

Experiential Learning Visit to Coringa Marine Museum

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Organised By: Department of Commerce & Management
Government College(A), Rajahmundry

Event Convenor and Faculty-in-Charge: Dr. B. Prathima

Accompanying Faculty Members: Mrs. T. Mani Ratnam,
Mrs. P. Prashanthi Kumari



The Department of Commerce & Management, Government College(A), Rajahmundry organised an educational visit to Coringa Mangrove World (Biodiversity Centre) for 38 BBA (Hons.) students as part of their experiential learning activities. The museum, located within the Coringa region of East Godavari District, serves as an interpretation centre that introduces visitors to the ecological, biological, and environmental significance of mangrove ecosystems. This visit provided the students with meaningful exposure to environmental studies, sustainability concepts, and green governance practices that complement their academic curriculum.

During the visit, the students first explored the large geographic and spatial models that represented the mangrove–estuary region. These models offered a clear visual understanding of how rivers, tidal creeks, backwaters, and mangrove forests are interconnected. By examining these representations, the students learned how estuarine systems function and how the mixing of freshwater and seawater shapes the surrounding ecosystem. This macro-level perspective helped the students appreciate the geographical and ecological intricacies of mangrove landscapes.

The museum also featured detailed information panels on various mangrove species. These panels explained the different types of mangrove trees and shrubs, their unique adaptations such as pneumatophores (breathing roots), vivipary (where seeds germinate while still attached to the parent tree), and mechanisms for tolerating high salinity levels. Students gained insight into how these plant species survive in harsh tidal environments and why mangroves play such a crucial ecological role along coastal regions.

Another significant part of the museum included exhibits showcasing the fauna and aquatic life found in and around mangrove ecosystems. Displays of fish, crabs, molluscs, and bird species illustrated how these animals depend on mangroves for shelter, breeding, and feeding. The students learned that mangroves act as vital nursery grounds and biodiversity hotspots that support a rich variety of life forms. These exhibits emphasized the ecological interdependence between flora and fauna within the mangrove environment.

In addition to biodiversity, the museum highlighted the ecosystem services provided by mangroves. The exhibits explained how mangrove forests protect coastal regions from storms, cyclones, and soil erosion; support fisheries and local livelihoods; sustain high levels of biodiversity; and contribute to climate regulation through carbon storage. Understanding

these services helped the students recognize the importance of mangroves not only as natural habitats but also as essential components of sustainable environmental management.

ZOOPLANKTON



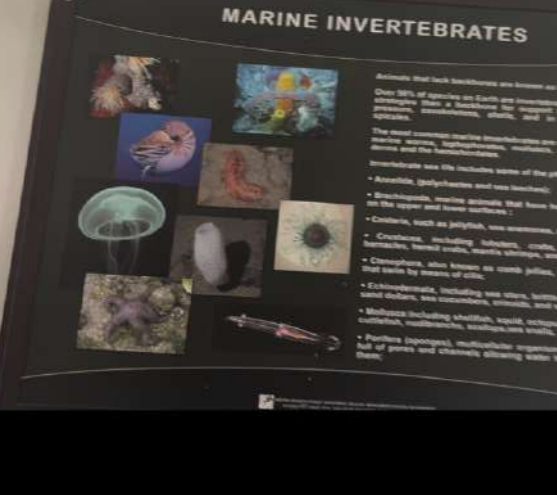
Zooplankton are heterotrophic (sometimes filter-feeding) plankton. Plankton are organisms that live in oceans, seas, and bodies of fresh water.

The zooplankton is divided into two groups: Temporary plankton consists of plankton and larvae of members of the benthos and permanent plankton includes all animals in their complete life cycles in a floating state.

The temporary plankton, particularly abundant coastal areas, is characterized by seasonal occurrence, though variations in spawning different species ensure its presence in all seasons.

Through their consumption and process phytoplankton and other food sources, zooplankton play a role in aquatic food webs, as a result consumers on higher trophic levels (including...

MARINE INVERTEBRATES

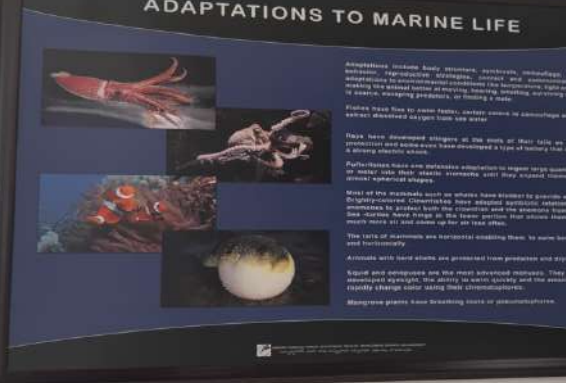


Animals that lack backbones are known as invertebrates. Over 95% of organisms on Earth are invertebrates. They include sponges, jellyfishes, mollusks, annelids, crustaceans, and many more.

