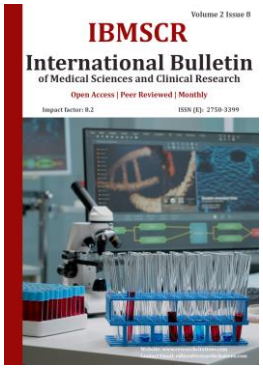

THE STRUCTURE OF BONY FISH

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Abstract
This article analyzes the structure and internal parts of bony fish.
Key words: Aquaculture, Flounder, real skin, ichthyologist, electrical organs, fins.

Body shape - the body shape of fish, which has a large number of species within the class of vertebrates, is extremely diverse. Among them, the two sides of the body are somewhat narrowed, and the most typical form is the tufted shape of the fish, which is adapted to fast and agile swimming. Usually, the body of pelagic fishes, i.e. fishes that swim actively in water all their life, is structured in this way.

Most pelagic fish have proportional pendulous fins. However, the pectoral fins of Ugor fish, which are able to jump out of the water and fly more than 100 m in the air, are long and wide. Very few fish swim in the water, and their bodies are different. For example: the body of the moonfish (mola-mola) is tall, compressed from both sides, and has no caudal fin, and the dorsal fin, ventral fin, and anal fin are narrow and long. The body of the flounder is compressed from both sides, and the eyes surrounded by long back and ventral fins are located on the opposite side of the side where the fish lies, or the body of the flounder is like a snake, and even some species of sea mares live on underwater horses with their high tails.

Integuments - The integuments of fishes are characterized by general structural features: their epidermis is covered with a slimy substance due to the presence of only a few unicellular glands. The skin glands of fish, like all other vertebrates, are formed from the epidermis. Among the skin glands, there are many glands that secrete mucus directly.

Scales - Scales of fish are always formed from a leathery corium. There are three main types of fish scales.

placoid
ganoid
bone

1) To the placoid body. It is the most primitive carapace, and it is very remarkable from a comparative anatomical point of view, because not only the ganoid and bony carapace, but also the teeth are made of the carapace. A shark's tooth is also a true placoid tan.

2) To the ganoid body. Currently, there are very few fish in the brush fins. But it is abundant in fossil fish. Typical ganoid grains consist of planar rhombic plates.

The outer layer of the ganoid bone is made of a very hard special substance called ganoid, and the lower layer is made of bone tissue. The ganoid is formed from the entire connective tissue. That is why it can never be covered with enamel.

3) Bone to body. Many fins are characteristic of all bony fishes. This body is typically made up of thin bony plates of various sizes. Bone coins are always hanging, and annual rings are

formed around the plate. Ichthyologists determine the age of fish based on these marks. The bony spikes in the fins of many fishes form bony spines.

The color of fish depends on several reasons. For example, the silvery luster is characteristic not only of coins, but also of many internal organs of fish (air bladder, peritoneum) and is caused by the presence of guanine. Many fish can change their color slightly to match the color of their environment.

White skeleton - the white skeleton of fish is structured differently. The white skeleton of an ancient group of fish consists of a hard membrane and a chorda composed of cartilage or bony vertebral arches. Much younger modern fishes have a white skeleton consisting of a toay or vertebral body, and the remains of the chorale are preserved among the vertebral bodies. In addition to true ribs, most bony fish have bones called musculature. These bones originate from the upper cartilage.

Head skeleton - the head skeleton of fishes is characterized by the development of the visceral skeleton first. The visceral skeleton has a food-retaining apparatus consisting of jaw and sublingual (ganoid) bones, and a jaw apparatus consisting of at least five jaw arches. Jabra rests on these jabra arcs.

built on the principle of a battery. They are often composed of deformed muscles, alternating with layers of glue-like connective tissue in which plates of slightly tougher tissue replace the copper in the volt element. The entire organ is enclosed in a bundle of connective tissue, and electrical discharges are generated due to the spinal nerves ending in each plate. The location of these organs is very diverse. In the electric scat, it is located next to the injury apparatus, in the lower part of the tail in the scat, under the skin along the entire body in the scat. The strength of the electric charge is 300 volts in the ugor, 70-80 volts in the scat. Electric organs can basically kill an anima and even knock a person down.

Nervous system - the brain of fish is generally small. The forebrain is less developed than the brain of the upper classes. Fishes are characterized by the lack of development of the pineal gland in the midbrain, as well as the presence of lower lobes and glandular sacs. The midbrain is very large compared to other brains, because the eye plays a major role in finding food. His guardrails are large.

Lateral line organs - in general, the lateral line organs are very well developed in fish. Usually these organs are in the form of one or more lines running along the tail and body.

Organs of taste - in fish, not only on the head, but also on the outer surface of the body. Taste organs consist of separate sensory buds located on the outer surface of the epidermis.

of the eyes or on either side of the head.

The organ of hearing consists only of the inner ear. The sound hits him directly through the tissues. According to recent evidence, fish sense different waves well, and fishing with ultrasounds is based on this.

Sight organs - the sight organ of fishes is distinguished by the spherical shape of the pearl located close to the flat horn layer, thanks to which they can see only objects in the immediate area, which is an adaptation for seeing in the aquatic environment. Normally, the eyes can see up to 1 m, but due to the contraction of the smooth muscle tissue in the eye, the eye is pulled back and its vision reaches 10-12 m. In addition, several eyes are found in fishes. For example: the sardine fish is very thin, each of its eyes is divided into two parts, the upper eye in the air and the lower eye in the water. Finally, in deep water, fish that live in underground water cannot see at all.

Digestive organs - the parts of the digestive tube are defined by the fact that they are not clearly separated from each other, such that the general mouth and the head of the larynx gradually turn into the esophagus. The red anus expands and turns into the stomach, and the intestinal segments are not clearly separated from each other.

of breathers. In general, it should be pointed out that in the embryo of many fishes there are six pairs of blood-carrying arteries, but the first two of these are burned later, so adult fish usually have 4 (tort) pairs, juvenile fish have 5 pairs, or even many blood-carrying arteries. and there is an injured artery carrying blood.

Genitourinary system - the genitourinary system of fishes consists of two main types. The urethra of fish opens either into the cloaca, or into the genitourinary sinus, or through a special orifice.

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