

The Center for Fisheries Research and Development at the Gulf Coast Research Laboratory in Ocean Springs conducts research and development in support of marine fisheries for the state of Mississippi. Fisheries research has been an integral part of the mission of the laboratory since its creation in 1947. Center biologists work on a wide range of coastal fishery issues including:

- blue crab and stone crab recruitment dynamics;
- habitat requirements of early life history stages of finfish, shrimp and blue crabs;
- reproductive biology of red drum, spotted seatrout, tripletail and wahoo;
- age and growth of important commercial and recreational fish species;
- impact of derelict and abandoned crab traps on crab resources and fishing and boating activities;
- restoration of the striped bass population in coastal tributaries;
- blue crab aquaculture; and
- a program to establish estuarine water quality criteria for the State of Mississippi in conjunction with the Mississippi Department of Environmental Quality.

SEA JELLIES of the Mississippi Sound

Guide to the Sea Jellies of the Northern Gulf of Mexico

Funded by the Coastal Impact Assistance Program through the Mississippi Department of Environmental Quality and the Center for Fisheries Research and Development

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SEA JELLIES of the *Mississippi Sound*

Guide to the Sea Jellies of the Northern Gulf of Mexico



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Sea jellies

appeared in the oceans about 650 million years ago and are found in all the world's seas. They are important and conspicuous members of the marine community and serve many ecological functions. In this guide are the species most often encountered in waters of the northern Gulf of Mexico.

To report sightings of invasive species or unusual jellyfish occurrences, contact harriet.perry@usm.edu.

GLOSSARY

Bell – *the gelatinous body of the animal; also called umbrella or float*

Pedalia – *appendages extending from the four corners of box jellies; long thin stinging tentacles are attached to them*

Oral arms – *appendages hanging below the bell that facilitate movement of food to the oral cavity for digestion; may be long and ruffled or short, thick, and firm*

Nematocysts – *stinging cells located along the tentacles of a sea jelly*

Sea Jellies

OF THE NORTHERN GULF OF MEXICO

Scientific name: *Aurelia aurita*

Common name: Moon jelly

Description: Translucent circular bell; large prominent gonads in clover shape. **Seasonal-**

ity: Small ones appear offshore in summer months, larger adults

found inshore September through

December. **Distribution:** Worldwide, both an inshore and offshore species; tolerates a wide range of salinity and temperature. **Size:** Up to 16 inches (400 mm) bell diameter.

Sting: Harmless to humans; sometimes very mild sting.



Photo by: Peter Parks
imagequestmarine.com

Scientific name: *Chrysaora quinquecirrha*

Common name: Sea nettle, compass jellyfish

Description: Saucer-shaped bell, white to pink, often

with red-brown radial stripes; 24-40 long stinging tentacles; from bell, four long, ruffled, lacy extensions same length as tentacles. **Seasonal-**
ity: May through December. **Distri-**
bution: Cape Cod to Florida through Texas. **Size:** Up to six inches (150 mm) bell diameter. **Sting:** Venomous, avoid contact.



Photo by:
Ron Larson

Scientific name: *Cyanea capillata*

Common name: Lion's mane

Description: Saucer-shaped bell, eight lobes along bell edge, white to pink, often with thin pairs of red-brown

radial stripes; more than 150 very long stinging tentacles; dense ribbon-like gonadal and mouth

extensions beneath bell that are shorter than ten-

tacles. **Seasonality:** January through March. **Distribution:** North Atlantic into Gulf of Mexico, North Pacific. **Size:** Up to 10 inches (260 mm) bell diameter in Gulf, may reach seven feet (2 m) across in Arctic. **Sting:** Highly venomous, avoid contact.



Photo by: Kirsten Larsen

Scientific name: *Drymonema dalmatinum*

Com-

mon name: No official common name; locally called big pink, pink meanie, stinging cauliflower, purple sea mane

Description: Similar to the lion's mane; bell flatly rounded, shield shaped, pink to yellow-white; more than 150 long stinging tentacles; beneath bell are dense ribbon-like gonadal and mouth extensions that are shorter than tentacles. **Seasonality:** Observed in the fall of 2000 in the Mississippi Sound. **Distribution:** Mediterranean, Indo-Pa-

cific, Caribbean, Gulf of Mexico. **Size:** Up to three feet (1 m) bell diameter.

Sting: Highly venomous, avoid contact.



Photo by: Jason Steckler

Scientific name: *Chiropsalmus quadumanus*

Common name: Sea wasp, box jelly

Description: Translucent dome-shaped bell with four distinct sides; four large, hand-shaped pedalia with seven to nine finger-like branches, each branch giving rise to a long slender tentacle; tentacles covered with closely set rings of nematocysts. **Seasonality:** August through October. **Distribution:** Atlantic Ocean, Gulf of Mexico. **Size:** Bell diameter up to seven inches (175 mm), tentacles up to 10 feet (3m). **Sting:** Highly venomous, avoid contact.

Scientific name: *Tamoya haplonema*

Common name: Sea wasp, box jelly

Description: Translucent elongate bell with four distinct sides; four flat, spatula-shaped pedalia extending from bell margin each with one tentacle; tentacle long, hollow, very flexible and covered with closely set rings of nematocysts.

