Z14 / Paper III rd / D II

RETROGRESSIVE METAMORPHOSIS IN HERDMINIA.

The retrogressive metamorphosis may be defined as — the ~~rapid~~ period of rapid transformation from larva to adult form in which considerable destruction of advanced larval organs ultimately disappear in adult.

Generally the simple system of larva become complex and advanced. But in some cases metamorphosis involves considerable distruction of larval tissue. Some organs completely disappear and some become degenerated while some may become complicated.

The Ascidian Larva exhibit retrogressive metamorphosis during its development.

Structure of Ascidian Larva:

1. Free swimming Ascidian Larva is an elongated cylindrical shaped measuring about 1.5 mm in length and 0.3 mm in width.
2. The body of Ascidian tadpole may be distinctly differentiated into an oval trunk (about 0.3 mm) a ~~long~~ laterally compressed tail (about 1.2 mm)
3. The anterior end of trunk bear 3 suckers or adhesive papillae. Out of the 3 papillae 2 are dorso-lateral and one ventromedian
4. The entire bodies covered over by the test. The test covering the tail expand to form a a transparent caudal fin
5. Within the tail, in the axis, a notochord

is present which is surrounded by. Substance Notochord is derived f... endoderm and about 60 vacuolated cells makeup the entire rod.

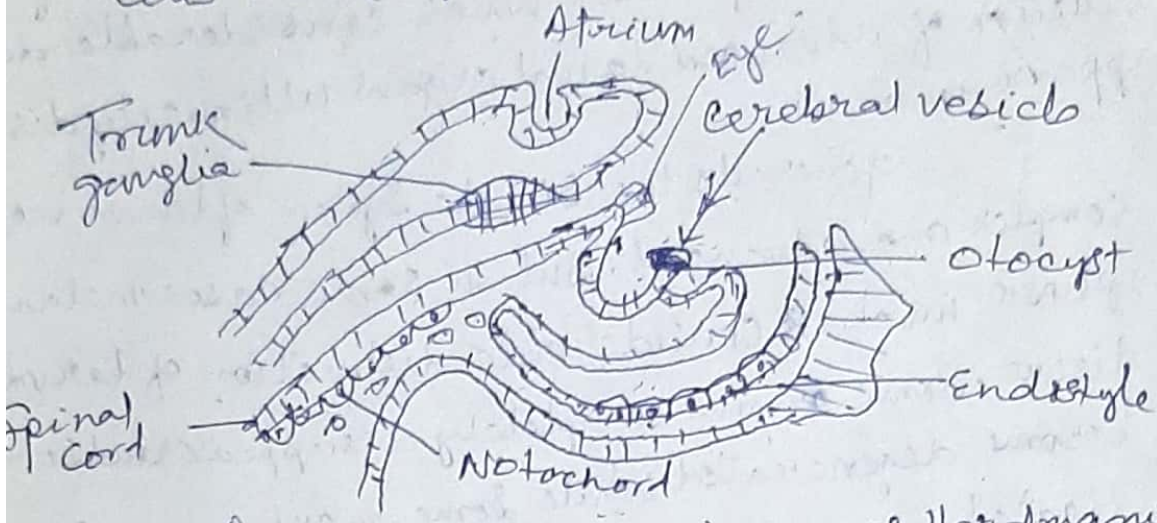

Fig - Young larva of Herdmania ready to hatch

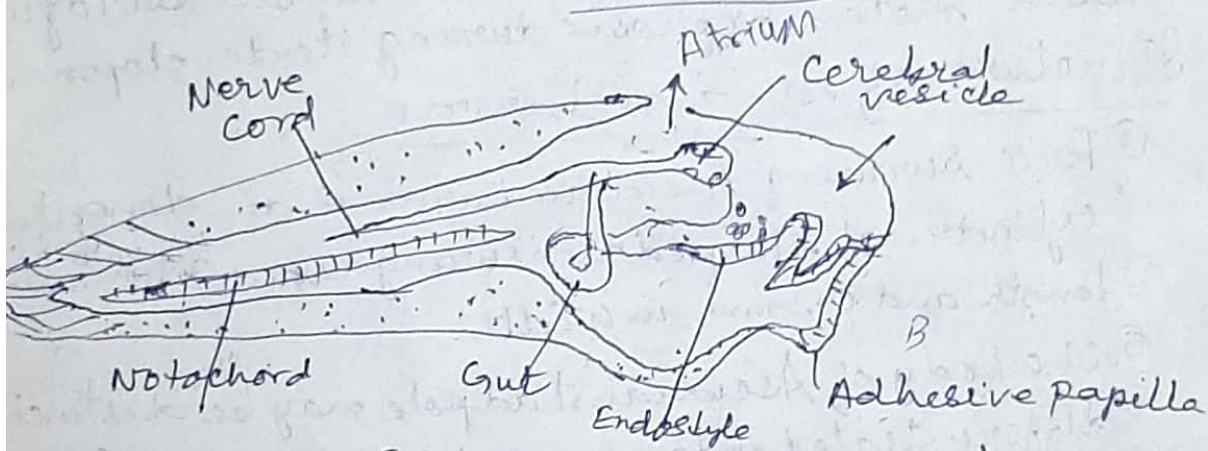

Fig - Free Swimming Ascidian tadpole larva

⑥ Dorsal to the notochord runs the dorsal nerve cord. Nerve Cord is continued into the trunk where it dilates to form the Cerebral vesicle. The vesicle consists of a dorsal pigmented eye, a ventral pigmented Otocysts and a thickened ganglion representing the brain.