

TOPIC: INTRODUCTION TO COELENTRATA-II

LECTURE NO:11

B.SC PART 1

ZOOLOGY(HONS.)-PAPER I-GROUP A

CHAPTER 5

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AUTHOR-DR.NIRMAL KUMARI

Class 2.Scyphozoa:

(Gr.Skyphos-cup + zoios-animals)

They are exclusively marine and solitary forms.

The medusa stage is dominant but the polyp stage reduced or absent.

The gonads are gastro-dermal and sex cells are shed or released in digestive cavity.

Order(a): Stauromedusae (lucernariida)

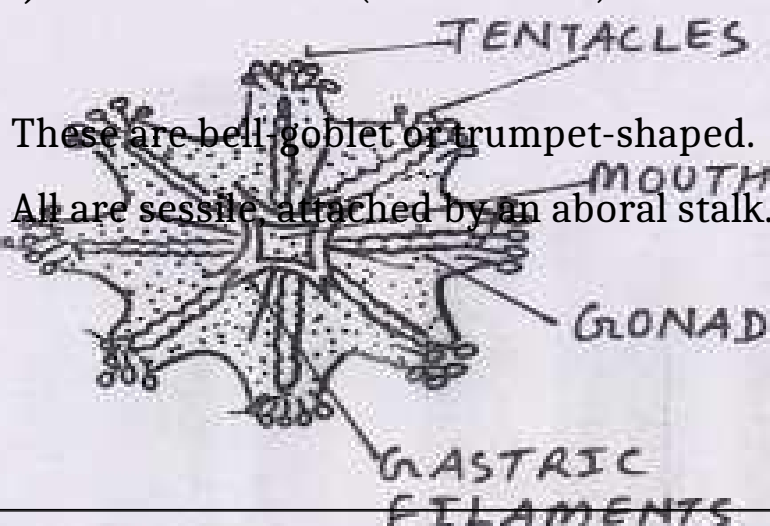


Fig.5 Lucernaria

Mouth cruciform (four cornered) with small oral lobes.

They have no marginal sense organs or tentaculocysts.

Fertilization is external.

Planula larva without cilia.

E.g. *Lucernaria* (Fig.5) and *Haliclystus*.

Order (b): Cubomedusae (Carybdeida)

Free-swimming Scyphozoa found in warm and shallow water of tropical and subtropical region.

They are bell-cubical, with 4 flattened sides.

Four per-radial tentaculocysts are present.

Gonads are life like structure.

E.g. *Charybdea* and *Chiropsalmus*.

Order(c): Coronatae

Free-swimming Scyphomedusae found inhabiting the deep water of ocean.

They are bell-conical, divided by a deep circular coronary groove.

Tentacles are long, born on pedalia.

Four to sixteen tentaculocysts present.

Mouth is cruciform.

E.g. Periphylla and Pericolpa.

Order(d): Semaestomeae (Discomedusae)

Most common free-swimming medusae found inhabiting the coastal water of all oceans.

Gastric pouches and filaments are absents.

They have flat saucer or disc-like umbrella.

Eight tentaculocysts present.

Mouth extending into 4 long oral arms.

