

Scales of Fishes

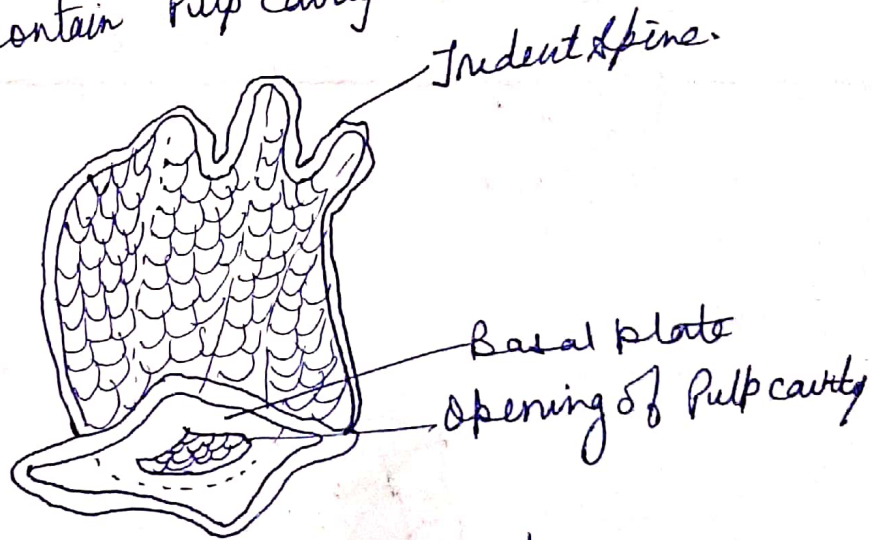
B. Sc Part II

Subsidiary Practical

Paper II B

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- Fish: Placoid Scales -
1. They are abundantly found in dermis of elasmobranch fishes. They are dermal in origin are arranged in regular oblique rows. Placoid scale cover entire surface of the body forming dermal exoskeleton of the sharks.
 2. Each scale is composed of a basal bony plate embedded in the dermis from which a spine projects upwards and points posteriorly.
 3. They contain pulp cavity in spine.



Fish Placoid scale

4. Pulp cavity contains odontoblasts, dentine forming cells, blood capillaries, nerves & lymph channels.

Identification - Scale has trident spine hence it is placoid scales.

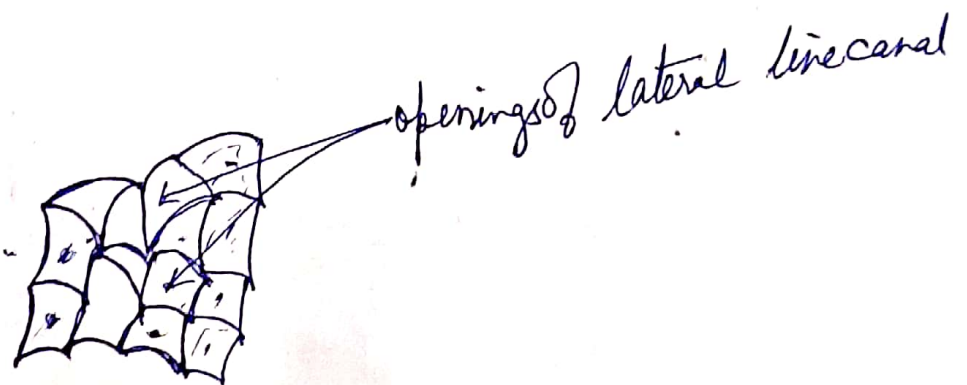
Fish: Cranoïd Scales

(2)

Comments:

- (1) Cranoïd Scales are found in primitive ray finned fishes such as Polypterus and garpikes.
- (2) Scales are covered with a hard, shiny and translucent material of mesodermal origin called the ganoin.
- (3) Scales are dermal in origin.
- (5) Each scale consists of bony base, coated by shining substance called as ganoin.

Identification - Cranoïd Scale is overlapping & fitted like tiles hence it is called cranoïd Scales.



Fish: Cranoïd Scales

Fish - Cycloid Scale

Comments - 1. These scales are found in Carps (Teleost) and lungfishes (Dipnoi). They are located in dermal pockets and possess concentric lines of growth.

2. Scales are soft, arranged lengthwise in diagonal rows.

Since the above scale contains concentric lines of growth hence it is a cycloid scale.

Fish : Ctenoid Scales

1. These scales are commonly found in most teleost and actinopterygian fishes.

2. They are thin, soft and dermal translucent plates.

3. These scales donot contain keratin.

4. They contain concentric rings representing lines of growth.

ctenoid scale has concentric lines of growth with teeth like projections posteriorly, hence it is ctenoid scales.