

# Life Cycle of Aurelia aurita

*by*

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# Life Cycle of Aurelia aurita

- Aurelia is dioecious
- no sexual dimorphism. Testis and ovaries are similar in appearance.
- A medusa has four, horseshaped gonads lying on the floor of stomach
- Ovum & sperms break into gastrovascular cavity and pass out of mouth with the outgoing water current



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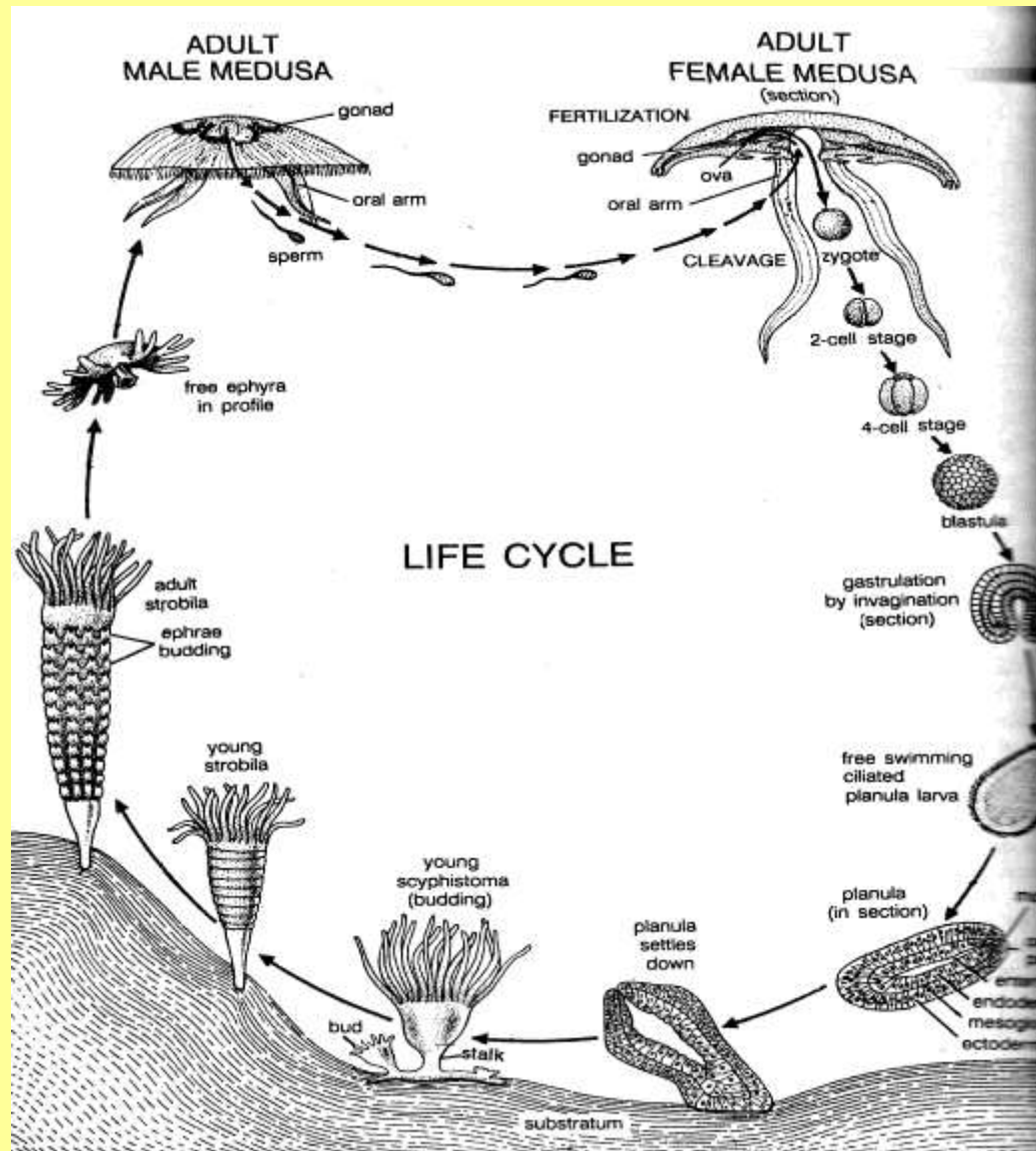
## Fertilisation :

- Fertilisation is either internal in the stomach of female or External in the oral arms

## Formation of Planula Larva :

- Zygote undergoes holoblastic and equal segmentation to producing a solid ball – like morula
- Soon it is transformed into a single layered blastula
- Blastula consists a central fluid filled cavity or blastocoel
- Two layered gastrula develops by invagination having an outer ecoderm and inner endoderm
- Blastopore is not completely closed.
- The embryo now elongates, its outer cells become ciliated, blastopore closes
- In this way the typical planula larva is formed

