

The Portuguese man-of-war (*Physalia physalis*)

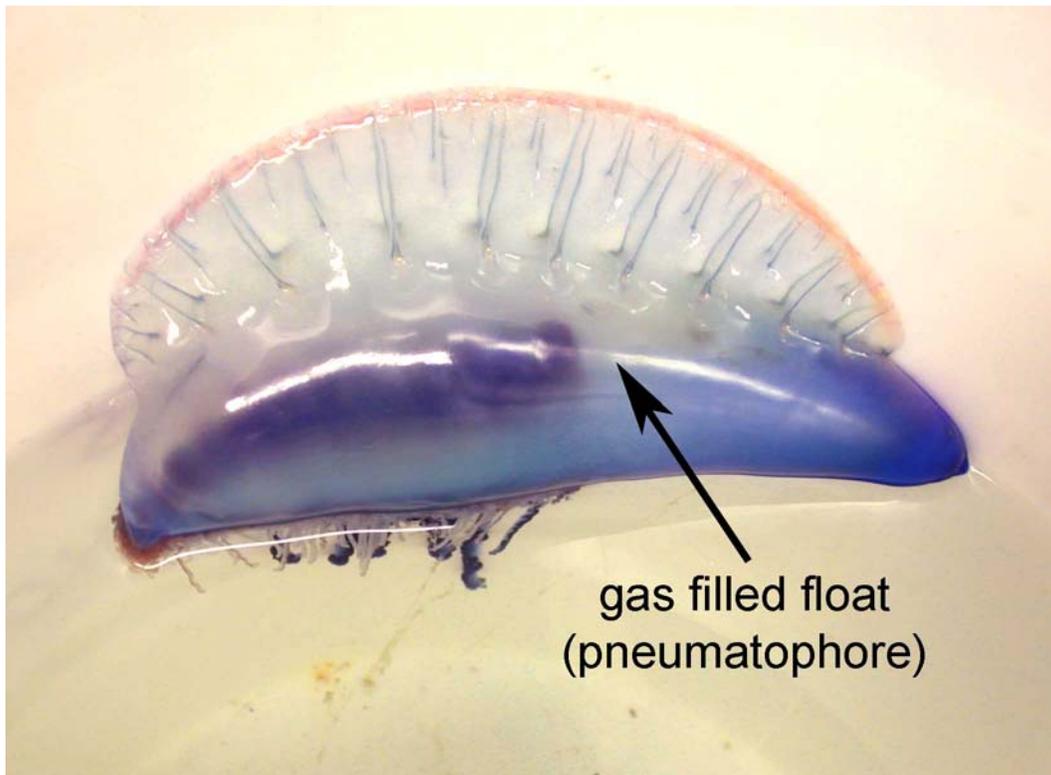
Classification:
Kingdom Animalia
Phylum Cnidaria
Class Hydrozoa
Order Siphonophora
Suborder: Rhizophysaliae
Family: Physaliidae
Genus: *Physalia*
Species: *Physalia physalis*