Eg. Aurelia (Fig.6), Pelagia and Cyanea (7) & Chrysaora

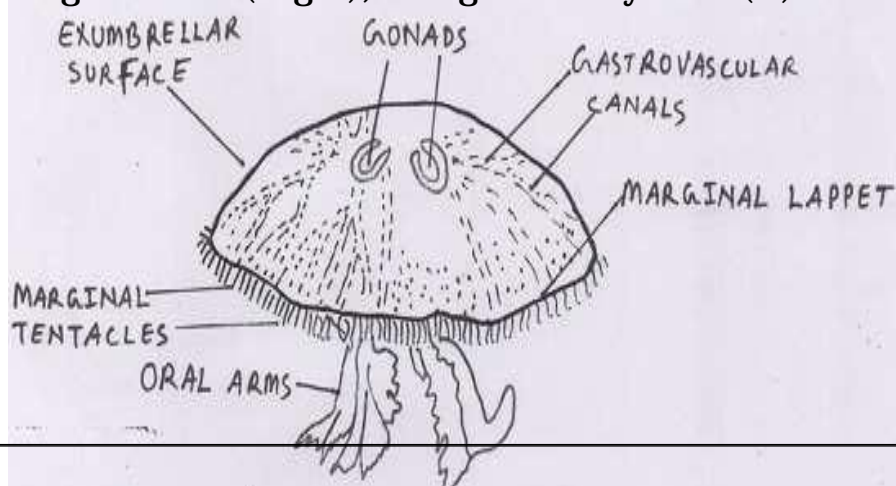


Fig.6 Aurelia

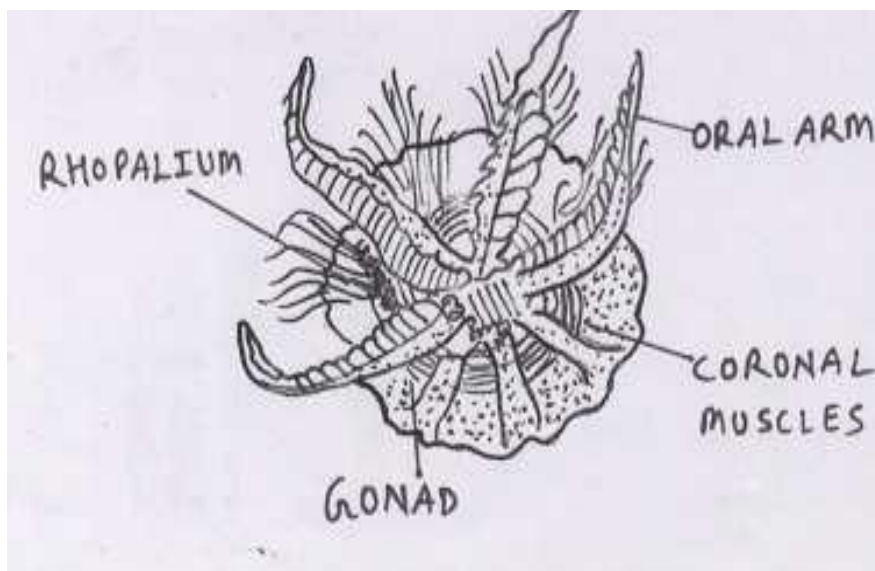


Fig.7 Cyanea

Order(e): Rhizostomae

Free-swimming Scyphozoa found in shallow water of tropical and subtropical oceans.

Bell-shaped usually hemispherical, without marginal tentacles.

Typically 8 or more tentaculocysts.

No central mouth but the oral arms is fused with several small mouths. E.g. Rhizostoma (Fig.8) and Stomolophus.

