Sense Organ In Vertebrates

.Ecolocation: Is the process in which an animal obtains and assessment of its enviroment by emtting sound and listening to echoes as the sounds waves

reflected off different object in the enviroment.

.In a very genral sence, any animal that can emits sounds may be able to here

echoes from large obstacles.

.Bats produce echolocation by emitting high frequency sound pulses through their mouth or nose and listening to the echo.

.With this echo,the bat can determine the size , shape and texture of object in it's environment.



.A sequence of bats ecolocation calls can be describein terms of search, approach and terminals phases.

.This phases corrspondence to commuting searching for prey, detection and location of prey and final prey capture.

.The sound are made by squeezing air through nazle pssaes near blow hole

.Thses sound waves then pass into fore end, where big blob of fact called mellon focuses them into a beam.

.If the Eco locating call hits sometime the reflect sound is pickup though the animals lower jaw ans passed to its years

Electroreception



.Elecyroreceptor of fish include ampulla receptors, which are canals opening from the surface of the fish into cavities lined with nerve cells, and tuberous receptors, found on weakly electric fish ( mormyriforms and gymnotoforms).

.Electric organs are masses of flattened cells, called electrolytes,which are stacked in regular rows along the sides of certain fishes.

.Electroreceptors are also found in some nonelectric fishes and in some amphibians. Even the duckbull platypus , a mammal, has electroreceptors (located in it's bill).

.Electroreceptive animals use this sense to locate objects around them this is important in ecological niches where the animal cannot depend on vision for ex..in caves inmurky water and at night. Many fishes use electric fields to detect buried prey.

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.Electroreceptors transduce electric signals into action potentials that are processed in the central nervous system, and can convey information of relevance for social communication, navigation, hunting, and defense.



Lateral line in fishes



.The lateral line is a sensory system that allows fishes to detect weak water motions and pressure gradients.

.The lateral line functions to detect vibrations and water movement and allows fish to orientate themselves in a water current (rheotaxis), gain information about their spatial environment, and also plays a vital role in schooling (see also HEARING AND LATERAL LINE | Lateral Line Structure).

.A shark senses prey in the distance by detecting water movement made by fish or other swimming prey. Sharks have a special system, called a lateral line, that picks up the vibrations in the water. This narrow strip of sensory cells runs along the sides of the body and into the head.

.Head and lateral line erosion (HLLE) is a chronic condition in fish that stems from the lateral line, which is a linear sense organ running along both sides of most fish just below the surface of the skin, usually marked externally by a series of pores that open out through the scales.

.The lateral-line system is a sensory system found in fishes and aquatic amphibians. With the lateral-line system, fishes measure the relative movements between their body and the surrounding water at each of up to several thousand sensory organs, the neuromasts.

.Lateral line information is used for prey detection, spatial orientation, predator avoidance, schooling behavior, intraspecific communication and station holding. The lateral line of most fishes consists of superficial neuromasts (SNs) and canal neuromasts (CNs).

