#### Sand Builder Worm

# Family: Sabellaridae

Sabellaria vulgaris

#### **Description**

Size: 1/8" wide or less, up to 1" long.

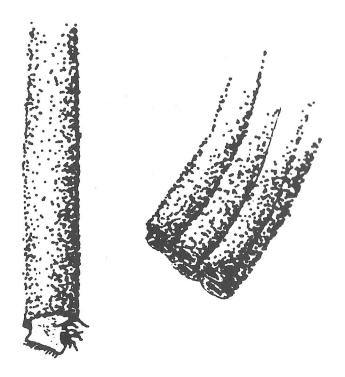
Characteristics: Well-defined head region; heavy conspicous body bristles.

#### Habitat

Lives in a tube within a colony of tubes built close enough together to create a honeycom. -like effect; found in sandy bottoms in intertidal and subtidal zones on Sandy Hook's bay side.

#### **Edibility**

Inedible



#### Sand Builder Worm

# SNAILS, CLAMS, OYSTERS, MUSSELS AND SCALLOPS

Phylum: Mollusca

The molluscs are second in number of species only to the arthropods with its vast number of insect types. Over 80,000 living species are included in phylum mollusca, and an excess of 35,000 fossil species are known to have existed. Mollusca has a rich geologic history, and the animals' mineral shells have provided a rich fossil record dating back to the Cambrian period (500-600 million years ago).

There are two distinct body structures unique to this phylum — the mantle and the radula. The mantle is a fold in the body wall which secretes a calcareous shell; the radula is a rasping tongue specialized for feeding. The foot of a mollusc, used for creeping, is sole-like in most snails, slugs and chitons, and somewhat hatch-shaped in many bivalves. The head region is usually distinctly defined and various organ systems are contained within its visceral mass. Many members of this phylum lack one or another of these features, but as a group they are easily recognized.

# Suture Spire Solve Spire Columella Iinnerlip Siphonal (anterior canal)

# Chondrophore Posterior adductor mussel scar Pallial sinus Beak (umbo) Lunule Teeth Anterior adductor mussel scar

A Gastropod Mollusc

A Bivalve Mollusc

Credhulated ventral margin

# Common Periwinkle

# **Family: Littorinidae**

Littorina littorea

#### Description

Size: Up to 1-1/4" long.

Characteristics: Conical shaped with 6-7 flat whorls; heavy, sharp lip contains a hard, brown, horny surface that covers the shell opening (operculum); has no navel-like formation that is present in similar snails.

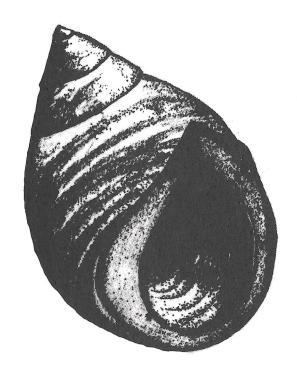
Color: Dull brown, with thin reddish lines.

#### **Habitat**

Clings to rocks, pilings or other hard surfaces; abundant along the groins of Sandy Hook's ocean and bay regions.

#### **Edibility**

Good; considered a delicacy by Europeans.



Common Periwinkle

#### Common Marsh Snail

# Family: Melampidae

Melampus bidentatus

#### Description

Size: Up to 3/4" high, 1/4" wide

Characteristics: Thin, oval-shaped shell; the shell opening in the widest opposite the tip and contains two thin-lipped, toothed folds, with 1-4 short, horizontal ridges on the outer lip.

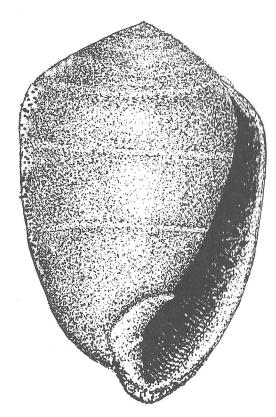
Color: Light brown.

#### Habitat

Found in and around salt marsh grass above the high tide level.

# **Edibility**

Inedible.



Common Marsh Snail

# Channeled Whelk

# Family: Melongenidae

Busycon canaliculatum

#### Description

Size: Up to 8" high, 5" wide.

Characteristics: Recognized by its deep, widely channeled seam and heavy skin-like outer covering; the thin shell has a thin outer lip with strongly shouldered whorls that may be beaded in young whelks; their dead shells are frequently used by hermit crabs for shelter.

