
Macoma nasuta

The bent nosed clam (Conrad, 1837)

Phylum: Mollusca
Class: Bivalvia; Heterodonta
Order: Veneroida
Family: Tellinacea; Tellinidae

Description

Size—"3 to 70 mm" (MacGinitie and MacGinitie 1949); "seldom reaching 2 1/2 inches" (Packard 1918); in Coos Bay, largest are about 2 1/4 (57.5 mm) which would classify it as a "medium" sized shell (Keen and Coan 1974).

Color—white; chalky where eroded (Kozloff 1974b); dark brown parchment periostracum especially near lower edge and near siphons on valves; often with black markings (Brusca and Brusca 1978); no interior shell color (Keen and Coan 1974), (though siphons can be orange) (Kozloff 1974b).

Exterior—valves thin, smooth, but not polished; shells ovate; "posterior portions of valves distinctly bent to the right" (Kozloff 1974a) (fig. 4); shells thin, radial lines fine, sometimes blackish; anterior end rounded, posterior wedge-shaped, truncate not "flanged".

Interior Right Valve—(hold closed shell in both hands with the hinged area up, the ligaments toward you: the right valve is in the right hand) (Keen and Coan 1974); pallial sinus doesn't reach anterior adductor scar; (fig. 3) (Coan and Carlton 1975); adductor and posterior muscle scars similar in shape in both valves and overlaps but sinus patterns differ.

Interior Left Valve—pallial sinus reaches anterior adductor muscle scar, fuses and overlaps with it (fig. 2) (Coan and Carlton 1975); clam lies on its left (rounded) side in the mud (MacGinitie and MacGinitie 1949).

Hinge—with ligament, entirely external (Coan and Carlton 1975); cardinal hinge teeth: 2 (right valve) (fig. 5), 1 (left valve) (fig. 2); no lateral teeth (beneath ligament), (fig. 5).

Ligament—entirely external end dorsal not on a "nymph" or projection (fig. 5).

Beaks—"central, slightly prominent" (Packard 1918) (fig. 5).

Siphons—completely separate; orange-colored.

Possible Misidentifications

There are 4 common species of *Macoma* in our area: *M. balthica*, often colored inside, is small; *M. inquinata* (= *irus*) is whitish and also small (only up to 5 cm); *M. secta*, the sand clam, has a quadrate, flanged posterior. None of them has a noticeably bent posterior. *M. identata*, a rare, small (to 2.5 cm) form, has a strongly produced posterior projection. *Macoma yolditormis*, small and found in sand or mud, has a long anterior end and a produced and expanded posterior (Coan and Carlton 1975).

The genus *Macoma* can be told from the similar *Tellina* by its lack of lateral teeth in either valve (Coan and Carlton 1975). *Macoma* are "more rounded than *Tellina*, more inflated, smooth, white, often chalky" (Coan 1971).

Ecological Information

Range—Kodiak, Alaska to Baja California (Ricketts and Calvin 1971).

Local Distribution—in bays as well as offshore below surf zone (Coan and Carlton 1975).

Habitat—substrate; mud and muddy sand, about 10-15 cm below the surface. Very adaptable, it can live better in soft mud than any other *Macoma* species, and in the extremely stale waters of small lagoons (Ricketts and Calvin 1971); also found in eelgrass beds (Kozloff 1974b).

Salinity—adapted to a wide range of conditions.

Temperature—temperate and cold waters; not found in the Panamic province to the south.

Tidal Level—most common in bays at mid-tide (Coan and Carlton 1975); low tide in California (communication Van Veldhuizen).

Associates—occasionally infested with encysted larvae of the tapeworm *Anthobothrium* sp (MacGinitie and MacGinitie 1949). Also pea crabs *Pinnixa*, commensal nemertean *Malacobdella* (Morris et al 1980).

Quantitative Information

Weight—

Abundance—on "every possible mud flat" (Ricketts and Calvin 1971); often most common clam, (i.e. Elkhorn Slough), being replaced by immigrant, *Mya arenaria*.

Life History Information

Reproduction—typically pelecypodan: separate sexes, eggs and sperm discharged into the water through excurrent siphon. fertilized egg develops into veliger larva which swims, metamorphoses, and settles as a small clam (MacGinitie and MacGinitie 1949). Oregon spawning reportedly spring, early summer (Morris et al 1980).

