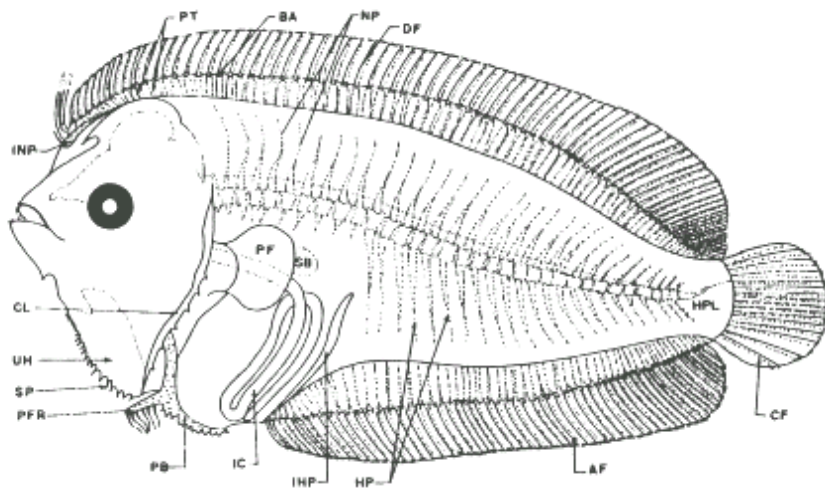


GENERAL MORPHOLOGY

The larvae of flat fishes (Pleuronectiformes) are symmetrical in early stages with thin laterally compressed body; continuous median fin folds without spinous rays; the forward extension of the dorsal fin over the skull to the level of the eye; rays are invariably articulated through a system of pterygiophores and baseosts; caudal fin with 17 rays, of which 15 are branched and are borne on hypural plates, pelvic fin with six rays, left pelvic- fin radial asymmetrical in advanced larval stages with its anterior 2 to 3 rays in advance of the first ray of the right fin; pelvic fin radials attached to the cleithra; a urohyal (Ahlstrom *et al.*, 1984; sciatic portion – Hensley, 1977; cartilaginous plate – Kyle, 1913 and Norman, 1934) placed in advance of the cleithra; presence of post-cleithra on either side; basipterygia attached to the posterior lower middle faces of the cleithra between cleithral tips and pectoral fins on either side; the pelvic fin complex differentiates as a cluster of chondrioblasts (cells) which transform into Y -shaped processes attached to the posterior lower middle faces of the cleithra between cleithral tips and pectoral fin on either side as larvae grow ; right arm of Y attached to the cleithra, while left arm differentiates into the pelvic fin radial and fin and the distal portion along the midventral line of the body extending up to the anus or near to it, the terminal portion of the processes end straight or get curved dorsalwards ; the processes may bear spines either in the proximal portion or along its full length, Kyle (1913) has recognised this as the cartilaginous pubic bar while Ahlstrom *et al.*, (1984) termed it as basipterygial process ; the spines may or may not be present on cleithra, urohyal or posterior basipterygial processes or in any one of them (Fig. 2). The aforesaid characters either in combination with other characters or alone help to distinguish the larvae of bothids form other Pleuronectiformes.



A larva of Bothid flat fish showing characters of diagnostic value. INP - 1st neural pterygiophore, PT - Pterygiophores, BA - Baseosts, NP - Neural processes, DF - Dorsal fin rays, HPL - Hypural plates, CF - Caudal fin rays, AF - Anal fin rays, HP - Haemal processes, IHP - 1st haemal pterygiophore, IC - Intestinal coil, PB - Posterior basipterygial processes, SB - Swim bladder, PF - Pectoral fin, PFR - Pelvic fin radial with fin rays, SP - Spines, UH - Urohyal, CL - Cleithra.