

Patula alternata, *Zonites arboreus*, *Z. fulvus*, *Vallonia pulchella*, *Succinea obliqua*, *S. ovalis*, *S. avara*, *Pupa armifera*, *P. pentodon*, *P. corticaria*, *Vertigo Bollesiana*, *V. contracta* and *Carychium exiguum*.

Of *Pupa armifera* it is the first time I have found it in this County.

The above are facts, the several questions arising concerning the presence of these clams here I will not answer.

Have they worked their way from the river during comparatively recent years? or are they a sort of living connecting link between the lake era and the present?

Yours very truly,
W. S. TEATOR.

THE SHELL-BEARING MOLLUSCA OF RHODE ISLAND.

BY HORACE F. CARPENTER.

Genus *Astarte*, Sowerby, 1816.

This genus contains twenty species; eight of these inhabit the coast of New England, from Cape Cod to Greenland, and three have been found south of Cape Cod, although none of them have actually been discovered in Rhode Island waters as yet.

183.—*Astarte castanea*, Say.

Syns.:

Venus castanea, Say.

Crassina castanea, Lam. Hanley.

Crassina sulcata, Brown.

Venus sulcata, Mont., Maton and Rackett.

Shell thick and solid, sub-orbicular; beaks elevated and much eroded, nearly central; lunule in front of the beaks deeply excavated; surface not strongly waved as in most species of the genus, but only slightly undulated, covered with a light-brown epidermis, excepting on the posterior portion, where it is almost black; hinge strong; ligament small; valves with one stout tooth in the right valve, and two in the left; margin crenulated in adult shells. Length one inch; height one inch; breadth $\frac{11}{16}$.

Gould says: "The foot of the animal is of a bright vermillion color and when seen protruded, one would hardly persuade himself that a red wafer was not embraced by the valves.

Habitat from Great Egg Harbor, N. J., to Nova Scotia. Common on the shores of Long Island, Nantucket, Martha's Vineyard and Cape Cod. Abundant in Massachusetts Bay. It should be found on the ocean shores of Rhode Island from Watch Hill to Newport, and also on Block Island.

184.—*Astarte quadrans*, Gould.

Shell small, nearly triangular; basal edge sharp and rounded; anterior more oblique and longer than the posterior; beaks central, pointed and eroded; surface smooth; epidermis light yellowish-olive; interior bluish-white, glossy; margin not crenulated. Length $\frac{9}{20}$; height $\frac{8}{20}$; breadth $\frac{1}{10}$ inch.

Described by Dr. A. A. Gould in the *Invertebrata of Mass.*, p. 81, 1841, from specimens obtained from the stomachs of fishes caught in Massachusetts Bay. It is a rare shell but has been quoted from Stonington, Connecticut, to the Gulf of St. Lawrence.

185.—*Astarte undata*, Gould.

This name was given provisionally by Gould to a variety of *A. sulcata*, described in his first edition of the *Invert. of Mass.*, p. 80. Binney in the second edition, 1870; p. 119, repeats the same remarks, but all later authors accept the name of *undata*.

Astarte sulcata is an European species described in 1778 by Da Costa, *British Conch.*, under the name of *Pectunculus sulcatus*. Gould, supposing our shell to be identical with the English one, called it by the same name, giving a list of ten or more synonyms, none of which apply to our shell, as it is a distinct species.

Prof. A. E. Verrill in *Silliman's Journal* for April, 1872, p. 213, remarks as follows: "This is by far the most abundant species on the northern coast of New England. It ranges from Cape Cod to Labrador. In the Bay of Fundy it is very abundant at all depths from three to one hundred and twenty-five fathoms on muddy bottoms. It varies greatly in form and sculpture, but can easily be recognized in all its varieties by any one familiar with the species of this genus. The beaks are less prominent and the lunule less deeply excavated than in *A. sulcata*, and other differences exist in the hinge, etc."

The figure in the second edition of Gould is not characteristic, the drawing having been made from an old eroded specimen of unusual if not abnormal form.

Astarte lutea, Perkins, described in Proc. Bost. Soc. Nat. Hist., xiii, 150, 1869, as a new species from New Haven, Connecticut, is a variety of *A. undata*, Gould. This species has been dredged in Newport Harbor and various other places south of Cape Cod.

SUB-FAMILY CARDITINÆ.

This Sub-family contains fourteen genera, six of which are fossil. Of the remaining genera, one only, *Venericardia*, inhabits the coasts New England.

186.—*Venericardia* (*Cyclocardia*) *borealis*, Conrad.

Syns.:

Cardita borealis, Con. Reeve, De Kay, Stimp., etc.

Actinobolus borealis, H. & A. Adams.

Arcturus rudis, Humph., MSS.

Cardita vestita, Desh.

(*To be continued.*)

NEW PUBLICATIONS.

MISSION SCIENTIFIQUE *au Mexique et dans l'Amerique Centrale, Etudes sur les Mollusques terrestres et fluviatiles*, by M M. P. Fischer and H. Crosse. The fascicle of this magnificent work last issued contains part of the *Cyclophoridae* and the *Cyclostomatidae*, with several plates illustrating the *Ampullariidae*. Of particular interest is the discussion (p. 148-150) of the genus *Cyclotus*. The authors purpose the name *Neocyclotus* for a genus to comprise all of the American *Cyclophoridae* with sharp lip and solid calcareous many-whorled operculum; these shells have heretofore been called *Cyclotus* in American collections. The anatomy is fully worked out. The following groups of exclusively Mexican species are also fully described and illustrated: *Tomocyclus* C. & F. (containing Mexican species formerly referred to *Megalomastoma*), *Habropoma* C. & F. and *Amphicyclotus* C. & F. (for species referred by previous authors to *Cyclophorus*). The plates, drawn by Arnoul, are superb. Messrs. Fischer and Crosse are to be congratulated on the progress of this magnificent work, indispensable to students of the tropical American fauna.—P.

NOMENCLATURE AND CHECK-LIST of *North American Land Shells*, by H. A. Pilsbry. (From Proc. A. N. S., Phila.) A pamphlet of twenty pages, containing a complete list of United



Carpenter, Horace F. 1889. "The shell-bearing Mollusca of Rhode Island (continued)." *The Nautilus* 3, 69–71.

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