

# Invertebrate Identification

## Mollusks

All the members of the phylum Mollusca have a soft body part called the mantle. In many mollusks, the mantle secretes a hard, protective shell. However, there are some un-shelled mollusks, such as octopus and squid.

**Univalves/Gastropods** are the class of mollusks with one shell, commonly referred to as snails. Some snails live on land, some in fresh water, and some in salt water. You will see six different snails at Jenkinson's Aquarium.

**Slipper shells** (Crepidula fornicata) are cup-shaped with a platform on the inside. They are found in shallow water attached to rocks or other shells. They grow to approximately 1½ inches and can change sexes.

**Moon snails** are found in sandy flats and spend most of their time digging through the sand in search of clams or smaller snails. They drill a neat hole through the shell of their prey and eat the meat. The lobed moon snail (Polinices duplicata) is similar to the northern moon snail (Lunatia heros), but the lobed moon snail has a lip, or lobe, over the hole opposite the spiral. Moon snails grow from two to four inches.

**Whelks** are the largest northern snails. The channeled whelk (Busycon canaliculatum) grows five to seven inches and is edible. The animal drills bivalve shells with a rasping tongue-like structure and feeds on the animal within. The knobbed whelk (Busycon carica) is similar to the channeled whelk, but has knobs on the spirals. In both of these whelks, the shell spirals to the right. The knobbed whelk is the New Jersey state invertebrate. The lightning whelk (Busycon contrarium) is much larger than the others and its shell spirals to the left.

**Bivalves** are the class of mollusks with two connected shells. Many different bivalves are found in New Jersey and here at the aquarium.

**Clams** are very abundant in New Jersey. The surf clam (Spisula solidissima) is the largest clam found on our beaches. These are the clams caught, canned, and sold commercially. 75% of the US clam crop is caught in NJ. The quahog, pronounced ko-hog, (Mercenaria mercenaria) is also known as the littleneck, cherrystone or chowder clam. These shells usually have a deep purple on the inside, and were used by Native Americans as money (wampum). Chestnut clams (Astarte castanea) look like tiny quahogs, but rarely grow larger than one inch. These shells can be white, off-white, or even dark gray in color. Razor clams (Ensis directus) do not look like most other clams; they are long and thin and resemble a straight blade razor.

There are two types of mussels you will see in New Jersey. The blue mussel (Mytilus edulis) grows in groups attached to rocks, pilings, and jetties. Their bluish-black shells are often found on our beaches. The ribbed mussel (Geukensia demissa), as its name implies, has ribs along the shell, and grows individually in salt marshes and mudflats.

Two types of **scallops** you will see are bay scallops (Aequipecten irradians) and sea scallops (Placopecten magellanicus). Bay scallops are either gray or reddish, and have deep ridges in their shells. They are usually smaller than three inches. Sea scallops grow much larger and are usually a pale red.

**Oysters** (Crassostrea virginica) have long, usually gray shells with a pearly shine to the inside. Oysters produce pearls when a grain of sand gets inside the shell and irritates the soft body of the oyster. It secretes a layer of shell around the grain of sand again and again until the grain of sand becomes a smooth, non-irritating pearl.

## Echinoderms

Animals belonging to the phylum Echinodermata are marine invertebrates with spiny skin or warts. All echinoderms lack a head area, but instead exhibit radial symmetry. Most have a mouth on the ventral side and can regenerate lost appendages.

**Sea stars**, formerly called starfish, come in many shapes and sizes. Most sea stars have five arms, but some have six, nine, or even up to thirty arms. The common sea star (*Asterias forbesii*), chocolate chip sea star (*Protoreaster nodosus*), and Bahama sea star (*Oreaster reticulatus*) each have five arms, which they wrap around the shells of clams and oysters. Once the shells have been pulled apart, the sea star sticks its stomach through its mouth and into the shell to digest the soft bodies of its prey.

**Sea urchins** have a thin brittle shell, called a test, which is covered with sharp, moveable spines. Their mouths are equipped with five small teeth that they use to feed on algae and detritus. Urchins are usually red, purple or brown and can be found locally and in warm water. Jenkinson's Aquarium's touch tank usually has purple sea urchins (*Arbacia punctulata*) and pencil sea urchins (*Eucidaris tribuloids*).

**Sand dollars** (*Echinoarachnius parma*) are found on the beach as white flattened disks with a five-petal design on top. However while still living, sand dollars have many short spines covering their bodies. They generally burrow in soft sand and feed on tiny particles mixed in with the sand.