Seasonality: May be present year round. **Distribution:** Atlantic Ocean, Gulf of Mexico. **Size:** Bell length up to eight inches (200 mm), tentacles up to 10 feet (3 m). **Sting:** Venomous, avoid contact.



Venomous jellyfish can still deliver a nasty sting, even when washed ashore and appearing dead; the stinging cells can be triggered by mechanical stimulation.

Photo by: Alvaro Migotto

*Chiropsalmus
quadumanus*



Photo by: Alvaro Migotto

Scientific name: *Physalia physalis*

Common name: Portuguese man-of-war



Photo by: Alvaro Migotto

Description: Purplish-blue, gas-filled floating sac with long red, purple or blue tentacles. **Seasonality:** November through March. **Distribution:** Worldwide, usually tropical waters. **Size:** Bell may reach up to 12 inches (300 mm) in length with tentacles reaching up to five feet (1.5 m) in length. **Sting:** Highly venomous, avoid contact.

Scientific name: *Porpita porpita*

Common name: Blue button

Description: Button-shaped float with a hydroid colony of tentacles beneath; float has grooves radiating from the center and is golden brown; tentacles may be blue to purple to yellow.

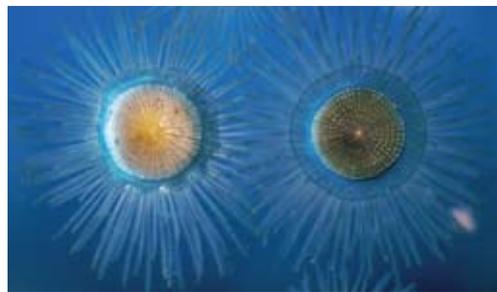


Photo by: Peter Parks
imagequestmarine.com

Seasonality:

Usually washes ashore on beaches during the summer months. **Distribution:** Warm waters of the Atlantic Ocean and Gulf of Mexico. **Size:** Less than 1.5 inches (40 mm) in diameter. **Sting:** No sting.

Scientific name: *Velella velella*

Common name: By-the-wind sailor

Description: Bluish to purple with a flat oval transparent float; an erect triangular sail projects vertically and short tentacles hang down from float. **Seasonality:** Washed ashore during spring and summer months. **Distribution:** Worldwide, tropical and temperate oceans. **Size:** Float up to three inches (75 mm) across. **Sting:** No sting.