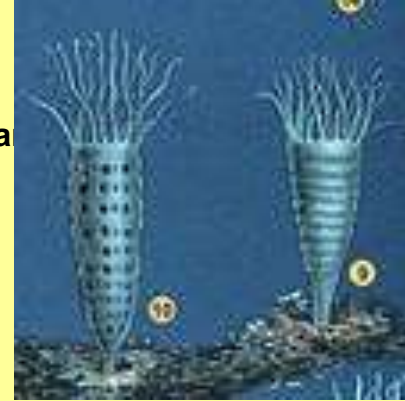
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## Formation of Scyphistoma :

- The ciliated planula after a short free swimming stage, attached itself to a stone or seaweed by interior or aboral end,
- Cilia are lost and a mouth opens at its free distal end
- The larva now become elongated
- Its proximal end is stalklike and is attached to the substratum by a
- Later on 16 long and slender tentacles are formed
- Mouth becomes square in out line
- Larva now called as young scyphistoma
- Scyphistoma survive in this stage to several months



## Formation of Ephyrae (Strobilation) :

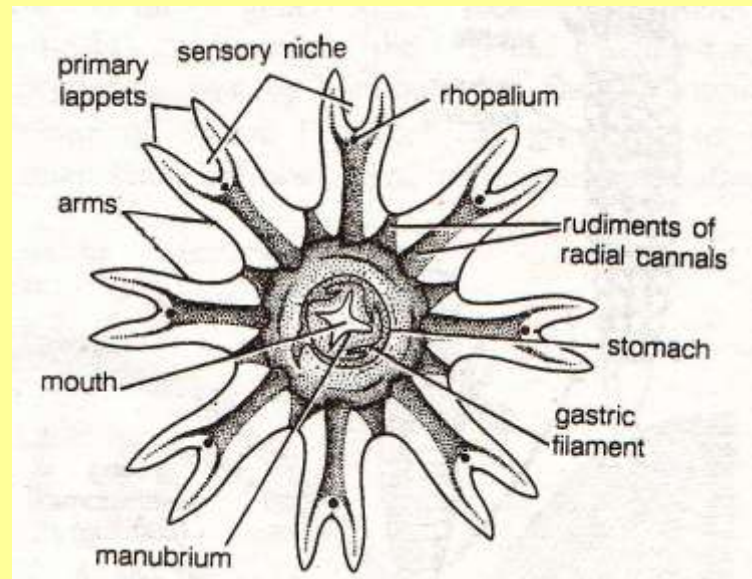
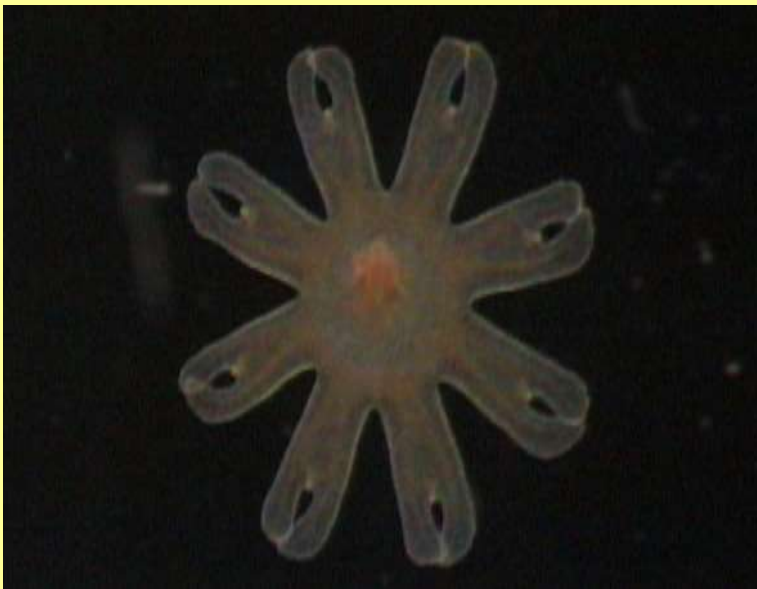
- In autumn and winter, scyphistoma undergoes a remarkable process of budding of oral end called as strobilation,
- Body develops a series of ring like transverse furrows
- Scyphistoma with a segmented body is called a strobila
- Each of the segment is called as ephyra larva
- About a dozen ephyrae are formed in a single strobilation



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## Ephyra larva :

- Ephyra is about 1mm in diameter & shows well developed tetramerous symmetry
- The edge of the umbrella is provided with 8 bifid lobes
- Each lobe is notched to form a pair of primary lappets
- Notch between lappets bears a short tentacle, which becomes tentaculocyst
- On the subumbrella side, stomach opens into short manubrium, bearing four-sided mouth
- Four subgenital pits are also present
- Ephyrae swim actively in sea water feeding on minute organisms



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## Metamorphosis :

- As growth proceeds, mesogloea increases
- Two layers of endoderm fuse to form a solid gastrodermal lamella except in the regions of gastrovascular canals
- With the appearance of four oral arms and marginal tentacles, Ephyra is finally transformed into adult Aurelia

