 (*Hemipleurotoma*) (715, pl. 34, f. 19)
 973. *sculptilis* Angas 1871 (*Clathurella*) (763, pl. 36, f. 22)
 974. *tasmanica* Tenison Woods 1877 (*Daphnella*) (759, pl. 36, f. 14)
Aspertilla Powell 1944 (*legrandi* Beddome)
 975. *legrandi* Beddome 1883 (*Drillia*) (757, pl. 36, f. 13)
Exomilus Hedley 1913 (*lutaria* Hedley)
 976. *cancellatus* Beddome 1882 (*Mangelia*) (733, pl. 35, f. 13)
 977. *dyscritus* Verco 1906 (*Terebra*) (764, pl. 36, f. 23)
 978. *pentagonalis* Verco 1896 (*Drillia*) (734, pl. 35, f. 14)
 979. *spica* Hedley 1907 (*Mangelia*) (765, pl. 36, f. 24)
Gatliffena Iredale 1929 (*fenestrata* Tate and May)
 980. *fenestrata* Tate and May 1900 (*Donovania*) (842, pl. 39, f. 25)
Nepotilla Hedley 1918 (*bathentoma* Verco)
 981. *bathentoma* Verco 1909 (*Daphnella*) (752, pl. 36, f. 8)
 982. *aculeata* May 1915 (*Taranis*) (751, pl. 36, f. 7)
 983. *diaphana* May 1919 (753, pl. 36, f. 9)
 984. *edwini* Brazier 1894 (*Pleurotoma*) (754, pl. 36, f. 10)
 985. *excavata* Gatliff 1906 (*Daphnella*) (755, pl. 36, f. 11)
 986. *fenestrata* Verco 1909 (*Daphnella*) (750, pl. 36, f. 6)
 987. *lamellosa* Sowerby 1896 (*Clathurella*) (756, pl. 36, f. 12)
 988. *microscopica* May 1915 (*Taranis*) (758, pl. 36, f. 18)
 989. *minuta* Tenison Woods 1877 (*Drillia*) (pl. 36, f. 16)
 990. *mimica* Sowerby 1896 (*Daphnella*) (pl. 36, f. 17)
 991. *triseriata* Verco 1909 (*Daphnella*) (760, pl. 36, f. 15)
Pseudodaphnella Boettger 1895 (*philippensis* Reeve)
 992. *nodorete* May 1915 (*Clathurella*) (746, pl. 36, f. 2)
 993. *mayana* Hedley 1923 (pl. 36, f. 1)
Benthofascus Iredale 1936 (*biconica* Hedley)
 994. *sarcinula* Hedley 1905 (*Bathytoma*)

Family: Conidae

- Floraconus* Iredale 1930 (*anemone* Lamarck)
 995. *anemone* Lamarck 1810 (*Conus*) (711, pl. 34, f. 16)
 996. *peronianus* Iredale 1931
Parviconus Cotton and Godfrey 1932 (*rutilis* Menke)
 997. *rutilis* Menke 1842 (*Conus*) (712, pl. 34, f. 15)

Family: Terebridae

- Terebra* Bruguiere (*subulata* Linne)
 998. *lauretanae* Tenison Woods 1877 (708, pl. 34, f. 12)
Pervicacia Iredale 1924 (*ustulata* Deshayes)
 999. *ustulata* Deshayes 1857 (*Terebra*) (709, pl. 34, f. 14)
 1000. *kieneri* Deshayes 1859 (*Terebra*)
 1001. *bicolor* Angas 1867 (*Acus*) (705, pl. 34, f. 9)
Nototerebra Cotton 1947 (*albida* Gray)
 1002. *albida* Gray 1834 (*Terebra*) (704, pl. 34, f. 8)
Acuminia Dall 1908 (*lanceata* Linne)
 1003. *brazieri* Angas 1871 (*Terebra*) (706, pl. 34, f. 10)
Parviterebra Pilsbry 1904 (*paucivolvis* Pilsbry)
 1004. *brazieri* Angas 1875 (*Eurypta*) (710, pl. 34, f. 13)
Euterebra Cotton and Godfrey 1932 (*inconspicua* Pritchard and Gatliff)
 1005. *inconspicua* Pritchard and Gatliff 1902 (*Terebra*) (707, pl. 34, f. 11)

Sub-class: Euthyneura

Order: OPISTHOBRANCHIA

Sub-order: Pleurocoela

Section: *Bullomorpha*

Super-family: CEPHALASPIDEA

Family: Acteonidae

- Actaeon* Montfort 1810 (*tornatilis* Linne)
 1006. *retusus* Verco 1907 (946, pl. 44, f. 1)
Bullina Ferussac 1822 (*ziczac* Muhlfieldt)
 1006a. *ziczac* Muhlfieldt 1818 (*Voluta*) (1026, pl. 46, f. 20)

