অবশেষে Important Non-chordate Phyllum

Obelia

Diploblastic

Digestive system incomplete

Radial symmetry.

Habitat – Maximum marine, আবার fress water.

Most of the cnidarians are marine, some are fresh water [illegible]. eg → Hydra.

ক্ষেত্রবিশেষ colony গঠন করে, আবার solitary.

Solitary cnidarians → Hydra

Colonial cnidarians → Physalia (Portugese man of war), Gorgonia (Se fan), Obelia, Sea pen (Pennatula)/Sea feather.

Aurelia

Level of body organisation – Tissue level of organisation.

First tissue level of organisation দেখা যায় Cnidaria তে.

⊛ Mesoglea কী?

⇒ ~~[illegible] outer layer~~.

In Cinarians, the outer ectoderm and inner endoderm are intervening / are separated with gelatinous layer called mesoglea. The mesoglea contains different kinds of cells like nerve cells, cnidoblast cells etc.

⊛ Cnidoblast cell কী? / Cnidocytes.

⇒ These are stinging cells present in the epidermis (from ectoderm). They migrate to the tentacles through the mesoglea by means of amoeboid movement. The projecting cnidoblasts act as organs for offence and deffence. These stinging cells bear a basal nucleus and a capsule. The capsule is called nematocyst. These capsule is filled with a poisonous fluid called hypnotoxin. Cnidoblast also provides the anchorage while locomoting from one place to another.

⊛ The body cavity of cnidarians are called coelenteron or gastrovascular cavity.

Reproduction :→

Asexual phase का अर्थ Polyp.

Sexual phase का अर्थ medusa

Polymorph

⊛ Metagenesis क्या ? V.V.I

⊛ Polymorphism क्या?

→ Occurence of the same species in more than one type of individuals which differ in the form or structure and function from one another is known as polymorphism.

e.g. Obelia, Physalia.

⊛ Metagenesis : When Sexual phase alternate with the asexual phase in life cycle then it is called metagenesis.

e.g. → In Obelia, the polyp (asexual phase) produces medusae (sexual phase) asexually and medusae form polyp sexually.

Polyp :→ Polyp is sessile (non-motile) cylindrical with mouth and tentacles facing upward.

Medusa :→ Medusa are free floating or swimming structure like jelifish. It is like a bell or an umbrella with mouth and tentacles facing downwards.

⊛ Only polyp is present in Hydra and Adamsia (Sea anemone)

⊛ " medusa " " in Aurelia (Jelifish).

Coral → Cnidaria.
In some of the cnidarians have a hard skeleton composed of ~~hor~~ calcium carbonate.
e.g. → Corals.

⊛ Scientific names of corals:—
Corallium (Red coral), Heliopora (Blue coral)

Classification
Medusa and polyp-র উপর base করে ৩ টি ভাগে ভাগ করা হয়। —

① Hydrozoa
i) Either only polyps are found or polyps and medusa are present exhibiting polymorphism.
ii) Many hydrozoa exhibits alternation of generation, that is called metagenesis.
e.g. → Obelia (Sea fur), Physalia, Hydra (শুধু Polyp থাকে)
iii) They are solitary or colonial.

② Scyphozoa :—
(i) These are commonly called jellyfishes.
(ii) Polyp is reduced or absent.
(iii) The mesoglea is much enlarged and gelatinous.
(iv) They are solitary.
e.g. → Aurelia, Rhizostoma (jellyfish)

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③ Anthozoa :→

(i) They are solitary or colonial.

(ii) Only polyp is present i.e. medusa is absent.

(iii) The gastrovascular cavity is divided into compartments by complete or incomplete ~~co~~ mesenteries or septa.

e.g.→ Gorgonia (Sea fan), Metridium (Sea anemone), Pennatula (Sea pen).

কারো ~~Corals~~ বা corals.

Ctenophora.

কী কী নাম আছে? –

Comb jelly / Sea walnut / Comb bearers.

Bioluminisscens → They emmiting light.

Comb plate থাকে,

Radialy symmetrical

Colloblast / Laso~~blast~~ cell থাকে.

Characteristics :→

① Marine and free swimming.

② Body radial symmetrical and tissue level of organisation.

③ Coloblastic.

Main character :-

Body form – They have a transparent body. Body shape varies from flat to oval. The external surface of the body bears 8 median combplates. These combplates bears cilia which are fused to make thes place ciliated. The ciliated complex help in locomotion. Tentacles may be present or absent. When present, the number is 2. The tentacles are solid and possess adhesive cells called colloblast ore lasso cells. ~~They sh~~

(ii) They shows bioluminicence (the property of living oreganism to emmit light). Bioluminicence is well marked characterics of ctenophora.

(iii) ~~The s~~ A special sense organ called ~~statocyst~~ present at the aboral end of the body. ~~These~~

(iv) These are hermaphrodite or bisexual.

Classification :→ On the basis of present or absent of tentacles.

(1) Nuda :→

(i) The species of these class do not have tentacles.

(ii) They are free swimmers and are typically found in all oceans and seas around the world.

(iii) They have a large mouth and they ~~fil~~ feed jellyfish. ~~and~~

e.g.→ Beroa

② Tentaculata :—

(i) They have two tentacles.

(ii) They have a large mouth and mainly feed on larval molluscs.

(iii) Tentacles-র সব character হবে,

Sea Walnut (<u>Hormiphora</u>), <u>Pleurobrachia</u> (Sea gooseberry).

<u>Cestum</u> (Venus girdle).

H.W.

Cell organelle → Cell wall থেকে পুরো cell organelle.

Cnidaria and Ctenophora.

↓

Cell membrane Model থেকে.

Cell wall middle lamella এর arrangement.

plasmodesmata

cell wall — Composition.

Mitochondria খুব Important.

↓ Parson's Subunit. → Enzyme-র position.

Fo-F1 particle.

Plastid.

Microtubule

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