What are jellyfish?

Jellyfish are marine organisms that represent the sexual generation of the phylum Cnidaria. Their bell is radially symmetrical in the shape of a hat, bell or umbrella. Their gelatinous umbrella is divided into lobes that extend into the tentacles with stinging cells. Tentacles are also located under the umbrella. Between the tentacles are located small vesicular sensory organs (for light, for spatial orientation and chemical characterization of the environment). Their mouths are on a short or long handle in the middle, on the underside of the umbrella. Their nervous system is poorly developed. There is also a system of muscles in the umbrella, the contraction of which squeezes out the water. That is how they move in the water. The best-known Adriatic jellyfish belong to the class Scyphozoa.

What do they eat?

Jellyfish have stinging cells in their tentacles to stun or paralyze their prey before they eat them. They feed on plankton and small marine animals. The predators of jellyfish are some fish species, sea turtles and some types of comb jellies. Cannibalism has also been recorded.

Jellyfish do not attack!

Sometimes their population increases rapidly, which can worry people, but jellyfish are normal inhabitants of the Adriatic Sea! They do not attack humans and move spontaneously with the movement of water. That's why the eventual meeting with them is a random and unintentional event.

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First aid treatment for jellyfish stings

1. Carefully rinse with sea water, no rubbing!
2. Apply a mixture of sea water (not fresh water!) and baking soda (1:1 ratio) for 2 min to stop further release of toxins from the stinging cells that burn the skin
3. Remove any residual tentacles and excess baking soda mixture (e.g. with a plastic card)
4. Apply cold packs (plastic ice bag, or a cold drink wrapped in a cloth or t-shirt) for 5-15 minutes
5. Assess the degree of pain, re-apply the cold pack if required for a further 5-10 minutes
6. If pain persists, consult a physician or pharmacist, ask for local painkillers/antiinflammatory creams or gels (e.g. 3-4% lidocaine + hydrocortisone)

Source: Guidelines for the identification of Mediterranean jellyfish and other gelatinous organisms with a first aid protocol for possible sting treatment, MED-JELLYRISK, University of Malta

The most common species of jellyfish and comb jellies in the Adriatic Sea

The guide to recognition

Institute of agriculture and tourism

Poreč City project: Invasive species centre

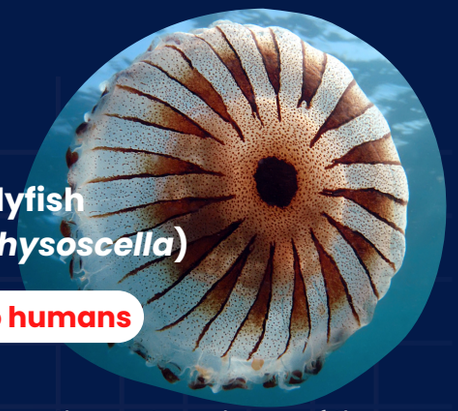
july, 2022.

Moon jellyfish (*Aurelia aurita*)

Not dangerous to humans

- A very common indigenous species in the Adriatic Sea
- It lives in coastal waters, most often near the surface, but it can be found up to a depth of 20 meters
- It is easily recognizable by the 4 pink horseshoe-shaped gonads
- Occurs in the spring and summer when it reaches its peak of reproductive development

Compass jellyfish (*Chrysaora hysoscella*)



Dangerous to humans

- It is spread along the eastern shores of the Atlantic Ocean and in the Mediterranean Sea
- It can grow up to 30 cm in diameter, and tentacles up to 1 m long
- Remains at depths up to 10 m, most often at the surface
- We recognize it by its yellow-brown umbrella that resembles a compass
- It has long tentacles whose stinging cells could create painful localised reactions in humans
- It approaches the coast more often in early summer, but rarely in large numbers

Mediterranean jellyfish (*Cotylorhiza tuberculata*)

Not dangerous to humans

- Indigenous Mediterranean species
- Her umbrella is flat and looks like a fried egg
- The umbrella is greenish-brown due to symbiosis with unicellular zooxanthellae algae, and can reach a diameter of 20 cm
- It usually inhabits the open sea, but sometimes appears along the coast
- In the Adriatic, it is most common in the summer

Barrel jellyfish (*Rhizostoma pulmo*)

Generally not dangerous to humans / may cause mild stinging in sensitive persons

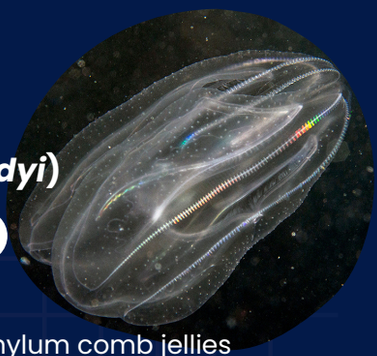
- A common indigenous species in the Adriatic Sea
- Individuals can grow over 50-60 cm and weigh over 10-15 kilograms!
- This jellyfish is white with a bluish sheen
- It is food for sea turtles
- It can appear in large swarms in late winter

Pelagia noctiluca

Dangerous to humans

- A typical offshore Mediterranean species, it is sometimes washed away by sea currents and waves
- It has ability to create light (bioluminescence)
- It can grow up to 6 cm in diameter, and tentacles up to 20 cm
- Its stinging cells contain a strong poison that can cause pain and injuries similar to burns, followed by depigmentation of the skin or even a scar

Sea walnut (*Mnemiopsis leidyi*)



Not dangerous to humans

- ·Belongs to the phylum comb jellies (Ctenophora)
- ·Comb jellies are marine planktonic organisms similar to jellyfish, but they don't have stinging cells and don't sting
- ·The sea walnut can survive in a wide range of environmental conditions
- ·It feeds on zooplankton organisms, including the planktonic stages of fish (eggs and larvae of sardines, anchovies, etc.). As a result, it can significantly disrupt the ecosystem, drastically reduce fish stocks and endanger fisheries and maritime tourism