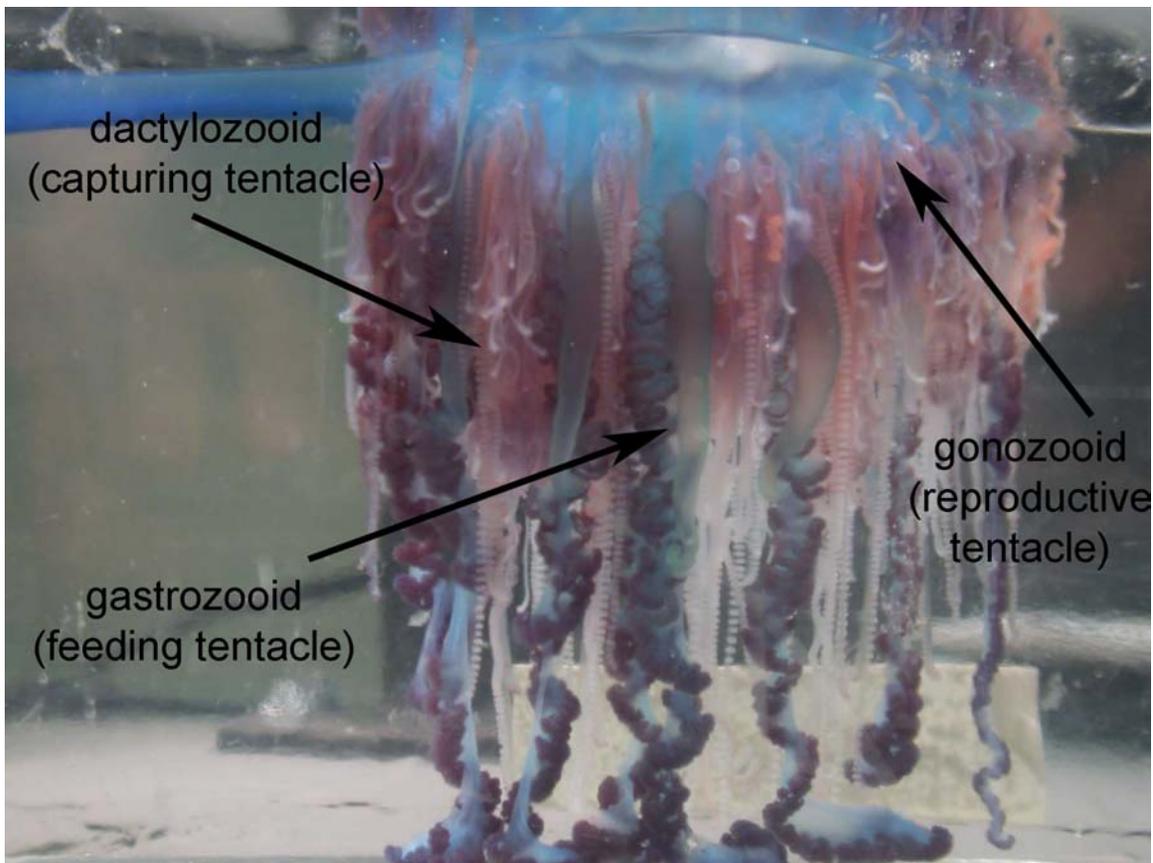
What is it?

The Portuguese man-of-war is a spectacular object to behold. While it may look something like other well-known jellyfish, with its conspicuous float and trailing tentacles, according to scientists the man-of-war is **not** a true jellyfish (true jellyfish are those that belong to the class Scyphozoa). Furthermore, the man-of-war is not a single animal. It is actually a colony of numerous organisms called polyps (or zooids) that are so specialized that they cannot live without each other.

Four main types of polyps make up the man-of-war. One individual polyp becomes the large gas filled float (pneumatophore) that sits horizontally on the surface of the ocean. The float can be up to 15 cm above the water and is generally translucent, tinged with pink, purple or blue. The other polyps become the feeding tentacles (gastrozooids), the defensive/prey capturing tentacles (dactylozooids) and the reproductive polyps (gonozooids). The tentacles of the man-of-war can hang down in the water 165 feet (or 50 meters).



gas filled float
(pneumatophore)



dactylozoid
(capturing tentacle)

gastrozoid
(feeding tentacle)

gonozoid
(reproductive
tentacle)

Where is it found?

Man-of-wars can be found floating on the surface of the ocean in warm tropical and subtropical areas around the world. In the United States they can occur in coastal waters from Florida (Atlantic coast, Florida Keys, Gulf of Mexico) around to Texas. However, some have been known to drift up the Atlantic coast on warm currents, or by storms, up into the cooler Northeastern United States.

