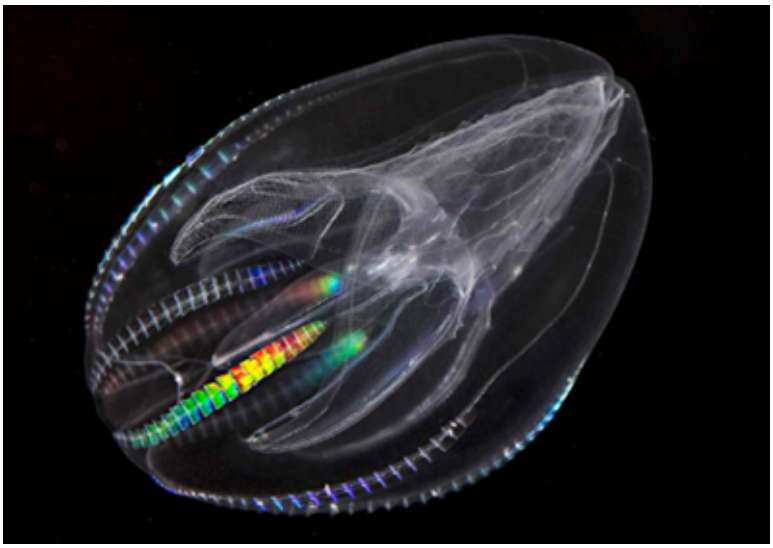
North American Marine Environment Protection Association

NAMEPA

Fact Sheet
Planet & Ocean Discovery Series: Open Ocean

Ctenophora
Comb Jellyfish



Comb Jellies' name and jellyfish-esque appearance may be deceiving at first, as, despite both, Comb Jellies are not a type of jellyfish; in fact, the two have many notable differences, as they belong to different phyla and possess very different features.

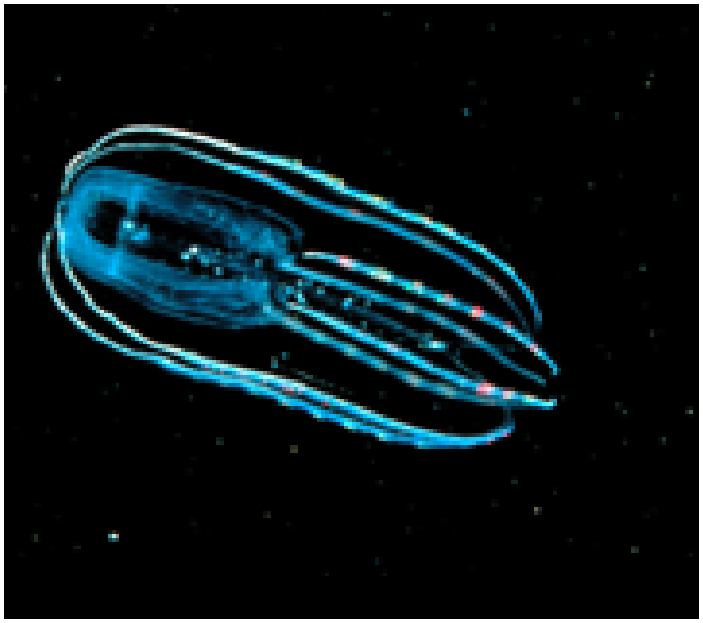
Comb Jellies are members of the **phylum** Ctenophora. Unlike their look-alike, Comb Jellies' tentacles do not possess stinging cells, but rather sticky cells known as **colloblasts**. There are between 100-150 known species of Comb Jellies, many of which possess their own unique method of catching prey. Some Comb Jellies reel in unsuspecting jellyfish with their sticky tentacles. Other Comb Jellies possess a large mouth that they use to devour and digest any creature they might drift into, including other Comb Jellies.

Another notable distinction between jellyfish and Comb Jellies is their method of propulsion. While jellyfish use a ring-shaped muscle in their bell to push water behind them, Comb Jellies have thousands of hair-like structures known as cilia on eight bands, or combs, across their body. Common among microscopic bacteria, cilia act as tiny oars that propel the creature forward. Comb Jellies are the largest known animal to utilize cilia for locomotion.

Did You Know?

The inside of a comb jellyfish is more than 95% water.

Comb Jellies can vary in size across different species. The smallest Comb Jellies can come in sizes of 1 mm in width, while the largest, Venus's girdle, is 1 m long. They can be found throughout the world's oceans, but most species of Comb Jellies pefer warmer waters.



Many Comb Jellies are able to produce light using **bioluminescence**. Comb Jellies use bioluminescence as a defensive tactic—they use bright flashes to startle predators—or as a lure for prey. Many Comb Jellies have evolved to stay hidden in the darkness. Although many Comb Jellies are **translucent**, some are bright red or orange; these colors serve just as well as black to camouflage the jellies in deeper waters and are easier pigments to produce. Some jellies have evolved dark red digestive systems to mask the glow of bioluminescent prey inside and remain hidden in the deep, dark, and mysterious waters of the **twilight zone** and beyond

Did You Know?

The combs of a Comb Jelly are translucent in color, but they produce a shimmering rainbow effect when moving under white light.

Resources

Comb jelly. (n.d.). Monterey Bay Aquarium. Retrieved August 10, 2023, from https://www.montereybayaquarium.org/animals/animals-a-to-z/comb-jelly#:~:text=Cool%20facts&text=Its%20thin%20skin%20stretches%20over,cilia%20structures%20in%20its%20mouth

Jellyfish and Comb Jellies. (2023, May 11). Smithsonian Ocean. Retrieved August 8, 2023, from https://ocean.si.edu/ocean-life/invertebrates/jellyfish-and-comb-jellies