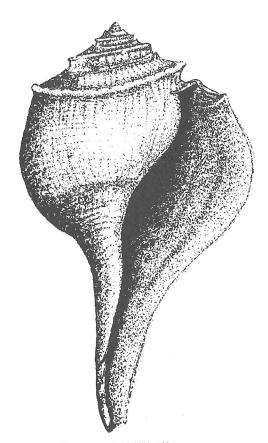
Color: Yellow-tan.

#### Habitat

Inhabit the bay regions of Sandy Hook; found on bay and ocean beaches after a storm or extremely high tide.

#### **Edibility**

Fair.



Channeled Whelk

# **Knobbed Whelk**

# Family: Melongenidae

Busycon carica

#### Description

Size: Up to 6" high, 3" wide.

Characteristics: Right-handed, pear-shaped spiral; smooth outer surface with approximately nine low, rounded swellings on the shoulder of the body whorl; has a strong, horny structure (the operculum) attached to the foot.

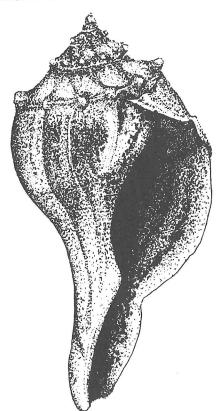
Color: Outside shell is yellow-gray, with brownish-purple axial streaks on young whelks; inside shell is orange, yellow, or brick red.

#### Habitat

Lives in shallow water, usually in bays, less common around Sandy Hook than channeled whelk; dead shells are frequently found on Sandy Hook's ocean beaches after storms.

# **Edibility**

Fair.



Knobbed Whelk

# **Atlantic Oyster Drill**

# Family: Muricidae

Urosalpinx cinerea

#### Description

Size: 3/4" long.

Characteristics: Spindle-shaped shell with 9-12 rounded ridges crossed by shallow, narrow spiral lines; shell opening has white teeth on thin outer lip; so named because it can drill through oyster shells and devour flesh inside; particularly destructive to young oysters.

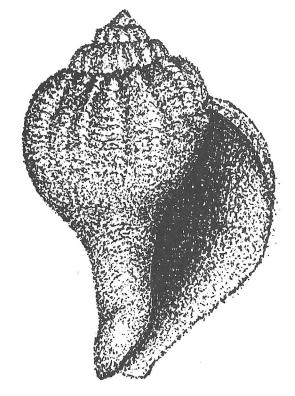
Color: Outer shell is bluish gray, white or orange, occasionally with darker bands of color; shell opening is brown, operculum is amber colored.

#### Habitat

Found on mud flats and all along the intertidal zone of Sandy Hook's bay region.

#### Edibility

Inedible.



Atlantic Oyster Drill

# **Thick-Lipped Oyster Drill**

# Family: Muricidae

Eupleura caudata

#### Description

Size: 3/4" long

Characteristics: Spindle shaped, strong surface sculpture in the form of axial ribs and opposite varices. Approximately 5 whorls ending in the strongly beaded outer lip. Siphonal (or anterior) canal constricted to nearly tubular. Generally more angular in appearance than Urosalpinx cinerea.

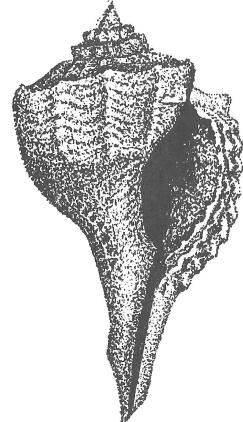
Color: Whitish grey to bluish purple.

#### Habitat

Found on mud flats and along the intertidal area of the bay. Slightly less common than U. cinerea but just as destructive to oyster bods.

#### **Edibility**

Inedibile



Thick Lipped Drill

# Eastern Mud Nassa (Mud Basket Shell)

# Family: Nassariidae

Ilyanassa obsoletus

#### Description

Size: 1/4 - 1/2" high, up to 1".

Characteristics: Blunt-tipped shell with approximately six body spirals; Lattice-like surface; smooth-edged operculum.

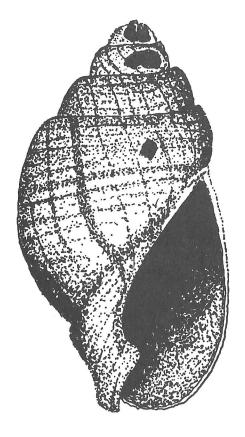
Color: Bluish band on the foot opening.