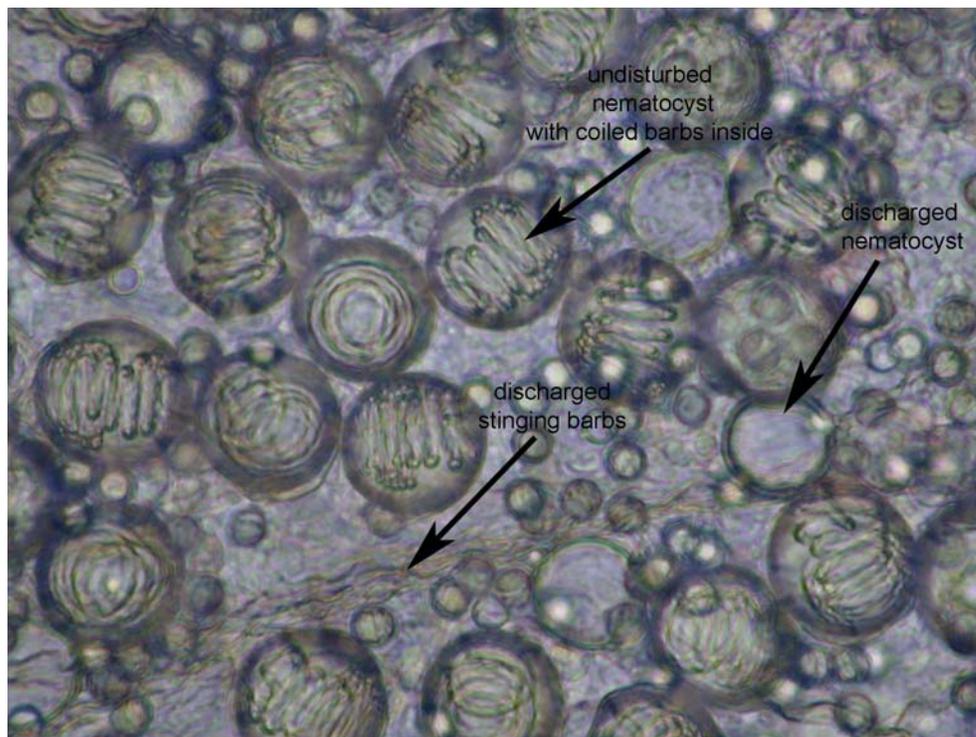
It should be noted that recent research suggests that Man-of wars in the Indo-Pacific may be a different species: *Physalia utriculus*.

What does it do?

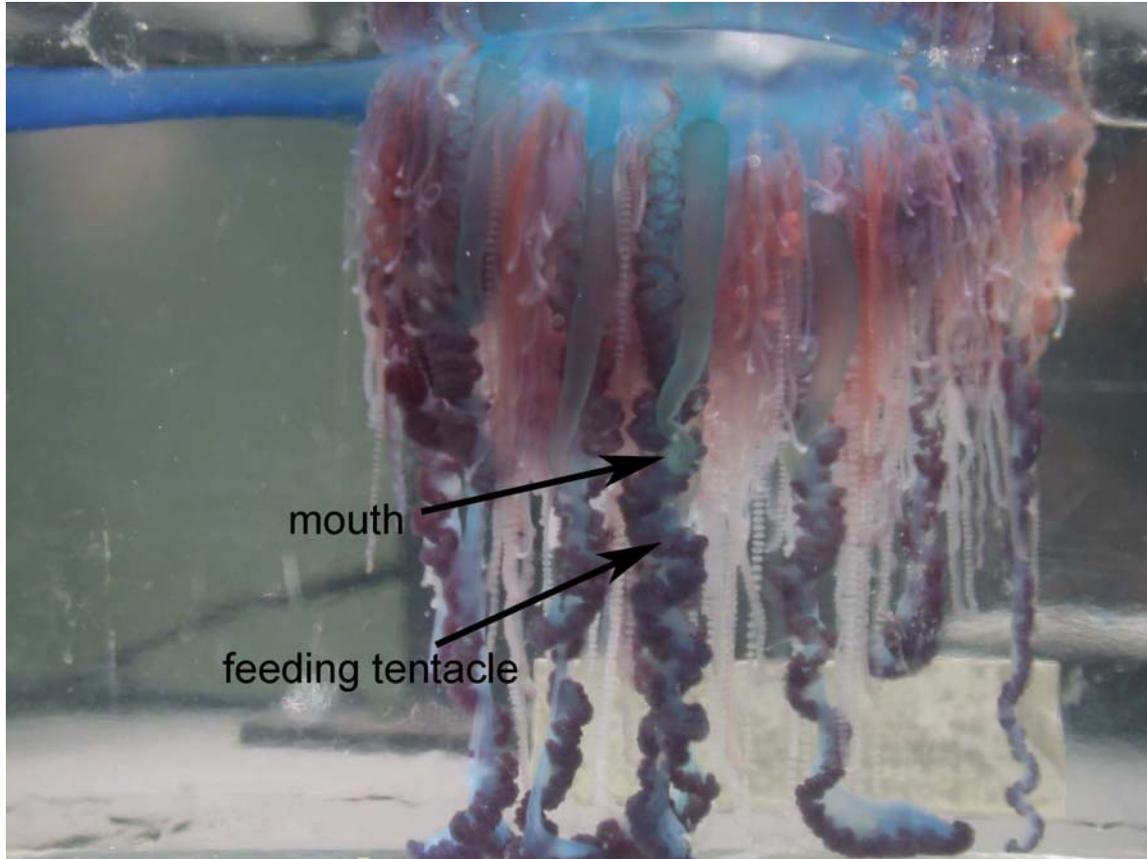
The man-of-war is adapted to live its life entirely in the open ocean. It drifts along on the surface (aided by the large float), blown by winds and carried by currents. When new colonies are produced their floats either lean to the left or right, ensuring that they will drift in different directions and spread themselves out more evenly over the ocean. This also helps when strong winds blow man-of-wars into shallow coastal waters, as half will be blown away from shore and are more likely to survive. Sea turtles, some fish and also crabs will feed on the man-of-war if they catch it.

