

Marine Invertebrates

Kingdom: Animalia

Conditions for Customer Ownership

We are a USDA compliant facility and hold all necessary permits to transport our organisms. Each state is assisted by the USDA to determine which organisms can be transported across state lines. Some organisms may require end-user permits. Please contact your local regulatory authorities with questions or concerns. To access permit conditions, [click here](#).

Never purchase living specimens without having a disposition strategy in place.

Live specimens should not be released into the wild! Please dispose of any unwanted organisms using the guidelines below.

Primary Hazard Considerations

Aiptasia, giant anemones and jellyfish may cause skin irritation and should not be handled. Sea urchins have sharp spines. Use a net to transport organisms or wear gloves when handling.

Availability

Generally available year round.

Arrival Care

When they arrive, let the bag sit in your tank for about 30 minutes. This allows them to slowly become acclimated to your tank's water temperature. During this time, add a couple ounces of your tank's water to the bag; this helps acclimate the invertebrate to any water condition differences as well. Empty the bag of water and invertebrate through a net into a bucket and place the invert into the aquarium. Do not put water from the bag into your aquarium because it can contain bacteria and nitrates, which are not beneficial to your marine system.

Water Quality and Conditions

Standard marine aquarium set-up conditions include:

- The specific gravity of the salt water needs to be kept between 1.020 and 1.024. This can be measured with a Hydrometer (470005-562).
- Keep the water temperature between 72–80°F.
- The optimum pH range is between 8.0 and 8.4 .
- Acceptable nitrite levels are less than 0.1 ppm. If the nitrites in your system are too high, the nitrifying bacteria in your filter are not adequate for the system.
- Provide 25–50% water changes twice a month. Unless specifically noted, these organisms have no special lighting requirements.

Feeding:

- Filter feeders (such as jellyfish, flame scallops, polychaete worms, and sea peaches) eat plankton and phytoplankton in the wild but an ideal alternative is Roti-Rich invertebrate food (470030-342). To feed Roti-Rich, turn off the pump and filter, shake the bottle, and squirt some Roti-Rich into the tank so that the water is cloudy. Leave the pumps turned off for one hour, then turn them back on. Feed Roti-Rich once per week.
- Marine snails require micro-algae, which grows naturally in a well-established tank. You can offer them lettuce to eat as well, if your tank does not have much of an algae population.
- The remaining organisms eat small fish and frozen or live brine shrimp (470193-786). To feed the filter feeders turn off the filtration systems in your tank and drip Roti-Rich until the water becomes slightly cloudy. Leave the filter off for about an hour. Filter feeders should be fed once a week. **DO NOT OVERFEED.** The other organisms should be fed a small amount of food once a day. If there is any remaining food after half an hour, net it out and, next time, reduce the amount of food given.



Information

Marine invertebrates are animals that lack a notochord or backbone. The marine invertebrates we provide you are found in the Florida Keys.

Cnidarians:

- *Aiptasia* are small anemones that are usually found in large numbers circling the edges of tidepools. They are translucent and their column and tentacles range from white to a dark brown. Their reproduction is sexual. They should be provided with compact fluorescent lighting to aid in the photosynthesis of their symbiotic algae.
- *Condylactis* anemones, also called Atlantic, colored, or giant anemones, are found off coastal waters in 6–9 feet of water. This species is only found in the Atlantic Ocean. *Condylactis* anemones are hermaphroditic and can also reproduce by division, furrowing to create two genetically identical anemones. They should be provided with compact fluorescent lighting to aid in the photosynthesis of their symbiotic algae.
- *Cassiopeia* (jellyfish) is a shallow water medusa. This jellyfish does not drift as most jellyfish do but are sessile. *Cassiopeia* lie upside down on the sandy bottom of the mangrove swamps and create a suction to prevent being swept away. They live in the mangrove swamps and have a symbiotic relationship to zoothella (an algae), which through the oxygen they produce, enable the jellyfish to inhabit this biotype where no other jellyfish is capable of living. They should be provided with compact fluorescent lighting to aid in the photosynthesis of their symbiotic algae.

