PENNATULA (SEA PEN)

Classification:

Kingdom : Animalia

Phylum : Cnidaria

Class : Octocorallia

Order : Scleralcyonacea

Family : Pennatulidae

Genus : Pennatula

For further details, Link

Characteristics :

- Pennatula" is a scientific term referring to a genus of marine animals known as sea pens. Specifically, it's the type genus of the family Pennatulidae, which are feather-like colonial cnidarians.
- Sea pens are characterized by their feathery appearance, with a central stalk and side branches, and they inhabit warm seas.
- **Colonial Structure:** Sea pens are colonies of specialized individuals (zooids).
- **Feather-like Appearance:** They have a central axis, the rachis, with lateral branches called pinnules that resemble a feather.
- **Peduncle:** A fleshy stalk, or peduncle, anchors the colony by embedding itself in the soft seafloor.
- **Autozooids:** The larger polyps with tentacles are responsible for feeding and reproduction.
- **Siphonozooids:** Smaller, specialized polyps that help with water circulation within the colony.
- **Bioluminescence:** Many species can produce a blue-green light when stimulated, particularly in darkness.
- **Retraction:** The colony can retract its stalk and polyps into the sediment for protection.

Habitat and Distribution

- **Substrate:** Sea pens prefer soft, muddy, or sandy bottoms.
- **Depth:** They are found in a range of depths, but often prefer offshore locations, typically deeper than 10 meters.
- **Global Distribution:** Found in tropical and temperate waters worldwide.
- **Water Currents:** They are often found in areas with water currents that help bring them planktonic food.

Habit (Behaviour)

- **Anchoring:** They remain stationary by burying their peduncle in the sediment.
- **Filter Feeding:** The autozooids use their tentacles to capture plankton from the water for nourishment.
- **Withdrawal:** They can rapidly retract into the sediment when threatened.
- **Potential Movement:** Although mostly stationary, some species have demonstrated unusual rolling behaviour by inflating with water and moving with currents.
- **Aggregation:** Sea pens can form dense aggregations, creating three-dimensional structures that enhance local biodiversity on the seafloor.