

Solen sicarius

The sickle razor clam, or blunt jackknife clam (Gould, 1850)

Phylum: Mollusca
Class: Bivalvia
Subclass: Heterodonta
Order: Veneroida
Family: Solenidae

Description

Size—to 125 mm (Morris et al 1980); this specimen (Coos Bay) 90 mm (3 ½") - same as type (Oldroyd 1924).

Color—shell very white, but covered with yellow green, glossy periostracum. (Periostracum present: family Solenidae (Quayle 1970))

Shell Shape—cylindrical: solen = channel pipe (Quayle 1970). Length about 4 x width; gaping at both ends (Coan and Carlton 1975). Shell thin, valves moderately inflated, beaks near anterior end, very weak (figs.

1, 4). Dorsal margin straight or slightly concave, not arched: genus *Solen* (Keen and Coan 1974) (fig. 1). Ventral margin arched (Oldroyd 1924); anterior edge truncate, posterior rounded.

Shell Interior—Adductor scars at opposite ends of shell; anterior scar elongate, posterior scar oblong (Oldroyd 1924). Pallial sinus shallow (Coan and Carlton 1975); pallial line extends beyond anterior adductor scar; line is a strong rib in this specimen. No strong radial rib as in some Solenidae (fig. 2).

Hinge Area—Beaks at anterior end: genus *Solen* (Keen 1971). One cardinal tooth in each valve. Teeth "single, erect, recurved, triangular" (Oldroyd 1924).

Beaks—terminal, anterior end (figs 1, 2, 4).

Ligament—long, external, not seated on nymph (figs. 2, 4).

Animal—long dark, finger-like; end swells to form an anchor. Mantle fused along entire ventral margin (keeps out foreign material, restricts foot movement to anterior-posterior axis (Pohlo 1963)). Siphons joined (fig. 4a). Can be automatized if disturbed, and lost (i.e. *Solen rosaceus* (Pohlo 1963); authors have found *S. sicarius* in Coos Bay to lose siphon when disturbed, as well).

Burrow—permanent, vertical, 30-35 cm deep (Morris et al 1980).

Possible Misidentifications

The Solenidae are cylindrical, vary from 2 ½ to 4 x longer than wide, and gape at both ends. (The California jackknife clam, *Tagelus*, has central beaks - family Psammobidae.) There are 3 eastern Pacific genera of Solenidae. Of these, *Ensis* is not reported north of Monterey, California. The other genus is *Siliqua* (see *S. patula*), the flat razor clam, only 2 ½ x longer than wide. It has a strong radial rib in the interior, and 2 or more teeth in each valve. Its beak is almost central, not terminal as in *Solen*. Its profile is much more oval, and not as cylindrical as in *Solen*.

One other species of *Solen* occurs as far north as Humboldt Bay (Morris et al 1980): *Solen rosaceus* Carpenter, is as its name suggests, a pink shelled clam. It is smaller, straighter and more southern than *S. sicarius*. Its siphons are annulated (and it can regenerate them when disturbed (Pohlo 1963)). It lives in sandier situations than does *S. sicarius* (Coan and Carlton 1975).

Ecological Information

Range—Vancouver Island, B.C., to San Quintin Bay, Baja California.

Local Distribution—Coos Bay: Charleston mudflats.

Habitat—in permanent vertical burrow, protected areas of bays, in mud or muddy sand (Coan and Carlton 1975). Around eelgrass (*Zostera*) roots, in firm sediments (Ricketts and Calvin 1971).

Salinity—collected at 30‰ (Coos Bay)

Temperature—lives in cold to warmer temperate waters

Tidal Level—intertidal down to 75m². Coos Bay: intertidal.

Associates—pea crabs (Quayle 1970).

Quantitative Information

Weight—

Abundance—not common; becoming more abundant, Coos Bay.

Life History Information

Reproduction—

Growth Rate—

Longevity—

Food—a suspension feeder.

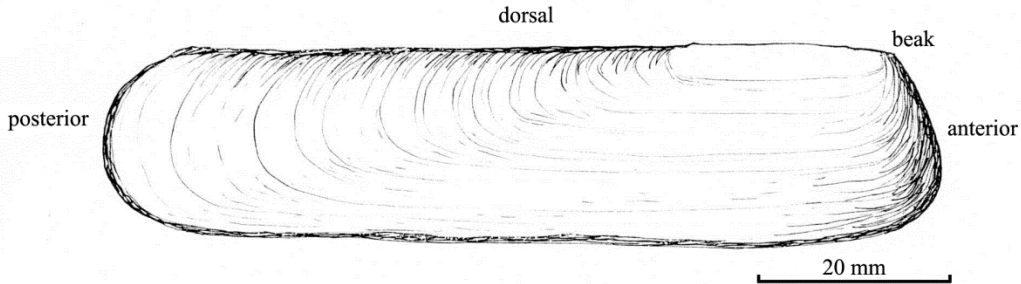
Predators—birds

Behavior—a good digger, it can bury itself in 30 seconds, and can both swim and jump (MacGinitie 1935).

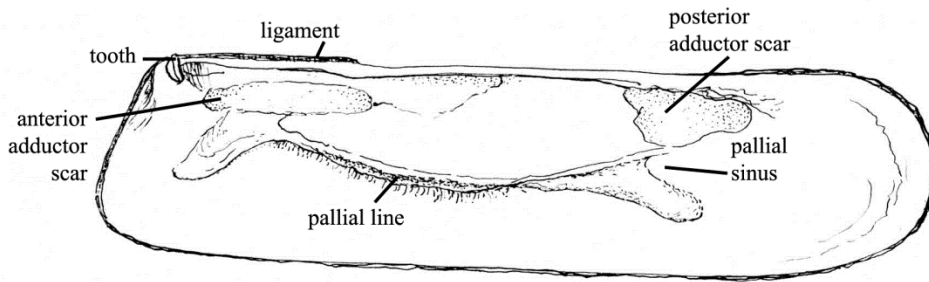
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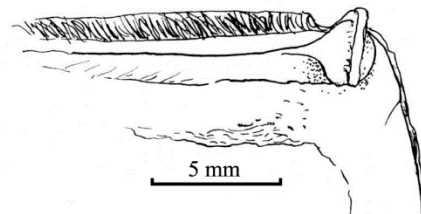
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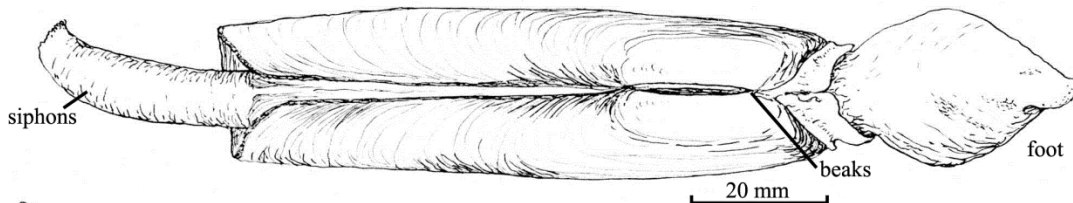
1. Right valve x1.5:
shell cylindrical; dorsal margin straight, anterior edge truncate;
length 4x width; beaks terminal, very weak; shell white,
periostracum yellow green, glossy.



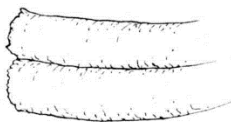
2. Right valve, internal:
adductor scars at opposite ends of shell; pallial
line a strong edge; no radial rib.



3. Hinge area, left valve x4:
a large single tooth (each valve).



4. Dorsal view x1.5



4a. Siphons (lateral view)