Molluscs

- Flame scallops have numerous photoreceptors (eyes) located along the mantle edge and move by jet propulsion. The gills of these bivalve mollusks serve a dual purpose: they are used for both respiration (gas-exchange or breathing), and filtration (feeding). Flame scallops are protandrous hermaphrodites, switching sex from male to female as they grow to larger sizes.
- Lettuce slugs incorporate the chloroplasts (the portions of the cell responsible for photosynthesis) from the algae into its tissues and thus rely on photosynthesis for part of its energy. They are found in the Western Atlantic Ocean. Lettuce slugs may grow to 3" and should be provided with compact fluorescent lighting to aid in the photosynthesis of their symbiotic algae.
- *Turbo* snails are also known as the turban or topshell snail. *Turbo fluctuosa* has a thick top- or turban-shaped shell with an iridescent interior. The *Turbo* snail is native to the Gulf of California off the coast of Mexico. *Turbo* snails are one of the best herbivores to include in the reef tank. Its life span is about two years with proper care. Since the *Turbo* snail uses calcium to build its shell, adequate calcium levels must be maintained in the marine tank.

Crustaceans:

- Marine hermit crabs are found worldwide. There are about five hundred known species of hermit crabs in the world, most of which are aquatic and live in saltwater at depths ranging from shallow coral reefs and shorelines to deep sea bottoms. Hermit crabs require empty shells as they grow; having varying sizes available to the crab is essential. A set of assorted Hermit crab shells (470308-726) is available.
- Brine shrimp eggs (470149-964) are metabolically inactive and can remain in cysts form for several years while in a dry, oxygen-free environment, even at temperatures below freezing. Brine shrimp have a biological life span of one year. Male brine shrimp are easily identified by large graspers located on the top of their head. There are several species of *Artemia* worldwide; they can be found almost everywhere in the world in inland saltwaters, although they are completely absent from oceans.

Merostomata:

- Horseshoe crabs date back to about 500 million years ago and are referred to as living fossils. Horseshoe crabs are most commonly found in the Gulf of Mexico and along the Northern Atlantic coast of North America. They migrate onto the shore in late spring; the females make nests at a depth of 15–20 cm in the sand. In the nest, females deposit eggs, which are subsequently fertilized by the male. Egg quantity is dependent on female body size and ranges from 15,000–64,000 eggs per female.

Echinoderms:

- Sea cucumbers are found on the sea floor worldwide. The diet of most cucumbers consists of plankton and decaying organic matter found in the sea. Most sea cucumbers reproduce by releasing sperm and ova into the ocean water. Depending on conditions, one organism can produce thousands of gametes. Sea cucumbers, particularly eggs and young larvae, are prey for fish and other marine animals.
- Sea urchins have long spines that radiate from the body. The spines are used for protection, for moving, and for trapping drifting algae to eat. Among the spines are five paired rows of tiny tube feet with suckers that help with locomotion, capturing food, and holding onto the seafloor. Sea urchins eat plant and animal matter, including kelp, decaying matter, algae, dead fish, sponges, mussels, and barnacles.
- Serpent stars originate from the reefs of the Caribbean, and are great scavengers for the marine aquarium. They are peaceful omnivores that are easy to care for under proper conditions. Starfish are well known for their powers of regeneration. A complete new animal can grow from a small fragment such as an arm.

Tunicates:

- Sea peaches are commonly found in the northern Pacific Ocean, ranging from the Arctic Sea down to Puget Sound, and most common in the Bering Sea. The Sea peach is typically barrel shaped, orange to red in color, growing to a height of 18 centimeters. It has two siphons on top and its body is attached directly to the substrate. The Sea peach is preyed upon by crabs and sea stars.

Annelids:

- Polychaete worms or tube worms are found on all coral reefs. They are members of a large group of segmented annelid worms. These sedentary worms are characterized by their ability to construct tubes using a variety of materials, including secreted mucus, sand grains, shell bits or calcium. The worms have a feathery crown of tentacles that varies in color from yellow, orange or red. These specialized tentacles serve a dual purpose: for respiration and for a trap to capture small food particles.
- Featherduster worms, or fan worms, are common throughout the world in shallow water. These segmented worms secrete a leathery tube that supports and protects the soft body. They are named for the fan of tentacles that extends from the protective tube. The tentacles are used in both oxygen uptake (respiration) and filter feeding. The worm produces the tube, secreting a leathery mucus from a collar-like structure at the base of the tentacles. Particles of sand and mud that are collected in the tentacles are incorporated into the tube.

Disposition

We do not recommend releasing any laboratory animal into the wild, and especially if they are not native to the environment.

- Adoption is the preferred disposition of invertebrates. If a capable owner cannot adopt the invertebrates, it may be placed in a bag in the freezer and disposed of after a 48-hour period. After 48 hours in the freezer, dispose of the invertebrates in the general garbage or according to your school's policy