Education Department
Waikīkī Aquarium
University of Hawai‘i-Mānoa

MARINE LIFE PROFILE: MOON JELLY

Scientific names:	*Aurelia sp.*
Distribution:	world wide, in tropical & temperate waters
Size:	to 12 inches (30 cm) in diameter
Diet:	microplankton

The moon jelly (also known as a jellyfish) belongs to the invertebrate Phylum Cnidaria**,** a diverse group of stinging animals whose members all possess stinging cells for feeding and protection. Sea jelly relatives include the sea anemones, corals, and Portuguese man-of-war. They are all simple, soft-bodied organisms with just two major tissue layers arranged around a central gut cavity. Individual animals are radially symmetrical, with a ring of tentacles around the central mouth. The tentacles bear stinging cells that are used for food capture and defense.

In the Cnidarians, there are two basic body forms the **polyp** form, like the familiar sea anemone, and the free-floating **medusa** form. Sea jellies, or jellyfish, illustrate the medusa body form: a gelatinous, bell-shaped body with mouth and tentacles hanging down from the undersurface of the bell. The jelly-like central layer of a medusa is 95% water, with protein and elastic fibers for gel and flex. Jellies are not attached to the bottom, but are carried by ocean currents, floating and swimming weakly by means of muscular contractions of the bell. However, the life cycle of most jellies includes a small polyp stage.

The moon jelly, named for its translucent circular bell, is well known world wide in tropical and temperate waters where it occurs in quiet bays and harbors. This genus *(Aurelia)* is widely distributed throughout the world, but scientists have recently found that those occurring in Hawaii, Palau, and Borneo are an unnamed species. As of yet, their designation is a number rather than a name: *sp.4.* The moon jelly's diet includes micro-plankton, minute crustaceans and fish larvae which it collects as it pulses through the water. The diet of very small prey requires only mild stinging cells; this jelly is harmless to most humans.

At the Waikiki Aquarium, we feed the moon jellies millions of one to two day-old brine shrimp larvae. The jelly's upper bell surface is armed with stinging cells and mucus secretions to help trap prey. The captured food is moved to the edge of the bell where the four central mouth arms collect it. As food moves up into the four stomach pouches, you can see the orange-colored brine shrimp right through the transparent body of the jelly. After digestion, nutrients are distributed through the body of the jelly by a system of channels.

As simple as the moon jelly is, it does have sensory structures around the rim of the bell. Balance organs and light sensors help the animal sense up and down, light and dark.

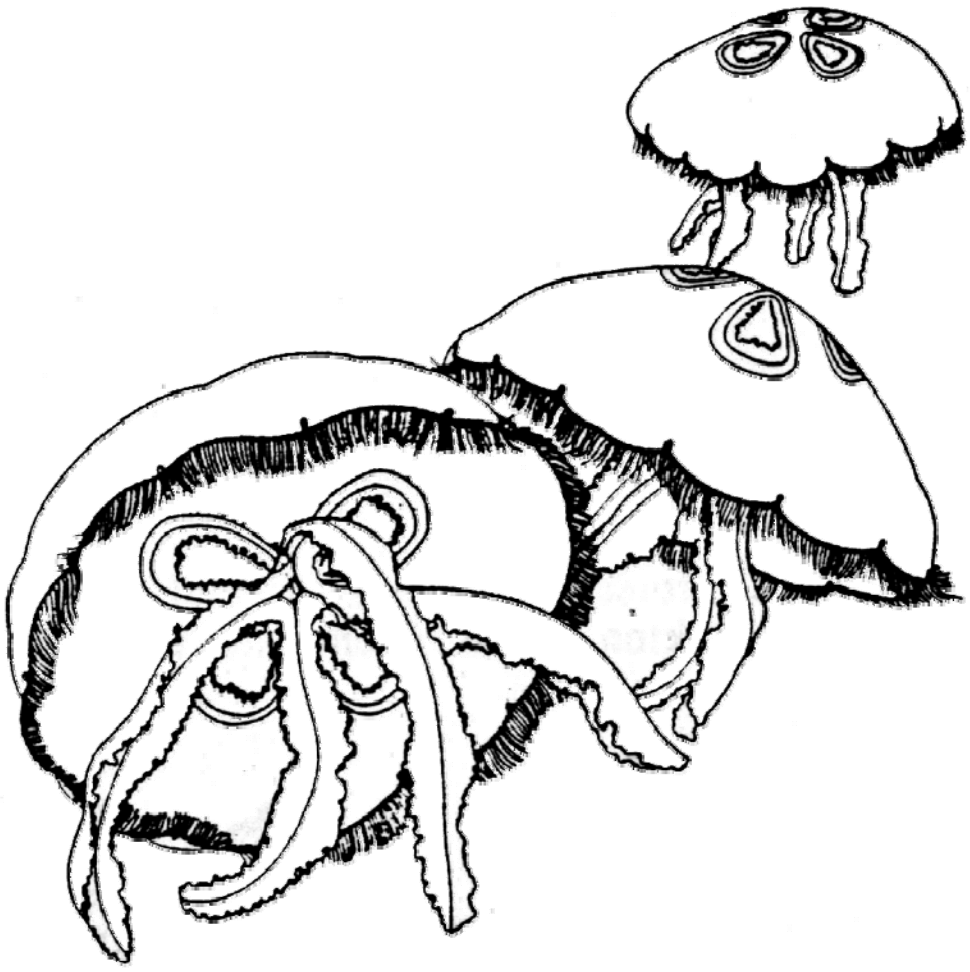
The tentacles of sea jellies and other cnidarians are lined with microscopic stinging cells that are activated by touch or chemical cues. Each cell fires a barbed thread that can penetrate the skin and deliver toxin that causes a burning sensation and, sometimes, more severe reactions. The moon jelly, in contrast to the box jelly and some others, has a very mild sting, perhaps a reflection of its diet of microplankton. Swimmers should still be alert when jellies are present. If stung, many lifeguards and doctors recommend rinsing the area with seawater to rinse off stinging cells, then using ice to control pain. Vinegar is sometimes applied to the sting to help deactivate any toxin. Some individuals may be more allergic to sea jelly or man-of-war stings than others, requiring physicians' care. Others may be allergic to the treatment listed here. Use this treatment at your own risk, and consult your physician in all cases.

Classification:

Kingdom Animalia
Phylum Cnidaria (Coelenterata)
Class Scyphozoa
Order Semaeostomeae
Family Ulmariidae
Genus Aurelia
Species aurita

MOON JELLY

Aurelia aurita



MOON JELLY

Aurelia aurita