What does it eat?

As the colony drifts, the man-of-war is constantly ‘fishing’ for food with its tentacles. The food is trapped in the tentacles (dactylozooids) with the aid of specialized stinging capsules called nematocysts that cover much of the surface area. Nematocysts are tightly packed with tiny, coiled, stinging barbs that shoot out whenever the cells are disturbed (either by something brushing up against them, or by osmotic water changes).



Potential food items such as small fish, crustaceans and plankton are paralyzed by these stinging cells, which contain a powerful neurotoxin. Once the food is paralyzed, the feeding tentacles (gastrozooids) attach and draw the prey up to the mouths.



How does it reproduce?

Scientists believe that man-of-wars spawn together in large numbers, with each colony (being either all male polyps or all female polyps) releasing gametes into the water to be fertilized. The resultant larvae then each go through asexual budding to produce a new man-of-war colony.

Is it dangerous to humans?

The man-of-war does not actively attack humans and is commonly out in open ocean water, far away from most human contact. However, they can sometimes be found in relatively shallow coastal waters. If you come into contact with one of its tentacles while swimming, you may get a painful sting from the nematocysts. Similarly, a washed up man-of-war on the beach (even if it looks dried out) remains highly venomous: it should be treated respectfully and care should be taken to avoid touching the tentacles.

If you are stung, the latest medical research suggests carefully removing (with gloves on) any noticeable tentacles from the afflicted areas and then rinsing the area with

plenty of lukewarm fresh water until the stinging sensation becomes lessened. Ice can help numb the affected area for pain relief. It has been suggested by lifesaving groups in Australia that applying alcohol may worsen the sting by making any remaining undisturbed nematocysts discharge. If the sting is severe, seek medical assistance. Keep the victim calm and watch for signs of shock or further distress as jellyfish stings may bring on cardiac or respiratory arrest.

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With assistance from Dr Dale Calder, Royal Ontario Museum

Further reading...

Calder, D. R. 1977. A guide to common jellyfishes of South Carolina. Sea Grant Marine Advisory Bulletin 11. Charleston, S.C.: South Carolina Marine Resources Center. 13 pp.

Brusca, R. C. and G. J. Brusca. 2003. *Invertebrates* (Second Edition). Sinauer Associates, inc. Sunderland, MA, USA. 936 pp.

Hawaiian web page: <http://www.aloha.com/~lifeguards/portugue.html>

Australian Museum web page: <http://www.amonline.net.au/factsheets/bluebottle.htm>

Florida website (Key Biscayne): http://www.key-biscayne.com/beach_park/facts/manowar.shtml