

Ctenophora: Comb Jellies That Glow

An anatomical and taxonomic overview of the ocean's sea walnuts.

Taxonomic Classification & Habitat

Also Known As

Ctenophores are commonly referred to as "Sea Walnuts" or "Comb Jellies."



EXCLUSIVELY_MARINE

Found entirely in ocean environments; no freshwater or terrestrial species exist.



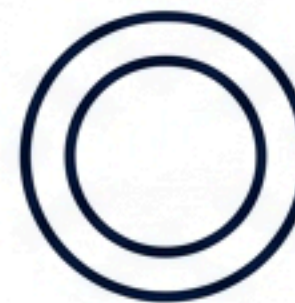
TISSUE_LEVEL

Cells performing similar functions are arranged into tissues, without forming complex organs.



RADIAL_SYMMETRY

Any plane passing through the central axis divides the organism into identical halves.

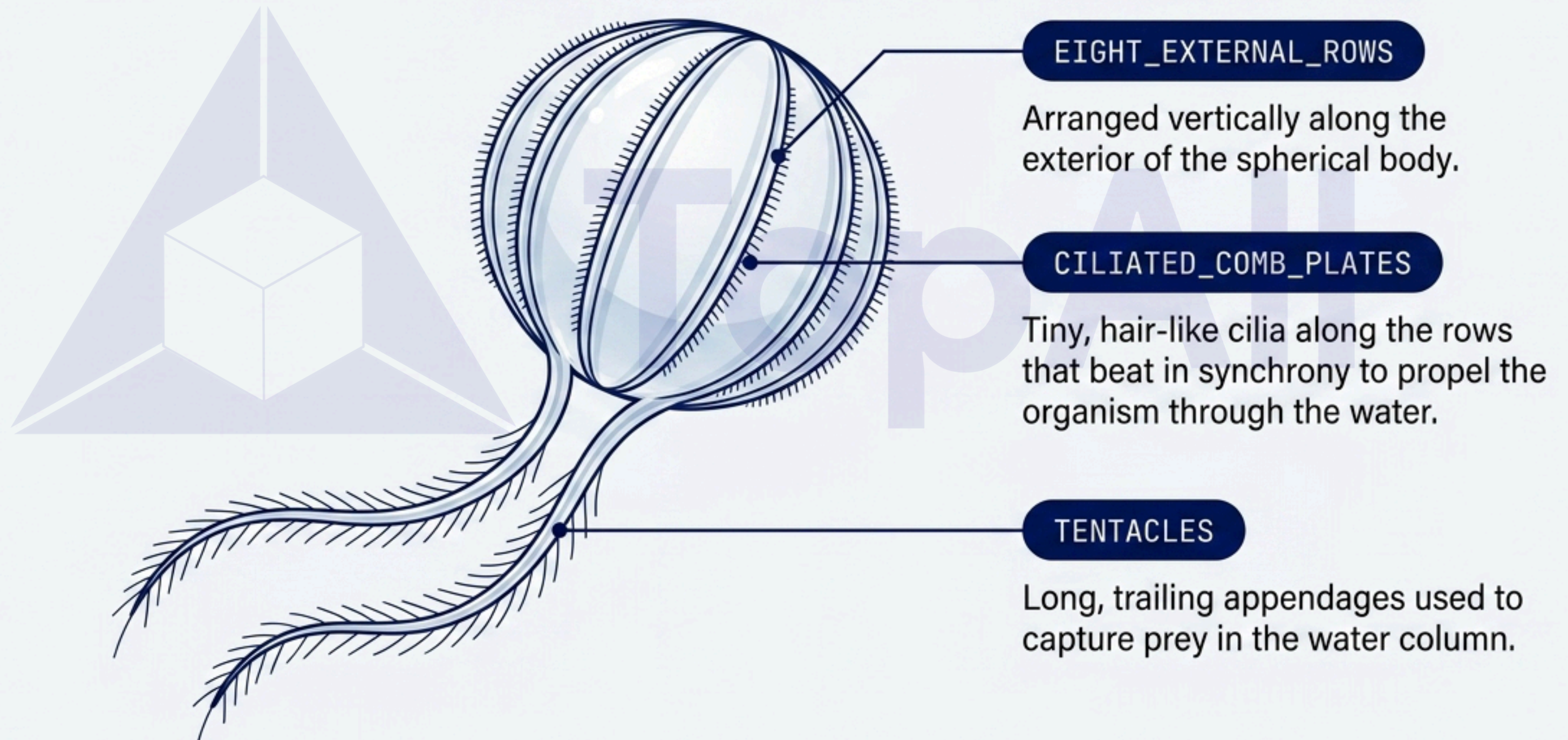


DIPLOBLASTIC

Cells are arranged in two embryonic layers: an external ectoderm and an internal endoderm.

Structural Anatomy: The Comb Plates

The defining physical characteristic of Phylum Ctenophora is their unique method of locomotion, driven by specialized external structures.