#### **Habitat**

Lives in Sandy Hook's bay region on mud flats exposed at low tide or in shallow water areas where algae grows on the bottom.

#### **Edibility**

Inedible



Eastern Mud Nassa

#### **Three-Lined Basket Shell**

# Family: Nassariidae

Nassarius trivittatus

#### Description

Size: 3/4" high

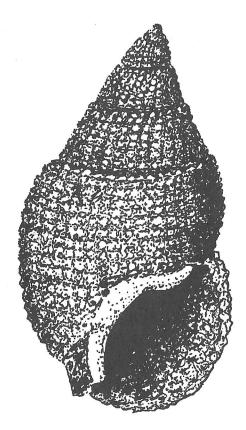
Characteristics: Latticed surface with a deep suture; six or seven spirals; thin outer lip; the rough operculum has one shallowly-serrated edge.

Color: Light green or yellowish-white.

#### Habitat

Commonly found on intertidal mud flats and shallow water areas of Sandy Hook Bay,

#### Edibility Inedible



#### Three Lined Basket Shell

# Common Moon Snail (Hero Moon Snail)

Family: Naticidae

Lunatia heros

#### Description

Size: Up to 41/2" high, 31/2" diameter.

Characteristics: Thin, globular shell and deep, open umbilicus distinguishes this snail from the Atlantic Moon Snail; the body whorl has a small, somewhat glossy spire; prey on oysters and clams.

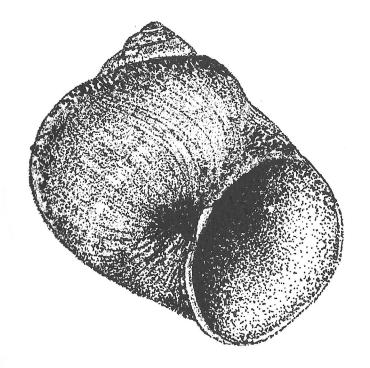
Color: Ashen-brown, occasionally with bluish spots; foot opening usually has brownish spots.

#### **Habitat**

Found in intertidal mud flats, around salt marsh banks and near algae-covered bottoms; can be dug up alive on sandy beaches at low tide by uncovering the small hillocks they throw up while plowing through the sand.

#### **Edibility**

Fair.



Common Moon Snail

# **Atlantic Moon Snail (Shark Eye)**

Family: Naticidae

Polinices duplicatus

#### Description

Size: 1-3" long.

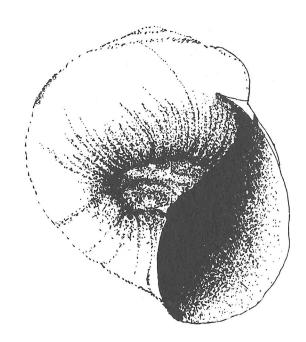
Characteristics: Solid, rounded, glossy shell; a dark callus lobe hides the umbilicus (a deep hollow at the base of the body whorl); carnivorous, they feed primarily on clams by drilling a hole through the clam shell with their rasping tongue and eating the flesh inside. Color: Creamy gray, bluish tan, or slate gray; callus lobe is purplish brown; umbilicus is yellow-brown.

#### Habitat

Commonly found living among algae-covered rocks, on sand, or intertidal mud flats in Sandy Hook Bay.

#### **Edibility**

Fair.



Atlantic Moon Snail

# **Common Jingle Shell**

# Family: Anomiidae

Anomia simplex

#### Description

Size: 2" long

Characteristics: Glossy thin shell; the upper shell varies in shape and looks inflated, the lower is flat, has a large hole near the hinge and is stronger than the upper shell.

Color: Lemon yellow, brownish or pale buff.

#### Habitat

Lives on rocks, oysters or other shells attached by threads (byssus) that extend through the hole in the lower valve; common in protected bay areas such as Spermaceti and Horseshoe Coves; found on bay and ocean sides of Sandy Hook, where their shells litter the beaches. These shells are used to make mobiles which "jingle" as the wind blows.

#### **Edibility**

Poor.







Jingle Shell

# **Blood Ark**

# Family: Arcidae

# Anadara ovalis

#### Description

Size: 2" long.

Characteristics: Round, oval shell with 35 radiating ribs.

Color: Blood is red (not watery blue as in most bivalves); the shell is white, but the bottom half may be covered with a skin-like greenishbrown covering (periostracum).