972. *esperanza* May 1911 (*Hemipleurotoma*) (715, pl. 34, f. 19)
 973. *sculptilis* Angas 1871 (*Clathurella*) (763, pl. 36, f. 22)
 974. *tasmanica* Tenison Woods 1877 (*Daphnella*) (759, pl. 36, f. 14)
Aspertilla Powell 1944 (*legrandi* Beddome)
 975. *legrandi* Beddome 1883 (*Drillia*) (757, pl. 36, f. 13)
Exomilus Hedley 1913 (*lutaria* Hedley)
 976. *cancellatus* Beddome 1882 (*Mangelia*) (733, pl. 35, f. 13)
 977. *dyscritus* Verco 1906 (*Terebra*) (764, pl. 36, f. 23)
 978. *pentagonalis* Verco 1896 (*Drillia*) (734, pl. 35, f. 14)
 979. *spica* Hedley 1907 (*Mangelia*) (765, pl. 36, f. 24)
Gatliffena Iredale 1929 (*fenestrata* Tate and May)
 980. *fenestrata* Tate and May 1900 (*Donovania*) (842, pl. 39, f. 25)
Nepotilla Hedley 1918 (*bathentoma* Verco)
 981. *bathentoma* Verco 1909 (*Daphnella*) (752, pl. 36, f. 8)
 982. *aculeata* May 1915 (*Taranis*) (751, pl. 36, f. 7)
 983. *diaphana* May 1919 (753, pl. 36, f. 9)
 984. *edwini* Brazier 1894 (*Pleurotoma*) (754, pl. 36, f. 10)
 985. *excavata* Gatliff 1906 (*Daphnella*) (755, pl. 36, f. 11)
 986. *fenestrata* Verco 1909 (*Daphnella*) (750, pl. 36, f. 6)
 987. *lamellosa* Sowerby 1896 (*Clathurella*) (756, pl. 36, f. 12)
 988. *microscopica* May 1915 (*Taranis*) (758, pl. 36, f. 18)
 989. *minuta* Tenison Woods 1877 (*Drillia*) (pl. 36, f. 16)
 990. *mimica* Sowerby 1896 (*Daphnella*) (pl. 36, f. 17)
 991. *triseriata* Verco 1909 (*Daphnella*) (760, pl. 36, f. 15)
Pseudodaphnella Boettger 1895 (*philippensis* Reeve)
 992. *nodorete* May 1915 (*Clathurella*) (746, pl. 36, f. 2)
 993. *mayana* Hedley 1923 (pl. 36, f. 1)
Benthofascus Iredale 1936 (*biconica* Hedley)
 994. *sarcinula* Hedley 1905 (*Bathytoma*)

Family: Conidae

- Floraconus* Iredale 1930 (*anemone* Lamarck)
 995. *anemone* Lamarck 1810 (*Conus*) (711, pl. 34, f. 16)
 996. *peronianus* Iredale 1931
Parviconus Cotton and Godfrey 1932 (*rutilis* Menke)
 997. *rutilis* Menke 1842 (*Conus*) (712, pl. 34, f. 15)

Family: Terebridae

- Terebra* Bruguiere (*subulata* Linne)
 998. *lauretanae* Tenison Woods 1877 (708, pl. 34, f. 12)
Pervicacia Iredale 1924 (*ustulata* Deshayes)
 999. *ustulata* Deshayes 1857 (*Terebra*) (709, pl. 34, f. 14)
 1000. *kieneri* Deshayes 1859 (*Terebra*)
 1001. *bicolor* Angas 1867 (*Acus*) (705, pl. 34, f. 9)
Nototerebra Cotton 1947 (*albida* Gray)
 1002. *albida* Gray 1834 (*Terebra*) (704, pl. 34, f. 8)
Acuminia Dall 1908 (*lanceata* Linne)
 1003. *brazieri* Angas 1871 (*Terebra*) (706, pl. 34, f. 10)
Parviterebra Pilsbry 1904 (*paucivolvis* Pilsbry)
 1004. *brazieri* Angas 1875 (*Eurypta*) (710, pl. 34, f. 13)
Euterebra Cotton and Godfrey 1932 (*inconspicua* Pritchard and Gatliff)
 1005. *inconspicua* Pritchard and Gatliff 1902 (*Terebra*) (707, pl. 34, f. 11)

Sub-class: Euthyneura

Order: OPISTHOBRANCHIA

Sub-order: Pleurocoela

Section: *Bullomorpha*

Super-family: CEPHALASPIDEA

Family: Acteonidae

- Actaeon* Montfort 1810 (*tornatilis* Linne)
 1006. *retusus* Verco 1907 (946, pl. 44, f. 1)
Bullina Ferussac 1822 (*ziczac* Muhlfieldt)
 1006a. *ziczac* Muhlfieldt 1818 (*Voluta*) (1026, pl. 46, f. 20)