



MARINE LIFE PROFILE: LAGOON JELLY

Scientific names: *Mastigias* sp.
Distribution: Indo-Pacific, including Hawai‘i
Size: to 5 inches (12 cm) in diameter
Diet: microplankton, nutrients from
symbiotic algae

The lagoon jelly (also known as jellyfish) belongs to the invertebrate Phylum Cnidaria, a diverse group of stinging animals whose members all possess stinging cells for feeding and protection. 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 96% 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.

This sea jelly has a high, rounded bell that reaches diameters of 5 inches (12 cm). Using four frilly “mouth-arms,” it feeds on minute plankton. Small openings in the mouth-arms lead to the digestive cavity. Longer, club-shaped structures hang down below the mouth arms; these are not tentacles, but their function is uncertain. The animal’s brownish tint comes from symbiotic algae called zooxanthellae living within its tissues. The jelly receives some nutrition from the photosynthetic activity of the zooxanthellae and some species show distinctive light-seeking behaviors.

Swimmers should still be alert when these jellies are present since some people are sensitive even to mild stings. 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. Use this treatment at your own risk, and consult your physician in all cases.

In Micronesia, this jelly is found in protected lagoons and salt-water lakes where it is sheltered from ocean swells by the reef or rocky island shore. In Hawai‘i, this species is found in quiet bays and harbors and is probably an introduction from other parts of the tropical Pacific.

Classification:

Kingdom Animalia

Phylum Cnidaria (Coelenterata)

Class Scyphozoa

Order Rhizostomae

Family Mastigiidae

Genus Mastigias

Species papua and others

LAGOON JELLY
Mastigias sp.