#### Habitat

Found in the shallow, ocean-front subtidal zone; commonly found on Sandy Hook's ocean side, sometimes on the bay side, usually found washed up on the beach after a storm.

# **Edibility**

Poor.



Blood Ark

Transverse Ark

# **Transverse Ark**

# Family: Arcidae

# Anadara transversa

#### Description

Size: 1" long, 3/4" high.

Characteristics: Trapezoidal-shaped shell has 12 ribs radiating outward; the left valve overlaps the right.

Color: White, with a grayish-brown skin-like outer covering.

#### Habitat

Commonly found in the muddy areas just below the water line; generally on Sandy Hook's bay side, but a few may be found on the ocean side.

#### **Edibility**

Poor.

# **Chestnut Astarte (Smooth Astarte)**

# Family: Astartidae

#### Astarte castanea

#### Description

Size: 1" long, 1" wide.

Characteristics: Smooth, thick, angular shell; strong hinge; knobs at the apex are notched or have finely scalloped edges.

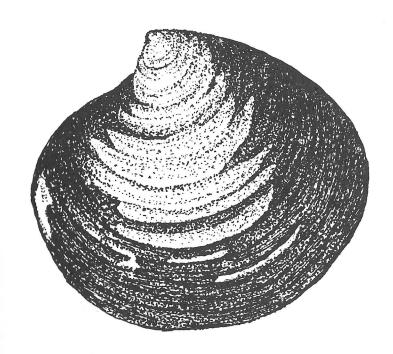
Color: Whitish shell with a black or chestnut brown outer covering.

#### Habitat

Common on ocean beaches, but some wash up on Sandy Hook's bay side.

#### **Edibility**

Poor.



Chestnut Astarte

# **Common Slipper Shell**

# **Family Calyptraea**

Crepidula fornicata

#### **Description**

Size: Up to 2" long.

Characteristics: Shell has a wavy, irregular edge with a smooth or lumpy surface, depending where it attaches itself; slipper shells growing in top of each other are convex, those growing inside dead shell are concave.

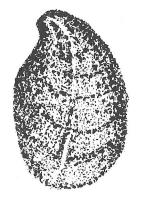
Color: Off-white or beige, with delicate, wavy pinkish-brown lines spreading out from the tip.

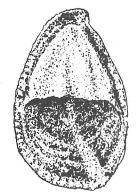
#### **Habitat**

Often grow attached to one another in little chains, can be found attached to the undersides of horseshoe crabs; found in shallow water on the ocean and bay sides of Sandy Hook; numerous on beaches after storms.

#### **Edibility**

Good.





# Common Slipper Shell

# Family: Calyptraea

Crepidula plana

#### Description

Size: 1" long

Characteristics: They are born male and change into female as they mature; the shell has fine growth lines.

Color: White shell, tan skin-like outer covering.

#### Habitat

Anchors itself inside old moon shells or on other dead shells; sometimes they attach to each other; not as common at Sandy Hook as the common slipper shell.

#### **Edibility**

Poor.



#### **Dwarf Surf Clam**

# Family: Mesodesmatidae

Mulinia lateralis

# Description

Size: 3/4" long, 1/2" high.

Characteristics: Swollen, triangular shape with distinct, yet rounded posterior ridge; juveniles look less swollen than adults.

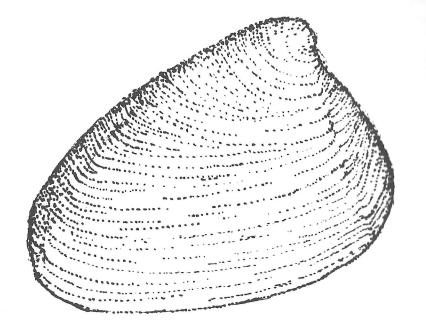
Color: Grayish-white with light tan outer covering.

#### Habitat

Found in Sandy Hook's quiet bay waters; found on ocean beaches after storms or high tides.

#### **Edibility**

Good.



#### Dwarf Surf Clam

# Family: Mesodesmatidae

Spisula solidissima

#### Description

Size: 6-9" long, 41/2" high.

