

## *Macoma (Psammacoma) pulleyi*, a New Clam from Louisiana

BY

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(2 Text figures)

THE FOLLOWING PELECYPOD was dredged by the author in the course of investigations of invertebrate ecology off the coast of Louisiana. Reference to published descriptions and comparison with the collections in the U. S. National Museum indicate that this clam is a new species.

### PELECYPODA

#### TELLINIDAE

*Macoma* LEACH, 1819*(Psammacoma)* DALL 1900*Macoma (Psammacoma) pulleyi* BOYER, spec. nov.

(Figure 1)

**Description:** Shell thin, white, moderately inflated, elongate, inequilateral, equivalve, and covered by a very thin, brown periostracum. Anterior end longer, the anterior dorsal margin almost rectilinear, the anterior margin rounded above and more gently and evenly curved below. Ventral margin nearly straight, subparallel to the anterior dorsal margin, and intersecting the posterior margin abruptly at an angle of about 120°. Posterior dorsal margin sloping steeply, and meeting the posterior margin in a curve. Surface of shell beneath periostracum lusterless white, and smooth except for very fine incremental growth lines; an obtuse, rounded ridge running from the umbo to the posterior ventral angle marks the intersection of the posterior slope with the surface of the disk: this ridge is better defined in the left valve, where the posterior slope is occupied by a broad, very shallow sulcus. Hinge plate very narrow, bearing in the left valve a bifid anterior cardinal tooth and a lamellar posterior cardinal tooth; right valve with a bifid anterior cardinal tooth and a smaller, grooved posterior cardinal tooth. Ligament area shallow; posterior area not sharply defined. Pallial sinus

mildly discrepant between the valves: in the left valve, obliquely rising from the posterior adductor muscle scar, sinuous above, narrowing and extending forward about  $\frac{3}{4}$  of the distance between the adductor muscle scars, bluntly rounded anteriorly, about half confluent with the pallial line below; in the right valve obliquely rising from the posterior adductor muscle scar, smoothly rounded above, sloping in a straight line anteriorly, somewhat less bluntly rounded anteriorly, extending forward about  $\frac{3}{4}$  of the distance between the adductor muscle scars, about half confluent with the pallial line below. There is a slight posterior gape (about 1.5 mm in the holotype), and the posterior end is angled to the right almost imperceptibly. The anterior dorsal margin of the right valve overlaps the left valve slightly; in front of the umbo of the left valve there is a small incised area for the partial reception of the overlapping portion of the right valve.

#### Measurements (in millimeters)

	Length	Height	Diameter
Holotype	42.0	22.2	12.4
1 <sup>st</sup> Paratype	40.8	22.5	12.0
2 <sup>nd</sup> Paratype	44.5	23.8	13.9
3 <sup>rd</sup> Paratype	28.6	15.1	8.3
4 <sup>th</sup> Paratype	55.3	29.8	16.7

**Type Locality:** The holotype was collected live offshore from Plaquemines Parish, Louisiana, 28°59' N Latitude, 89°30' W Longitude, 18 m water depth, in silt substrate, salinity (interpolated from adjacent stations) 15‰ at surface, 31‰ at bottom, 9 June 1965.

**Known Range and Habitat:** *Macoma pulleyi* was collected west of the Mississippi Delta, offshore from Terrebonne, Lafourche, Jefferson, and Plaquemines parishes, Louisiana, in mud substrate, in water depths of from

13 to 45 m, in bottom water having nearly normal salinity (30 to 33‰). The unusually large 4<sup>th</sup> paratype was dredged dead in 19 m water depth farther west, from a patch of sandy mud substrate 52 km south of the mouth of the Mermentau River, Cameron Parish, Louisiana.

PARKER illustrates this species (PARKER, 1956; plt. 1, figs. 8A, 8B; the same pictures appear in PARKER, 1960, plt. 4, figs. 14A, 14B) as *Macoma tageliformis*. He lists several localities (PARKER, 1956, p. 315, table II) for *M. tageliformis* which probably refer to *M. pulleyi*. These localities are east of the Mississippi Delta: live specimens were common at the delta front, and dead valves were found in the shallow shelf area.

United States National Museum no. 189186, collected from Louisiana by L. R. Cary, is this species.

