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Jabra Breathers are a Subtype. A Class of Crustaceans

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Abstract: Mainly the habitat, distribution, body joints and sections of crustaceans are covered.

Keywords: protocephalon, gnathocephalon, protopodite, nauplius, parapodia, mandible and maxillae.

Crustaceans are primary aquatic animals. A number of representatives live on land (snappers, some crabs). Crustaceans make up more than 90 percent of marine and freshwater plankton. Many species are benthic animals that live on the bottom of the water. There are about 30,000 species of crustaceans with different structures ranging in size from microscopic to several meters in size. The body of crustaceans consists of many joints. In some representatives of the most basic structure, it is impossible to distinguish the head, chest and abdomen due to the fact that the body joints are the same, i.e. homonomous. In most crustaceans, the body joints are structured differently, that is, heteronomous, and the body is divided into the head, chest and abdomen. Each joint has a pair of growths. The head consists of an acorn corresponding to the prostomium of ringworms and four body segments, with five pairs of outgrowths. The growths of the joints originate from the parapodia of ringworms, and the oral organs, in particular, form a pair of upper jaws and two pairs of lower jaws. Jaws serve to hold and chew food. The number and shape of the thoracic and abdominal joints are different. Higher crustaceans have 8 thorax, 6 joints in the abdomen, and 18 joints in the whole body. The last joint of the abdomen forms the anal plate and the telson. The telson of benthic crustaceans has a pair of forked outgrowths called furka. The number of legs of crustaceans is less than the number of body joints. For example, 17 pairs of legs correspond to 18 body joints of higher crustaceans. According to the structure of the tumors of the chest joints, they are specialized to perform various tasks. In most cases, they serve as real movement organs for swimming and crawling. The body wall consists of the cuticle and the layers of hypodermal epithelium and basement membrane below it. The surface of the cuticle is covered with lime and becomes hard and strong. The structure of the cuticle of crustaceans differs from that of insects and arachnids in that there is no surface epicuticle layer that does not evaporate water. For this reason, they can only live in water or very humid places.

Digestive system. The mouth opening of crustaceans is located on the lower side of the head. The anterior and posterior sections of the intestine are formed from ectoderm leaves during embryonic development. The intestine of most crustaceans consists of a straight tube, the anterior part of the intestine directed vertically upwards from the mouth opening, and the posterior part with a short larynx forms a two-part stomach. Food is crushed in the stomach and partially digested. The undigested part of the food is removed from the pyloric stomach directly to the hind intestine, and then to the external environment through the anus. The middle intestine is very short and is connected to the liver. The liver of benthic crustaceans consists of a pair of tubes formed from the side growths of the midgut.

In most cases, crustacean injuries are located on the pectoral legs. There are three rows of crayfish wounds, located at the base of the jaws and walking legs. The water head enters the wound cavity through a slit formed between one edge of the pectoral shield and the body, and exits through a similar slit on the other side. Water washes the wounds due to the movement of the second and third pair of jaws. Crustaceans and other arthropods have an open circulatory system. The structure of the circulatory system is related to the development of the respiratory organs. The circulatory system of representatives that breathe through the surface of the body is also very simplified, only the heart itself

is preserved or the circulatory system has completely disappeared (arthropods). The heart of crustaceans is usually similar to a tube or bladder with several chambers and is located in the back of the body. The heart is surrounded by a sac-like pre-cardiac compartment formed from the myxoceles cavity. In the wall of the heart there are slit-like openings (holes). River shrimps have three pairs of legs. When the heart expands, the valves open and hemolymph passes from the pre-cardiac chamber to the heart. On the other hand, when the heart contracts, the valves close, and hemolymph flows from the heart to the arteries.

The excretory system of crustaceans consists of 1-2 pairs of antennal or maxillary glands. The excretory organs of higher crustaceans consist of a pair of long convoluted tubes located in the head. At one end of the bundle of tubes is the coelomic sac, and at the other end is the urinary bladder. The general structural scheme of the nervous system of crustaceans is similar to that of ringworms. In the simplest cases, the nervous system consists of a pair of head ganglia, connective tissue around the larynx, nerve trunks running on the ventral side of the body, and a pair of nerve ganglia on each body joint above the nerve trunks. Due to the fact that the abdominal trunks are far from each other and the opposite nodes are connected to each other through transverse commissures, the nervous system is in the form of a ladder. The ladder-type nervous system is a simple structure and the body is divided into many joints of crustaceans. characteristic for The brain of crustaceans consists of protocerebrum and deitocerebrum sections. Often, the segment nodes of the antennae also approach the brain and form the tritocerebrum, the third part of the brain. Crustaceans have well-developed organs of sense, smell, sight and balance. The organs of vision are of two types, consisting of one simple nauplius and two complex faceted eyes. There are more than 3000 ommatidia in the eye of a crayfish. Each ommatidia is an independent eye with light-reflecting and sensing elements.

Classification. Crustaceans are divided into a subclass of arthropods, cephalocarids, and higher crustaceans.

A subclass of gastropod crustaceans.

Arthropods are the most basic crustaceans. Their joints are almost the same (homonymous), the head is not joined with the chest, the number of joints in the body is not constant. Leaf-like thoracic legs perform the function of movement, breathing and bringing food to the mouth. Most of the species live in fresh water, and some species live freely.

Anostraca order. The body consists of head, chest and abdomen. The front part of the head has antennae, a single nauplius eye and a pair of faceted eyes, and two pairs of free jaws on the back part. The chest consists of 11-19 joints. Each joint has a pair of two-horned leaf-like legs. Amphibians lay their fertilized eggs in water. Eggs are very resistant to the effects of the external environment and do not lose their viability even in dried up water bodies for 3-4 years.

Jaw-footed (Maxillopoda) subclass. The oral organs of arthropods are well developed and serve to extract food from water. Faceted eyes and no injuries. The circulatory system of most representatives is not developed or very simplified. They can be found in different depths of seas and lakes. Several representatives have adapted to parasitize other aquatic animals, including the bodies of crustaceans. This subclass includes several genera. We will focus on the groups of copepods and centipedes. There is a nauplius eye on the head, a long antennula, a short antennula, and two pairs of jaws on the ventral side. In the seas, there are many calanuses in shallow water. Several species of copepods parasitize the bodies of various animals, mostly fish. As a result of the life of a parasite, their body structure changes to different degrees. In the jaws of fish, the ergasilus, which is more similar to cyclops, and its appearance is different from other crabs.

Cirripedia family. Armadillos lead a sedentary life clinging to underwater stones and rocks, the bodies of whales, sharks, crabs, mollusk shells, and the underwater part of ships. Sedentary living has caused some changes in their body. Their bodies are covered with a shell consisting of separate plates. Centipedes have become long and two-horned whiskers. As a result of regular shaking of the whiskers,

small food particles fall into the mouth. Whiskers develop by metamorphosis. Their spiral larva is similar to the nauplius larva of other crustaceans. This larva clings to the skin of slow-moving animals through the segmental glands in the antennules and goes on to lead a sedentary life. After that, the antennae, compound eyes disappear, and the pectoral legs are developed into a two-horned mustache. Most millipedes are hermaphrodites. Whiskers live in different depths of the seas. Some millipedes have become parasites. Examples of parasitic representatives are sacculina and peltogaster. Sacculina crabs live attached to the underside of the abdomen. Molluscs cling to underwater parts of ships and increase their weight. 10-12 kg of millipedes can be collected on one square meter of the ship's wall for a year.

Conclusion: In this article, we collected information about the structure, life, and classification of various representatives of crustacean types and classes, and we explained them with the help of the necessary literature.

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