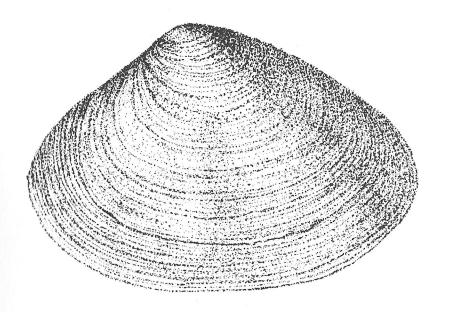
Characteristics: Older, more mature shells are heavy, thick and triangular with evenly rounded edges; the fragile, U-shaped cardinal tooth is usually broken when the two valves are forced apart; long lateral teeth along the edges of the shell have deeply scored sides with sharp ridges.

#### **Habitat**

Usually found in dense beds in shallow water along the ocean side of Sandy Hook.

#### **Edibility**

Excellent.



# Soft Clam (Steamer, Long-Neck Clam)

# Family: Myacidae

Mya arenaria

#### Description

Size: Up to 4" long, 134" high.

Characteristics: Chalky shell is thin, wrinkled and eliptical, covered with flakey gray outer covering; left valve has long, spoon-shaped structure (chrondrophore) to receive the internal ligament; right valve has corresponding groove; no teeth; feed through long siphons (tongues) which can spurt water when you walk near them on beach.

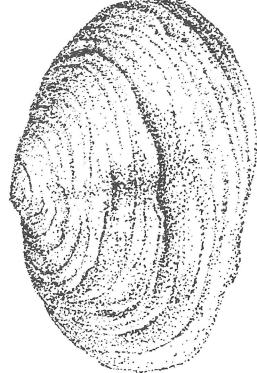
Color: Chalky gray.

#### Habitat

Found in deep burrows in mud, especially in bay areas; there are many clam beds in the mud flats of Sandy Hook Bay, but harvesting restrictions should be checked with local authorities.

#### **Edibility**

Excellent.



Soft Clam

# Family: Mytilidae

Modiolus demissus

#### Description

Size: 3-41/2" long.

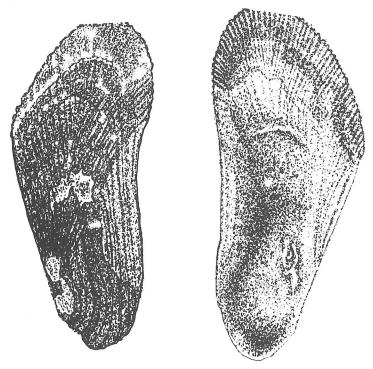
Characteristics: Numerous radial ridges on the shell divide near the lower margin; skin-like outer covering has a thin, varnished look; byssal threads at the mid-section anchor the mussel to any hard surface.

Color: Brown when exposed to air, greenish-yellow when submerged. **Habitat** 

Found in salt marshes with their lower half buried in muddy or peat bottoms; found growing among submerged rocks in Sandy Hook's bay.

#### **Edibility**

Inedible.



Ribbed Mussel

#### **Blue Mussel**

# Family: Mytilidae

Mytilus edulis

#### **Description**

Size: Up to 3" long, 1" high.

Characteristics: Smooth, elongated, triangular shell with pointed beaks (umbo) opposite the hinge; four small teeth near the umbo; strong, string-like threads (byssus) extend from middle part of the shell and anchor the mussel to hard surfaces or other mussels.

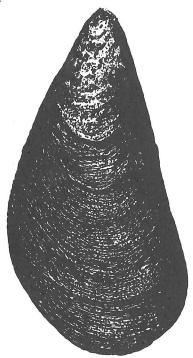
Color: Violet-blue, with a shiny, bluish-black outer covering.

#### **Habitat**

Found attached to any hard surface or clumped together in and around Sandy Hook's bay and ocean; dead shells usually wash onto the beach after storms.

#### **Edibility**

Good — excellent.



Blue Mussel

# Family: Ostreidae

Crassostrea virginica

#### Description

Size: 6" long; older specimens may be 10" long with a shell 1" thick. Characteristics: Rough, elongated shell; may vary depending on the substrate it grows on; frequently overgrown with seaweed or covered with other molluscs.

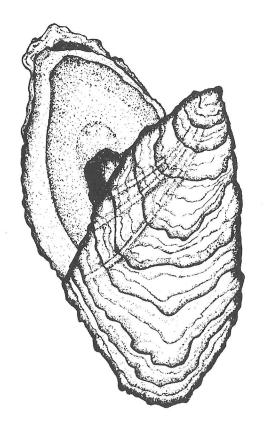
Color: Outside shell is dirty white; inside is white with purple muscle scars and a purple stain along the shell edge.

