

INTRODUCTION

→ Coelenterata

• Greek word → Koliase → Hollow
Enteron → Intestine

CNIDARIA

• Cnidocytes → Nematocyst → Stinging cells

CHARACTERISTICS

- Radial Symmetry
- Diploblastic organization

HABITAT

- Fresh and marine water

SIZE

- Microscopic → HYDRA
- Macroscopic → BRANCHIO CERANTHUS

BODY STRUCTURE

- Diploblastic Body

1. Ectoderm → Outer Layer → Nematocyst

2. Endoderm → Inner Layer → Digestion

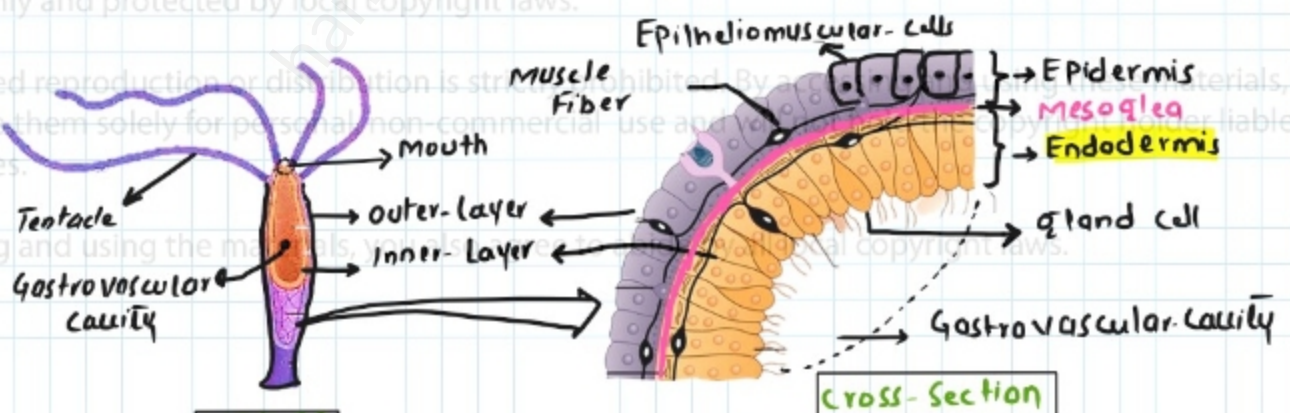
- Mesoglea

→ Jelly Like, Non-cellular, Non-living

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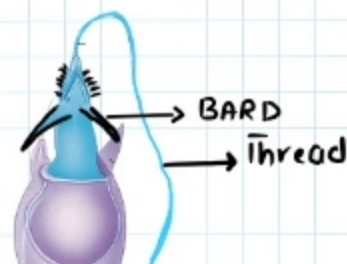
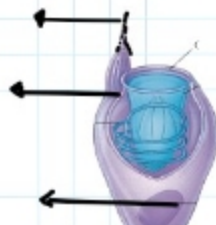


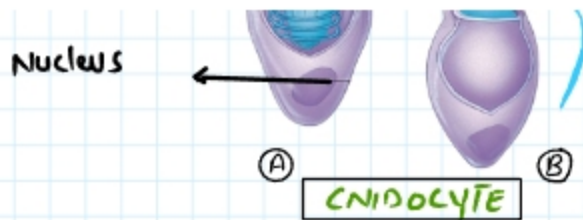
HYDRA

CNIDOCYL

Undischarged Nematocyst

Nucleus





GASTROVASCULAR CAVITY

→ Sac-like digestive-cavity

- Single cavity
- Serves as - digestion
- Single opening

TENTACLES

- Mouth → Tentacles
- Stinging Cells → **Nematocysts**
 - Defense
 - offense

SKELETON

- Exoskeleton → **Coral** → $(CaCO_3)$
- Epidermal-cells → **secreted**
- Exoskeleton → **Coral Islands** → **Small**
→ **Coral-Reefs** → **Large**

MODE OF LIFE

- **Sessile** → Hydra, Obelia, Corals, Sea-anemone
- **Free Living** → Jelly Fish
- **Solitary** → Hydra, Jelly Fish, Sea-anemone
- **Colonial** → Physalia, Velella
- **Colony** → **Aggregation of individuals - OR - Zooids**

Perform different functions for Colony

FORM OF ZOIDS

- **1 POLYP** → **Cylindrical form, Nutritive- function** → **Gastrozooid**
- **2 MEDUSA** → **Umbrella-like, Sexual-Reproduction** → **Gonozooid**
- Structurally and functionally more than two different types of individuals



ALTERNATION OF

ALTERNATION OF GENERATION



REPRODUCTION

- 1 Asexual - → **HYDRA**
- 2 Sexual - → **Obelia**

BODY SYSTEM

- Nervous-System
 - Network of Neurons → **plexus**
 - No CNS
- Digestive-System
 - Sac-like
- Circulatory & Respiratory System
 - No specific

EXAMPLES

- **HYDRA**
 - Fresh water, polyp form
- **Obelia**
 - Marine water, polyp & Medusa form
- **Jelly Fish (Aurelia)**
 - Medusa → dominant
- **Sea-Anemone**
 - Marine water, polyp Form
- **Madrepore (Corals)**
 - Marine



Hydra



Obelia



Jelly-fish



Actinia



Corals

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