

Histological changes associated with the development of *Anguilla bicolor bicolor* McClelland

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Histological studies of skin, gonads, liver and thyroid tissues of glass eels, elvers, yellow-eels and silver eels of *Anguilla bicolor bicolor* McClelland indicated that the epidermis of all eels contained only mucous secreting cells and clavate cells. The dermis of yellow and silver eels consisted of a muscular layer embedded with scales whereas in glass-eels and elvers no scales were seen. Sex differentiation was not seen in glass-eel gonads. Except for one eel all the others captured during the present study were females. In the ovaries of elvers and yellow-eels, only previtellogenic oocytes at early developmental stages were seen. Gonads of silver eels contained previtellogenic oocytes at ooplasmic vesicle stage. Liver of eels at all stages were similar in histological structure. Thyroid follicles of silver eels contained an acellular inclusion whereas in yellow eels and elvers they were more or less empty.

In *A. bicolor*, oocytes do not reach the vitellogenic phase and maturity during the continental phase of their life cycle which includes their development upto silver-eel stage. During this growth phase, there were no evidence for hepatic production of vitellogenic proteins. Increased activity of thyroid is evident in silver-eels.