#### **Habitat**

Lives in shallow water beds along the bay area; their empty shells are frequently washed up on bay and ocean beaches after storms.

#### **Edibility**

Excellent.



Eastern Oyster

#### **Bay Scallop**

# Family: Pectinidae

# Aequipecten irradians

#### Description

Size: 2-3" across.

Characteristics: Slightly inflated shell has 17 to 19 ribs emanating from the base in a fan-like configuration.

Color: Pale brown or gray; some have light reddish tinge.

#### Habitat

Found in the inshore waters of the bay and ocean; free swimmers; some adults may permanently cement one valve to a hard object.

#### **Edibility**

Excellent; much more tender than the sea scallop.

# Sea Scallop

# **Family: Pectinidae**

# Placopecten magellanicus

#### Description

Size: Up to 8" across.

Characteristics: This almost circular, slightly inflated, smooth shell has radial lines emanating outward.

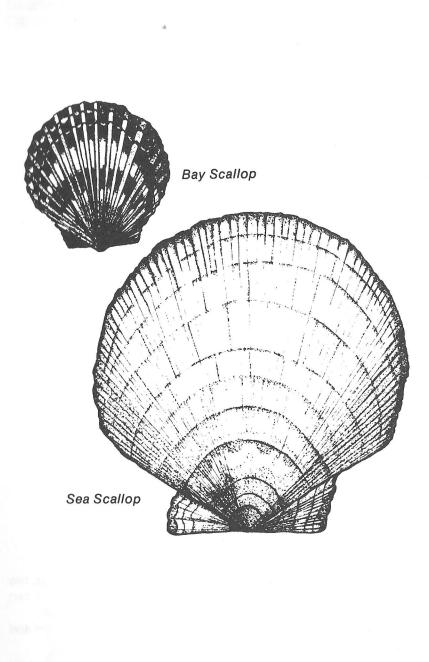
Color: Shell exterior is white; interior is glossy white with a prominent muscle scar.

#### Habitat

Inhabit deeper ocean waters near Sandy Hook, but shell fragments are found on beaches after a storm.

#### **Edibility**

Excellent.



# False Angel Wing

# **Family: Petricolidae**

Petricola pholadiformis

#### Description

Size: 134" long, 3/4" high.

Characteristics: Medium thick, elongated shell has low ridges radiating from its tip; on one end these ridges are shorter, more elevated and have strong, tooth-like scales; the glossy interior corresponds to its external sculpture.

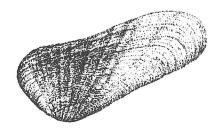
Color: Chalky white.

#### Habitat

Bore into peat, clay and, occasionally, water-logged wood near salt marshes; more common on Sandy Hook's bay side.

#### **Edibility**

Poor.



False Angel Wing

#### **Common Razor Clam**

Family: Solenidae

Ensis directus

#### Description

Size: 6" long; 11/4" wide.

Characteristcs: Curved shell with sharply squared, gaping ends; the single, narrow marginal tooth in the left valve fits between the two teeth in the right valve; each valve has a long, posterior tooth.

Color: Shell has elongated or triangular brown or purplish spots and is covered by a bright, yellow-green skin-like covering.

#### Habitat

Prefers to live in sandy bottoms in shallow water within the subtidal zone of the ocean and Sandy Hook Bay.

# **Edibility**

Excellent.

# Quahog (Hard Clam; Chowders; Littleneck Clam; Cherrystone Clam)

# Family: Veneridae

Mercenaria mercenaria

#### Description

Size: Up to 4" long, 3" high.

Characteristics: This heavy, thick heart-shaped shell looks swollen; marked by the buildup of many thin, concentric plates or scales (lamellae) near the umbos; the Lenni Lenape Indians traded these shell known as "wampum" and today they are also used to make jewelry pieces.

Color: Grayish-white or ash-colored with a deep purple blotch on the inside of the shell.

#### Habitat

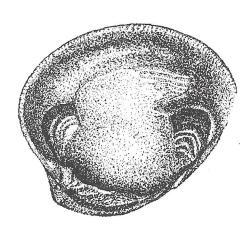
Burrow into the mud or sandy bottoms of the bay; found in densely populated beds in the inshore waters of the ocean; can live undisturbed for 20 to 25 years.

#### **Edibility**

Excellent, especially in making chowders.



Razor Clam



Quahog