

Mr. A. DaCosta Gomez has called our attention to several New Caledonian examples of *Cypræa tigris* L. in his collection which show a rostration like the New Caledonian forms mentioned above, together with others diversely modified; and as such forms have not, to our knowledge, been noticed in this species, we have figured four of them on plates vii and viii, the two plates representing different views of the same specimens.

I. The upper left hand figures show a shell having a broad chestnut dorsal streak, the rest of the back being clouded with chestnut, light blue and dull pale brown. On the margins may be seen the characteristic dappled coloring of *tigris*. The base is normally colored. At the anterior end there are large callous lumps. The posterior end is also a little produced. Length 83 mm.

II. Upper right figures. This shell is broad and very heavy (weighing  $7\frac{1}{8}$  ounces). The dorsal streak is interrupted, chestnut, partially overlaid with bluish callus. Elsewhere it is a soiled cream-white, obscurely and irregularly mottled. The base is stained with yellow around the mouth. The sides are very heavily calloused and lumpy. Length 90 mm.

III. Lower left figures. This shell is heavily calloused and produced at the ends and on the right margin. The spotted *tigris* pattern appears on the other side, but is covered by a dark enamel in the middle of the back. Base white, with some yellowish suffusion in places. Length 98 mm. This shell is characteristically New Caledonian in appearance.

IV. Lower right figures. A broad form, heavily calloused at the sides. The dorsal streak is dark purplish-brown; remainder of the back bluish-white, irregularly mottled and spotted with orange-brown and purple-brown, ends blackish. The base and teeth are brownish-yellow except for a pure white area on the inner lip. Length 85 mm.

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#### ESSEX COUNTY NOTES.

BY REV. HENRY W. WINKLEY.

My last article was an urgent invitation to fellow-laborers to inspect mud. We may now view some results of the inspection.

Just south of Cape Ann, Mass., is a bay with many branches, forming harbors for Marblehead, Salem, Beverly and Danvers. The

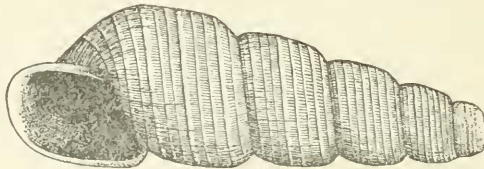
inner waters, *i. e.*, at Danvers, seemed to be favorable for a colony of the forms which are common south of Cape Cod, but local and in sheltered places north of that cape. Only a partial examination has been made, but results are interesting. One mud flat of small area, and uncovered at low tide, was swarming with life. Literally I obtained quarts of *Gemma gemma*. With these were other species more or less abundant. *Columbella*, *Ilyanassa*, *Polinices* and such forms are expected and were found as usual. *Odostomia* revealed *trifida*, *bisuturalis*, *winkleyi* and a new species described below. I was able to secure here a living specimen of the disputed *fusca*, and observe the animal. Unlike some of this group, that are said to be timid in captivity, *fusca* was very active. Bulletin 37 of the U. S. Natl. Mus., plate xxvi, figs. 1 and 2, are labeled animal of *Turbonilla interrupta*. Slight changes would make the drawing for *fusca*. The plate gives the front of the foot in four lobes; for *fusca* it should be a continuous curve. From the plate one would infer that the mentum was of two flaps, one overlapping the other. In *fusca* this would not be correct, but a deep groove runs along the median line. The front of the mentum is a double curve, and its end is held close to the surface ahead of the foot in crawling, as if it was feeling the way. Eye spots are easily seen at the bases of the tentacles. The animal is semi-transparent, with parts a deep maroon. The tentacles are slender and held close to the mentum.

The above-named species were found at the headwaters, but no evidence of *Turbonilla*, as I had hoped. Rowing down river I smelt them, and came back for my dredge. A dozen specimens of *T. winkleyi* were found, good size, but badly eroded. In other parts of the Danvers River *Venus mercenaria*, *Astarte nucula* and some other forms occur, but I postpone exact lists until more work can be done. One unusual find was a solitary specimen of *Bela bicarinata* var. *violacea* on a mud flat between tides.