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Key Highlights

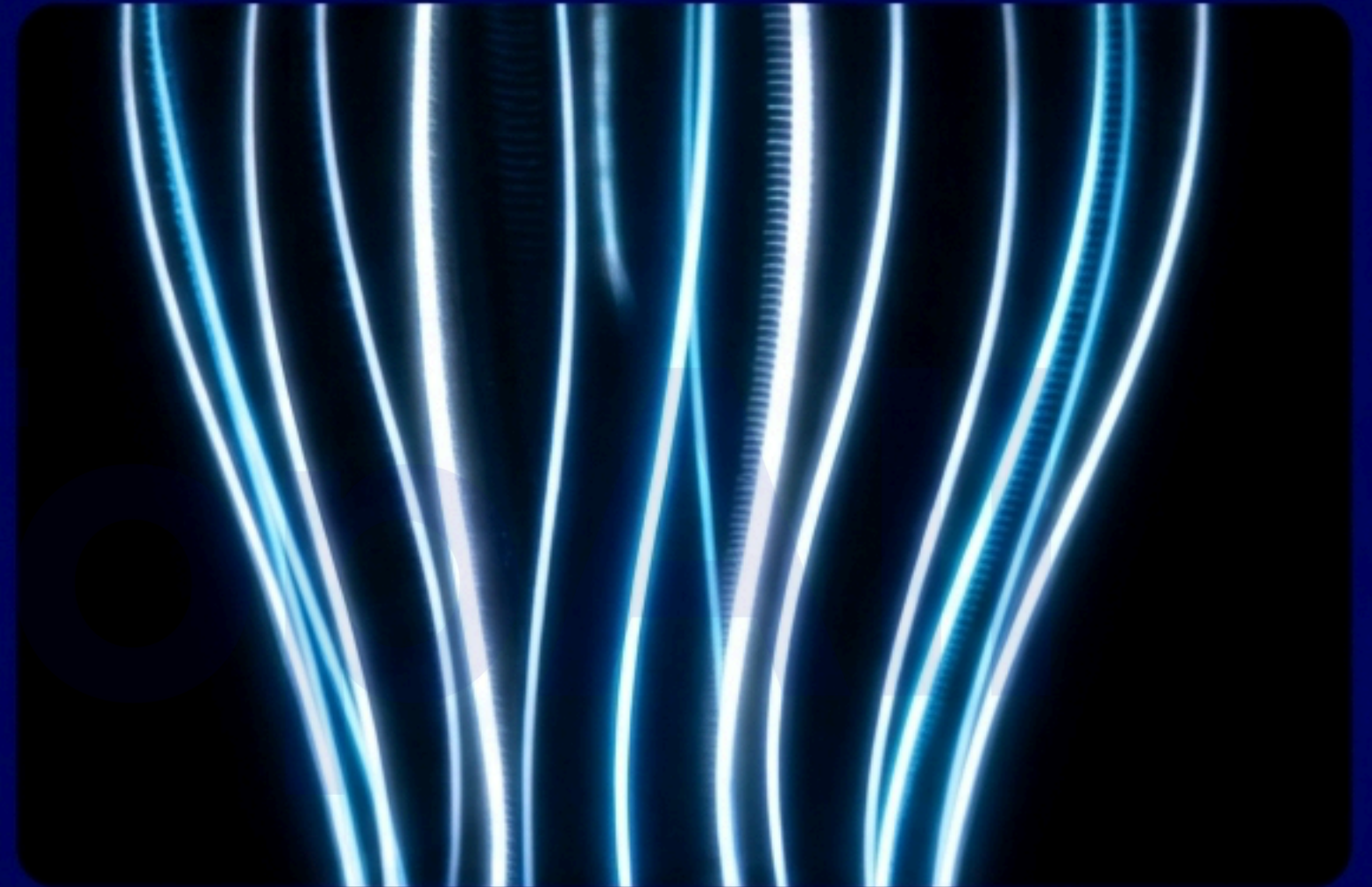
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Masters of Deep Sea Light

Bioluminescence

The property of a living organism to emit light is exceptionally well-marked in ctenophores.



As the ciliated comb plates beat, they scatter light. In the dark of the ocean, their innate bioluminescence creates stunning, glowing displays.

Internal Systems & Life Cycle

DIGESTIVE_PATHWAY



Ctenophores utilize a dual-method digestive system to process food.

- ✓ **Extracellular:** Digestion initiated in the central gastro-vascular cavity.
- ✓ **Intracellular:** Digestion completed within the cells themselves.

LIFECYCLE



Reproduction in ctenophores takes place exclusively by sexual means.

- ✓ **Hermaphroditic:** Sexes are not separate in the individual (monoecious).
- ✓ **Fertilisation:** External (gametes are released into the water column).
- ✓ **Development:** Indirect (involves a morphologically distinct, free-swimming larval stage).

Representative Species



GENUS: PLEUROBRACHIA

The archetypal “sea gooseberry.” Characterized by a spherical body featuring the classic eight comb rows and long, trailing tentacles.

GENUS: CTENOPLANA

A distinct genus that demonstrates the morphological diversity within this exclusively marine phylum.

Key Takeaway

Phylum Ctenophora represents a beautifully specialized branch of marine life. Though structurally simple (diploblastic, tissue-level organization), their mastery of ciliated locomotion and bioluminescence makes them highly adapted deep-sea organisms.



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