Growth Rate—

Longevity—

Food—primarily a suspension feeder; also sucks surface film from mud surface with siphon, blows out coarse, inedible material (MacGinitie and MacGinitie 1949).

Predators—small clams are fed upon by crabs. Snail *Polinices* (Morris et al 1980).

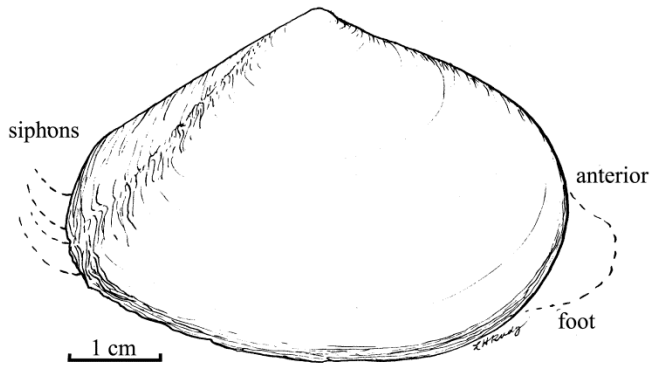
Behavior—unusual feeding mechanism (fig. 6).

Bibliography

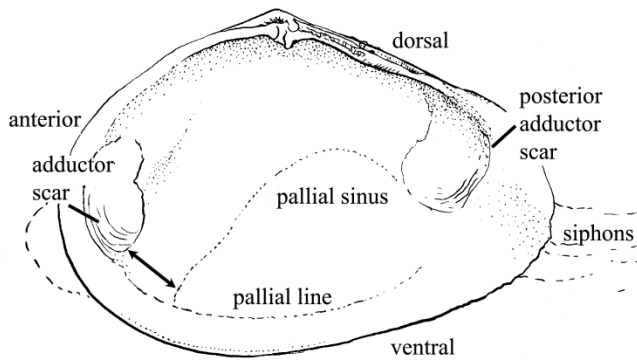
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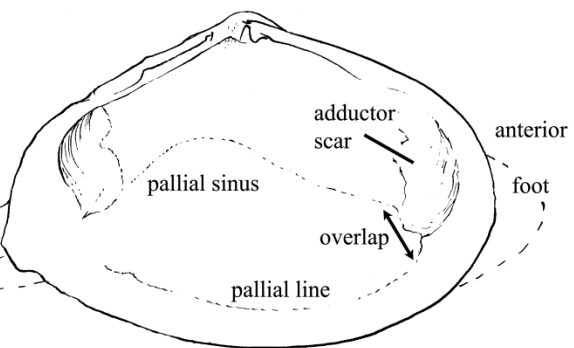
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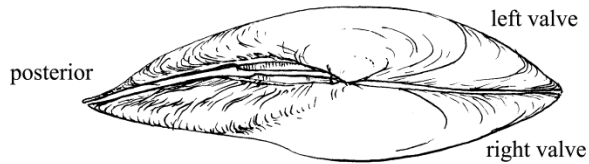
1. *Macoma nasuta*, external, right valve x1.63:
thin, white shell; bent right posteriorly; fine, radial
lines; anterior rounded; posterior truncate



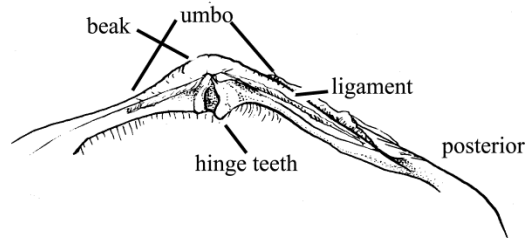
2. Interior, right valve:
pallial sinus doesn't reach anterior adductor
scar; muscle scars similar.



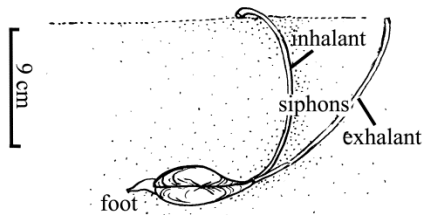
3. Interior, left valve:
pallial sinus overlaps anterior adductor scar.



4. Exterior (dorsal view):
posterior valves bent right.



5. Dorsal region, right valve:
two cardinal hinge teeth; hinge
external; no lateral teeth; ligament
dorsal, external, not on nymph; back
central, slightly prominent.



6. Clam burrowing x0.33
(MacGinitie, 1949).