Later work was done at Salem. The inner harbor revealed the last-named species, with beautiful violet coloring, especially when wet. Salem harbor is practically all mud bottom. *Polinices*, *Nucula*, *Yoldia*, *Crenella*, *Periploma*, *Lyonsia*, *Tellina*, *Nassa*, *Bela*, *Retusa*, etc., are obtained at moderate depths. Shore collecting revealed the usual species, with some things worth noting. *Acmaea testudinalis* is very small and *alveus* scarce. At one small cove at low tide, with eel grass, I found another colony of *Turbonilla winkleyi*.

Passing to the outer harbor there is a slight change. More species of *Bela*, for example. Here I met a surprise in finding a third colony of *Turbonilla*. As the outer harbor is practically open sea, the occurrence is unusual. In fact the only locality known to me north of Cape Cod where that form occurs save in inner waters. So much ground remains to be examined that this report must be imperfect, yet the area covered showed *Astarte* very scarce. *Thyasira* lacking, and some other forms expected did not appear. I am told that there are small beds of them in places not yet dredged.

A few years ago the writer was stationed near New Haven. At that time I received much help from Dr. Bush, and together we examined many specimens of *Turbonilla*, *Odostomia*, *Bela* and other genera. It is my desire to recognize my high appreciation for her kind help by naming the following species for her. I am confronted with the fact that one *Odostomia* already bears her name. Not to be defeated in my purpose, I will use her first name, and am sure she will pardon me this time.



*Odostomia (Evalina) katherinae*, new species.

Shell much smaller than *O. (E.) winkleyi*, bluish-white, semi-translucent. Nuclear whorls deeply obliquely immersed in the first of the succeeding turns, above which the tilted edge of the last volution only projects. Post-nuclear whorls well rounded, with a very strong beveled shoulder, marked by many very slender axial threads and a number of fine spiral lirations, of which one is at the angle of the shoulder, one on the shoulder a little nearer the suture than the angle; one forms the weak peripheral angle, and six others divide the space between the peripheral angle and the angle at the shoulder into subequal spaces. Sutures strongly constricted. Base short, well rounded, marked by spiral threads, of which the second one below the periphery is as strong as the peripheral one, the other four being of equal strength; the two basal ones dividing the space be-

tween the umbilical area and the stronger thread into three equal parts. Aperture very broadly oval, posterior angle very obtuse; outer lip thin, showing the external sculpture within; columella very slender, slightly twisted and very slightly revolute, provided with a very weak fold, which is scarcely discernible in the aperture, but becomes apparent when the pillar is exposed by grinding; parietal wall glazed with a light callus.

Specimens were found in the Danvers River, on a mud flat between tides, most of which are in the Winkley collection, and seven in the U. S. National Museum, cat. No. 208067. The one figured has  $5\frac{1}{2}$  whorls and measures, length 2.15 mm., diameter 0.8 mm.

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#### NEW HELICINA AND STROBILOPS FROM FLORIDA.

BY H. A. PILSBRY.

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Several years ago Mr. G. H. Clapp called my attention to a form of *Helicina* differing in several respects from *H. orbiculata* Say, the specimens having been received from Mr. C. T. Simpson, who collected them at Lemon City, Florida. At about the same time Mr. Vanatta encountered the form in material from Lee Co., Fla., collected by Mr. C. B. Moore. He subsequently published a list of these shells (NAUTILUS for January, 1908, pp. 99-104), mentioning the form in question as *Helicina orbiculata* var. *clappi* Pils. MSS. No description has been published.

*Helicina orbiculata* was described from the mouth of the St. John's River. The types, four specimens, are still preserved with Say's label. They are globose, very pale greenish-white, and measure from alt. 6, diam. 6.8 mm., to alt. 6.3, diam. 7.7 mm. There is a distinct tooth at the junction of the columellar and basal lips. The periphery is well rounded.

In the St. John's River valley, away from the coast, and where calcareous material is almost wanting in the soil, there is a small race of *orbiculata*, measuring, alt. 5.5, diam. 6.8 mm., to alt. 4.5, diam. 5.1 mm.

*H. orbiculata* extends from Florida and Georgia west to Tennessee and western Louisiana. West and southwest of this it is entirely replaced by *H. orbiculata tropica* 'Jan.' Pfr., distinguished by its heavier shell and very thick lip.