

ELECTRORECEPTORS

Specialised electro sensitive cells called the electroreceptors. In teleosts it is well developed. These specialised organs serve as an additional sensory system to the ordinary lateral line system, and are used to detect electric stimuli produced by inanimate source such as electric field caused by earth magnetic field or by other organisms. These electroreceptors are of two types:

(A) Ampullary organs:

Consisting of a single or several ampullae opening to the exterior by a large or short canal. The sensory epithelium lies at the bottom of the ampulla and consists of hair cells and supporting cells. The ampulla and the canal are filled of jelly like material and are sensitive to weak low frequency potential changes.

(2)

⑧ Tuberous organs:

This is consisting of an ampulla which does not open to the exterior and the sensory cells possess microvilli-like stereocilia along the long luminal surface. These cells are innervated by an afferent nerve there being no efferent nerve. These cells are sensitive to weak high frequency potential charges.

The electroreceptors vary considerably in their morphology in different species and occurs all over the skin of the fish. They are found in both electric and non-electric teleosts both in fresh water and marine fishes. Both the types may occur in the same fish but the tuberous organs are found in electric fishes only. Being highly sensitive to the electric field they are used in electric communication and electro location.