The most common marine invertebrates are sponges, jellyfishes, mollusks, annelids, crustaceans, and many more.

- Sponges, which are sessile animals that have bodies that are porous and have many openings.
- Jellyfishes, which are gelatinous animals that have a bell-shaped body and tentacles.
- Mollusks, including snails, slugs, scallops, and nautilus.
- Annelids, which are segmented worms.
- Crustaceans, including crabs, lobsters, and shrimp.
- Echinoderms, including sea stars, brittle stars, sea urchins, and sea cucumbers.
- Poriferans (sponges), which are sessile animals that have a porous body and many openings.

ADAPTATIONS TO MARINE LIFE



Adaptations include being streamlined, having gills, and having a protective shell. Many marine animals have evolved a type of body that is adapted to their environment.

Fishes have evolved adaptations to survive in their watery environment. They have developed a type of body that is adapted to their environment.

Many of the mollusks such as snails have shells that provide protection from predators and desiccation. Some mollusks have evolved to live in the intertidal zone where they can survive both in water and on land.


The tentacles of sponges are specialized structures that help them to capture food particles.

Animals with hard shells are protected from predators and desiccation.

Small sea anemones are the most successful predators. They are sessile animals that use their tentacles to capture their prey.

Many marine plants have developed roots or rhizomes to anchor themselves in the seabed.

MARINE INVERTEBRATES - SPONGES



Sponges are the simplest multicellular animals. They are sessile animals that live in aquatic environments.

Sponges are filter feeders. They have a porous body that allows them to filter food particles from the water.

Sponges do not have nervous systems, digestive systems, or circulatory systems. They are simple animals that live in aquatic environments.

A sponge's body is hollow and is made of many small chambers. These chambers are connected by a network of canals.

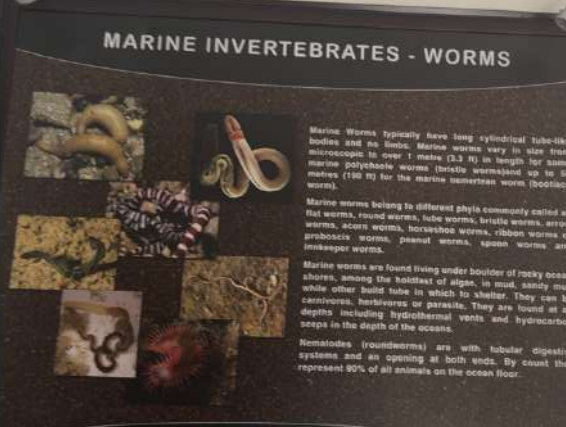
All sponges have cells, known as choanocytes, that are specialized for capturing food particles. These cells have long flagella that create a current that draws food into the sponge.

Most sponges are found in shallow waters, but some species live in deep-sea environments. They are found in all parts of the world.

Common sponges are found in coastal areas and in the open ocean. They are found in all parts of the world.

Sponges reproduce by budding. They produce small daughter sponges that grow from the parent sponge. Some sponges can also reproduce asexually by fragmentation.

MARINE INVERTEBRATES - WORMS



Marine Worms typically have long cylindrical tube-like bodies and no bones. Marine worms vary in size from microscopic to over 1 meter (3.3 ft) in length. The most common marine polychaete worms (bristle worms) have up to 50 segments (two by two for the marine annelid worm (leech-like worm)).

Marine worms belong to different phyla commonly called as flat worms, round worms, tube worms, bristle worms, annelid worms, ribbon worms, comb worms, ribbon worms, and miscegenator worms.

Marine worms are found living under boulder of rocky ocean shores, among the holdfast of algae, in mud, sandy mud, cavernous, hydrothermal or geothermal. They are found at all depths including hydrothermal vents and hydrocarbon seeps in the depth of the oceans.

Nematodes (roundworms) are with tubular digestive systems and an opening at both ends. By count they represent 80% of all animals on the ocean floor.

ZOOPLANKTON



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Overall, the visit proved to be an enriching academic experience for the BBA (Hons.) students. It strengthened their learning by offering practical insights into environmental conservation, coastal ecology, and sustainable development. The exhibits and information at the museum also provided valuable material for academic case studies, project work, and discussions on green governance. The visit fostered greater environmental awareness among the students and encouraged them to think critically about the need to protect fragile ecosystems like mangroves for future generations. The interactive displays and real-time observations further deepened their understanding of the interconnectedness between human activity and natural habitats. Students expressed that the field experience helped them relate classroom concepts to real-world environmental challenges. The visit also encouraged collaborative learning, as students engaged in reflective discussions and shared their observations. Such experiential learning activities play a vital role in shaping environmentally responsible future managers and decision-makers.

