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MELONGENA CORONA AND ITS RACES

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Melongena corona is one of the commonest large shells of the Gulf coast of Florida, everywhere variable, but at the same time readily divisible into several fairly recognizable racial strains, which though doubtless well known to shell collectors, do not seem to be adequately noticed in the books.

In its several races *M. corona* ranges from the Indian River region on the east coast around the keys and up the west coast somewhat further. We have not seen it from the northern shores of the Gulf. It was reported from Texas and Guadeloupe by Dall, but no definite place in Texas was mentioned, and the Guadeloupe record certainly needs confirmation. There is, we believe, no authentic West Indian record. Frank C. Baker recorded specimens collected by him in Yucatan (Proc. A. N. S. Phila., 1891, p. 50), but these belong to a strongly marked subspecies. For a large shallow water shell the distributional data seem remarkably incomplete, and we will be glad to have further records, accompanied by specimens when possible, showing the limits of the species on the Atlantic coast and in the Gulf. Does it occur on the coast from Alabama to Texas?

Joseph Willcox wrote of its feeding habits in NAUTILUS 10:27, 1896.

MELONGENA CORONA (Gmelin). Pl. 12, figs. 3, 4.

Gmelin's species was based on figures in Chemnitz which represent the common form with erect (that is, backward pointing) or incurved spines at the shoulder. It was the form without a basal circle of spines (pl. 12, fig. 4); but

this varies individually, and these anterior spines may be either present (pl. 12, fig. 3) or wanting among shells of most colonies. The name *Melongena belknapi* Petit de la Saussaye (Journ. de Conch., vol. 3, p. 65, pl. 2, fig. 5, 1852) was proposed for the form exactly like the type but with a basal circle of spines. It seems to have no racial value. The spines at the shoulder are either erect or incurved typically, but sometimes they flare outward more or less. An anterior series of spines is often present in the quite distinct but related species *Melongena melongena* (L.), and therefore it may be assumed that this character was present in the ancestral stock of *M. corona*. In *subcoronata* and its derivative *perspinosa* these spines are strong and constantly developed, but in the typical *corona*, a more evolved stock, they are a decadent structure, being as often absent as present.

Fusus bicolor Say (Journ. A. N. S. Phila., vol. 5, p. 215, 1826) is a very young *corona* 12 mm. long, according to the type, No. 34276 A.N.S.P. At this stage no spines are developed. The ordinary length of *M. corona* is 75 to 125 mm. (3 to 5 inches), but we have seen it up to 190 mm. It is very abundant on the west coast of Florida.

Several varieties which at present we regard as ecologic forms and not true races have been described, as follows:

M. corona form *inspinata* Richards, pl. 6, fig. 1 (NAUTILUS, Oct., 1933, p. 57), differs by being thinner with the shoulder narrowly rounded, without spines; the basal series of spines developed on the last half turn; size as in *corona*. We have seen two specimens, the type and a paratype which we owe to Mr. T. Van Hyning. Though two localities, "near Sarasota" and "Palma Sola," were given, there is every reason to believe that they are out of the same lot. Both were procured from Mr. J. H. Holmes, and were collected by the late Mr. Chas. B. Lungren of Ozona, Fla., who wrote as follows: "I collected the spineless *Melongena corona* some years ago for Mr. Holmes. I was at Bishop's Harbor on the south side of Tampa Bay, near the Manatee County line. There are some small sloughs at

the head of the harbor draining small ponds which are salt water in dry weather but very dirty reddish brackish water in the rainy season. I collected the *Melongena* in what I consider the freshest water they could live in, but the shells were of large size and fine color, very thin and without spines. The locality is near Terra Ceia."

M. corona form *minor* (Sowerby), pl. 12, fig. 6 (*Hemifusus corona* var. *minor* Sowb., Proc. Zool. Soc. London, 1878, p. 798, pl. 48, fig. 13, Key West) is the dwarf form, 50 mm. long, more or less, which inhabits protected mud flats, often in great profusion. It has otherwise exactly the structure of typical *corona*, and like that, may have a few spines in a basal circle, or spines at the shoulder only. It is apparently an ecologic form, often found constant in the small size, but in other places running up to the size of small *corona* proper. It occurs on the west coast at least as far up as typical *corona*, on the keys, and up the east coast, more or less typically developed, to Indian River, where it sometimes shows a tendency to be longer, approaching the following form.

M. corona form *altispira*, n. f., pl. 12, fig. 5. An extremely long, narrow form from Oceanus, Brevard Co., near the northern limit of the species on the east coast. The diameter is about half the length or less. The spines are as in *corona*, erect or suberect at shoulder, few or wanting in the basal series. Two measure: length 71 mm., diam. 31 mm., aperture 42 mm., and 60 x 29 mm.

MELONGENA CORONA SUBCORONATA (Heilprin). Pl. 12, fig. 2.

Trans. Wagner Free Inst. Sci., vol. 1, p. 70, pl. 1, fig. 3, 1887.

The shell is wider and shorter than *M. corona*, with strong shoulder-spines projecting at right angles and always strong spines in a basal series. This is the form of the Caloosahatchie Pliocene, but we have typical specimens marked "Post-pliocene, Little Sarasota Bay" collected by Jos. Willcox, one of which is figured. The assigned age should be checked up if the deposit worked by Willcox can be found. Heilprin and Dall considered *subcoronata* specific-

ally distinct from *corona*, and perhaps it is; but for the present we leave it in this connection.

A strongly marked form from the Caloosahatchie Pliocene has been named var. *aspinosa* Dall. It usually has much stronger axial sculpture than Dall's figure shows.

MELONGENA CORONA PERSPINOSA, n. subsp. Pl. 12, fig. 1.

Large, heavy, wider than *corona*, with a wider aperture, and with shoulder spines standing out at right angles and doubled or tripled by accessory spines below the regular series; basal series of spines always well developed. The figured type measures, length 109 mm., diam 80 mm.; it is often larger, but does not reach so large a size as some *M. corona*. The localities known to us are all on the west coast from Tampa Bay south to Marco Pass and Lossman's key.

This is evidently the direct descendant of the Pliocene *subcoronata*, and if that is considered a distinct species, this living race will be called *M. subcoronata perspinosa*. It differs from the fossil form only by the multiplication of spines.

MELONGENA CORONA BISPINOSA (Philippi). Pl. 12, fig. 8.

The siphonal fasciole bears a series of elevated scales. The shoulder has moderately developed spines, typically with a second series below them. The basal series of spines is developed but rather small.

This race has been described and figured by Philippi, 1844, Abbild, u. Beschreib. neuer Conch., vol. 1, p. 94, *Pyrula* pl. 1, figs. 7, 8; Petit, 1852, Journ. de Conch., vol. 3, p. 157, pl. 8 fig. 3; Reeve, 1847, Conch. Icon., vol. 4, *Pyrula* pl. 6, figs. 19 a, b. None of these authors knew the locality, and the typical specimens in our collection are not localized, but as a very closely related variety occurs in Yucatan, we believe that typical *bispinosa* will be found on the Mexican coast also. The form seems to have been neglected by American conchologists, though its essential character, "prope canalem serie squamularum instructo," was formulated nearly a century ago. In all the Florida series of *corona* forms, the prominent siphonal fasciole, while often



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