Veella veella

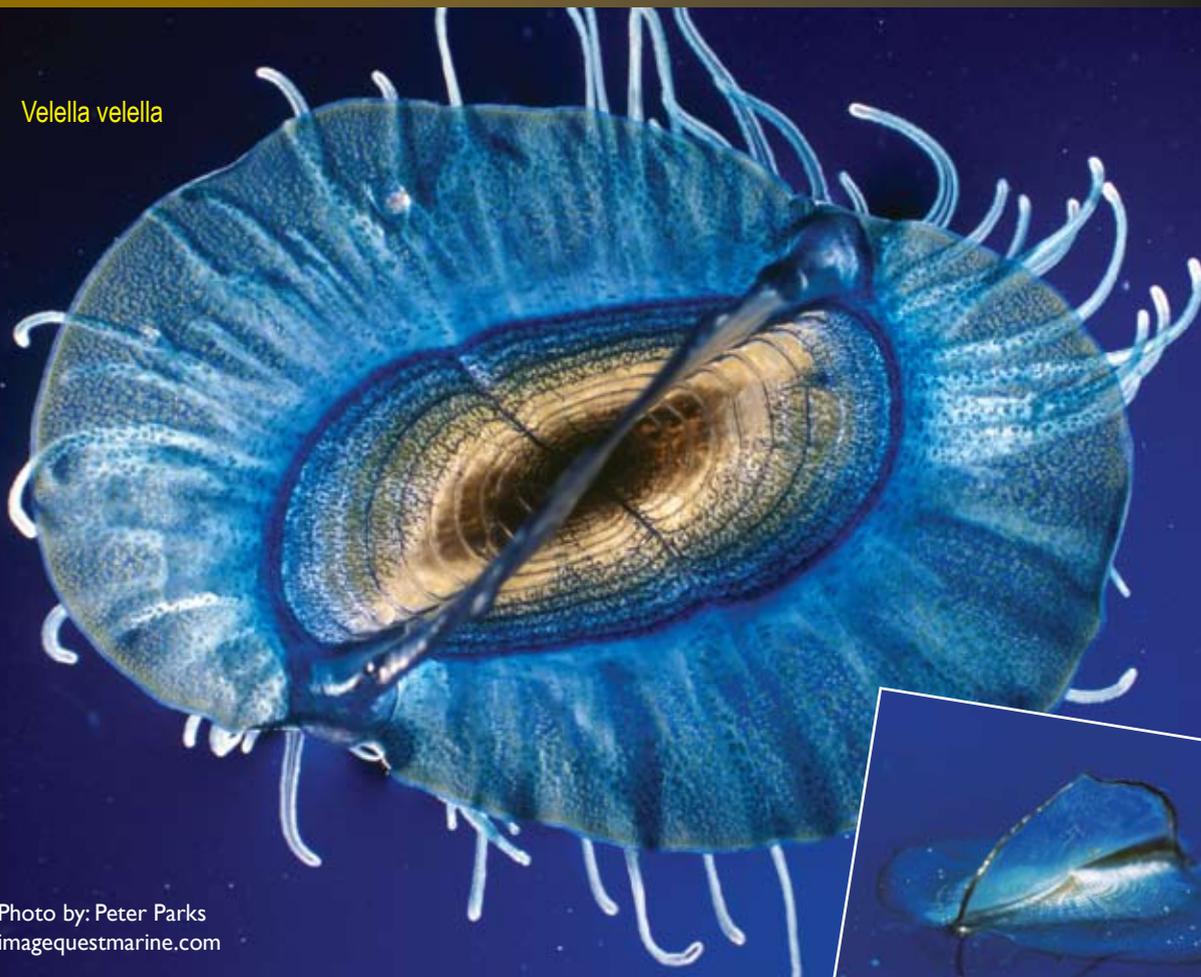


Photo by: Peter Parks
imagequestmarine.com



Photo by: Mississippi Department of Marine Resources

Invaders from Down Under

Phyllorhiza punctata – an exotic species from “down under,” the Australian spotted jellyfish invaded Mississippi waters in the summer of 2000 in the hundreds of thousands. Arriving as small tennis-ball-sized individuals, they soon grew to washtub size weighing over 25 pounds. As filter feeders, they strain tiny plants and animals from the water column, and there was some concern that they were feeding on the larvae of important fish and shellfish in local waters.

Did You Know?

Scientific name: *Phyllorhiza punctata*

Common name: Spotted jelly

Description: Bell somewhat flattened, colorless with white spots; lacking tentacles around the margin; eight short, thick, transparent branching oral arms which terminate in large bundles of stinging cells; a longer ribbon-like transparent appendage hangs from each oral arm. **Seasonality:** Summer. **Distribution:** Gulf of Mexico, Caribbean, Australia, Hawaiian Islands. **Size:** Bell diameter up to 20 inches (500 mm). **Sting:** Usually harmless to humans, sometimes mild sting on sensitive areas.



Photo by: Alvaro Migotto



Scientific name: *Stomolophus meleagris*

Common name: Cannonball jelly,
cabbagehead

Description: Rounded, rigid bell; milky color, sometimes with reddish-brown pattern becoming darker towards bell margin; tentacles and oral arms presented as a short, rigid stalk extending beneath bell.

Seasonality: November through April, occasionally seen other months. **Distribution:** Chesapeake Bay through Gulf of Mexico to South America, Pacific side of Panama.

Size: Ball shaped, from tennis to soccer-ball size. **Sting:** Mild to no sting.

Photo by: Ron Larson

The largest jellyfish in the world, *Cyanea arctica*, weighs nearly a ton and can have tentacles up to 100 feet long.

Scientific name: *Rhopilema verrilli*

Common name: No official common name, sometimes called mushroom jelly

Description: Bell somewhat flattened, whitish, NO WHITE SPOTS; lacking tentacles around the margin; eight thick transparent branching oral arms which terminate with large bundles of stinging cells, may have fingerlike transparent extensions below. **Seasonality:** December through March. **Distribution:** Gulf of Mexico and Atlantic Ocean. **Size:** Bell diameter up to 20 inches (500 mm). **Sting:** Usually harmless to humans, sometimes mild sting on sensitive areas.



Photo by: Harriet Perry

Scientific name: *Mnemiopsis* spp.

Common name: Common comb jelly

Description: Transparent, elongated body; semi-transparent rows of “combs” running the length of body. **Seasonality:** Year round with highest densities during the summer months. **Distribution:** Gulf of Mexico and western Atlantic Ocean; has been introduced into the Black and Caspian Seas. **Size:** Up to four inches (100 mm) in length. **Sting:** No sting



Photo by: Alvaro Migotto

Scientific name: *Beroe ovata*

Common name: Brown comb jelly

Description: Barrel-shaped; color reddish-brown to orange with rows of “combs” running the length of the body.

Seasonality: Year round with highest densities during summer months.

Distribution: Gulf of Mexico and western Atlantic Ocean, has been introduced into the Black and Caspian Seas. **Size:** Up to eight inches (200 mm) in length. **Sting:** No sting.



Photo by: Kirsten Larsen

Scientific name: *Aequorea aequorea* and *Rhacostoma atlanticum*

Common name: Crystal jelly, water jelly

Description: Flat, solid saucer-shaped bell; one side of bell is lined with radial canals that feel like ridges; very fine tentacles; *Rhacostoma* differs from *Aequorea* by having wart-like bumps lining the canals; can be bioluminescent.

Seasonality: Spring and summer. **Distribution:** Worldwide. **Size:** Up to 15 inches (380 mm) diameter. **Sting:** No sting.



Photo by: Kirsten Larsen