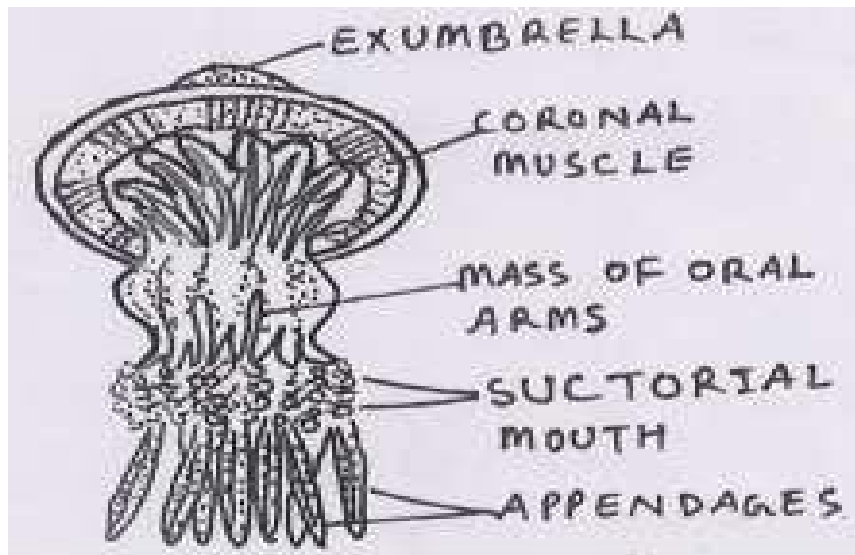


Fig.8 Rhizostoma

Class 3. Anthozoa (Actinozoa):

(Gr. Anthos- flower + zoios- animal)

They are exclusively marine, may be solitary or colonial.

All are polyp forms, no medusae.

They have gastro-dermal gonads.

Gasto-vascular cavity is divided into completed and incomplete septa.

Skeleton either external or internal.

Nervous system prepared by typical nerve net without a concentrated central nervous system.

Fertilisation is external.

These are divided into three subclasses:

Subclass 1.Octocorallia (Alcyonaria)

They are exclusively colonial.

These are found in polyp form with 8 pinnate tentacles and 8 septa.

Eight complete mesenteries are present.

Polyps are dimorphic in some forms.

They include six orders:-

Order(a): Stolonifera

The stolonifera are inhabitants of shallow water in the tropical and temperate area.

The polyps arise independently from a creeping motor stolon.

The skeleton of separate calcareous spicules or absent. \ E.g. *Tubipora* (Fig.9) and *Clavularia*

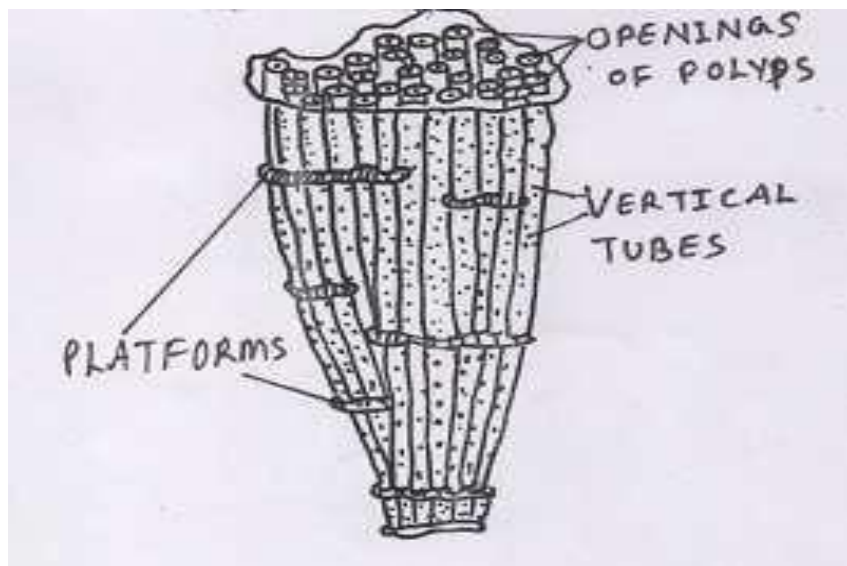


Fig. 9 Tubipora

Order (b): Telestacea

Lateral polyps on simple or branched stems arising from a creeping base.

Skeletal consists of spicules
fused by calcareous. E.g. *Telesto*.

Order(c): Alcyonacea

Colony mushroom-shaped.

Polyps are dimorphic in some forms (Autozooides and
Siphonozooides)

Polyps proximally embedded in a fleshy mass or
coenenchyme.

Skeleton of separate
calcareous spicules. E.g.
Soft corals and *Alcyonium*.

Order(d): Coenothecalia

Polyps embedded and connected by solenial tubes.

Skeleton massive, calcareous and blue-
green from iron-salts. E.g. *Heliopora*
(Blue coral).