**Disposition of Specimens:** Holotype deposited in the Museum of Comparative Zoology at Harvard University, no. 271577; 1<sup>st</sup> paratype (Figure 1) in the author's collection; 2<sup>nd</sup> paratype in the U. S. National Museum; 3<sup>rd</sup> paratype

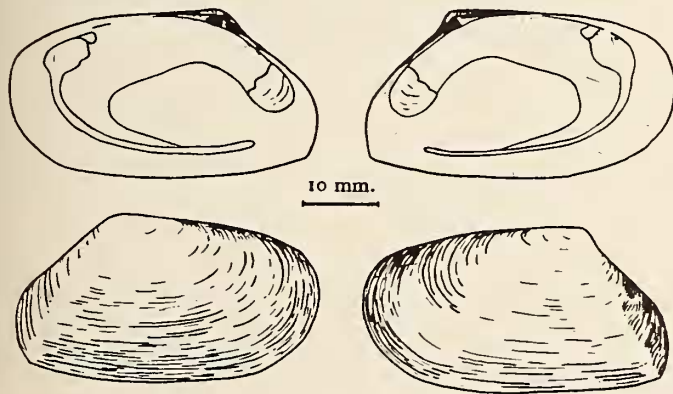


Figure 1

*Macoma pulleyi* BOYER, spec. nov.

First Paratype - matching valves

- A. Interior, right valve
- B. Interior, left valve
- C. Exterior, right valve
- D. Exterior, left valve

in the Academy of Natural Sciences of Philadelphia; 4<sup>th</sup> paratype in the Bureau of Economic Geology, The University of Texas, Austin.

**Remarks:** *Macoma (Psammacoma) pulleyi* has been confused with the sympatric *M. (P.) tageliformis* DALL, 1900. *Macoma tageliformis* was originally described from Corpus Christi Bay, Texas, but was not figured (DALL, 1900a, pp. 300, 315). Another description, also without figures, appeared about a month later (DALL, 1900b, p. 1055). Subsequently, illustrations were published of a specimen

from Puerto Rico (DALL & SIMPSON, 1901, plt. 55, figs. 10, 11, 15) which was identified as *M. tageliformis*. DALL & SIMPSON's figured specimen (U. S. National Museum no. 160497) is relatively much shorter than the holotype of *M. tageliformis* (U. S. National Museum no. 6086); the illustrated specimen also differs from the holotype in having a steeper posterior dorsal margin, which makes it look superficially like *M. pulleyi*. Thus DALL's choice of specimen to illustrate as *Macoma tageliformis* may have caused some of the confusion surrounding that species.

Collections of *Macoma tageliformis* from Louisiana agree perfectly with DALL's holotype. Figure 2 is a specimen of *M. tageliformis* from sandy silt substrate, 19 m water depth, 39 km south of Rollover Bayou, offshore from Vermilion Parish, Louisiana.

*Macoma tageliformis* and *M. pulleyi* may easily be distinguished by the following differences:

- a) *Macoma tageliformis* is more noticeably inequivalve, its left valve being more convex than its right.
- b) In *Macoma tageliformis* the ligament area is depressed, so that the surface of the posterior area on either side is almost vertical and is set off from the rest of the shell by a rather sharp ridge; the posterior area is not so defined in *Macoma pulleyi*.
- c) *Macoma pulleyi* has a rather abrupt posterior ventral angle; also
- d) *Macoma pulleyi* bears a ridge delineating the posterior slope from the surface of the disk. These last two features are lacking in *M. tageliformis*.

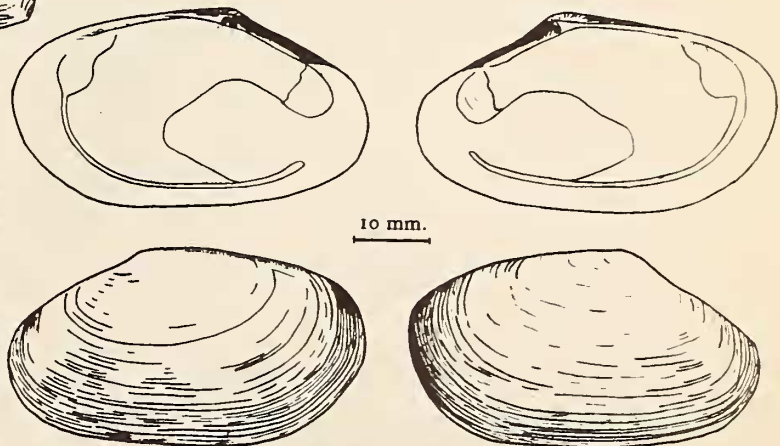


Figure 2

*Macoma tageliformis* DALL, 1900

- Matching valves. Offshore from Vermilion Parish, Louisiana
- A. Interior, right valve
- B. Interior, left valve
- C. Exterior, right valve
- D. Exterior, left valve

- e) The pallial sinus of *Macoma pulleyi* extends farther forward than that of *M. tageliformis*.

The closest relative of *Macoma pulleyi* would seem to be the Miocene species *M. holmesii* DALL, 1900, from Duplin County, North Carolina.

*Macoma pulleyi* is dedicated to my friend Dr. T. E. Pulley, of the Houston Museum of Natural Science. Dr. Pulley is an authority on the mollusks of the Gulf Coast.

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