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# Sturgeon

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The word “Sturgeon” is the common name for more than 25 species of fish in the family Acipenseridae.

Sturgeons are rather large fish (for example Beluga’s length could reach 4 meters). The body is quite long, almost terete.

The Sturgeon family belongs to the class Actinopterygii. Their bodies are partially covered with bony plates called scutes (the kind of scale they have is called placoid). The body is elongated; they have a small-sized toothless mouth, which is situated in the lower part of the head and is rather stiff; around the mouth there are 4 barbels (tactile organs) that grow in a row; the vertical fins have a row of fulcra; dorsal and anal fins are close to the tail fin; membrana branchialis are attached to the fauces; they lack in gill arches; they have 4 normal and 2 adventitious gills; the swimming bladder is big in size and is connected with the dorsal side of the oesophagus.

Sturgeon range from subtropical to subarctic waters in North America and Eurasia. Mostly sturgeons are entirely freshwater, but some venture into the open ocean beyond near coastal areas. Sturgeons are highly prolific; both kinds spawn in the rivers. Except for the spring spawning, they also inhabit the rivers in cold seasons for hibernating. They keep to the bottom of the river mostly; their diet consists of molluscs, worms and small fish.

Globally, sturgeon fish (especially Acipenser) are of great value, primarily as a source for caviar, but also for flesh. A rare type of glue is produced from their swimming bladder; the chorda is used as food. Nowadays industrial sturgeon –fishing is carried out only in the rivers of Caspian Sea – in the deltas of Volga, Ural, also in Iran. Every year the international organization CITES defines the quota of sturgeon-fishing for each of the Caspian sea countries. The size of these quotas depends on the amount of little sturgeons, set free from the Caspian sea fish breeding factories.

Due to the lessening of these quotas and many bans on fishing, the industrial reproduction of sturgeons on fish breeding farms is rather important. Some predict that in the nearest future it will be the only source of the precious black caviar. Acipenseriform fishes appeared in the fossil record approximately 200 million years ago, around the very end of the Triassic, making them among the most ancient of actinopterygian fishes. True sturgeons appear in the fossil record during the Upper Cretaceous (86—70,6 millions of years ago). From the zoogeographical point of view there is a high interest in Scaphirhynchinae, which inhabit the rivers of Asia and North America, which ensures us that this species descendants from an ancient fauna.

**The sturgeons are an ancient species. They are able to survive in very high, and very low temperatures, which is quite important in Russia (the temperature diapason is very high). During their life they spawn 2-3 times (sometimes up to 5 times). They spawn during the warm spring and summer seasons.**

The sturgeon race consists of 26 species of fish including the genera Acipenser, Huso, Scaphirhynchus, and Pseudoscaphirhynchus.

An Acipenser is similar to a starlet, but has a much bigger size. Its weight ranges from 12 – 24 kg, but rarely it could grow up to 80 kilos! Males reach puberty at the age of 8-14 years, the females - 10 - 20 years. Their lifespan is normally 45-50 years. Just like all sturgeons, an Acipensers’ diet consists of small kinds of fish, worms, molluscs, maggots and different bugs.

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If you are really into fishing, or if you have a pond where you fish, or if you are engaged in a business that has a lot to do with organising paid fishing, then you absolutely need an Acipenser, because it is definitely the fish any huntsman would love to catch.

A Strelt is a freshwater fish, which inhabits the rivers of the sea of Azov, the Caspian, the Black and the Baltic seas, and in the North-Pacific ocean. In the European part of Russia a starlet is found in the rivers the Volga and the Kama, also in the Ob and the Yenisei. A strelt's size ranges from 30 - 65 cm, their weight - from 0.5 to 2 kg. Males reach puberty at the age of 4-5 years, the females – 7-9 years. Its spawn period lasts from April to July. It lives close to the bottom. Their diet depends on the habitat. Mainly, they eat caviar, maggots and molluscs.

For quite a long time the Astrakhan area has been famous for its noble fish and black caviar. But nowadays the sturgeons are in danger of extinction. The local authorities are doing their best to keep up the population and stop the poaching. Meanwhile the entrepreneurs are finding new methods of fish-breeding in captivity.

The locals are unschooled fishers. Back a few years ago a book of specific Astrakhan words was published, and most of the words were related to fishing! For hundreds of years people from the downstream of the Volga learned how to catch this noble fish. But for the last century they are mastering something new – how to save and breed sturgeons. This is a measure of compulsion, but otherwise the fish could just become extinct!

The main cause of this troubled situation is poaching. According to the foreign researches, only 3 % of the fish catch is produced by government enterprises. If the illegal trade will continue to grow, some sturgeon species will be wiped out in no time. "During the past decade, the sturgeon catch in the Caspian sea has decreased from 20 000 tons (in the 70-s) to 1000 tons (the 90-s). The Russian sturgeons are facing extinction!", - says the representative of the World Wildlife Fund Caroline R.

For the population of Astrakhan the main way of earning money is fishing. The decrease of the sturgeon population in the Caspian sea has already affected the family finances of the locals. In order to improve the standard of living and lessen the poaching, the local authorities have introduced a moratorium on catching certain fish species. Government inspectors are now looking after the compliance of these new rules

The United Nations International Trade of Animals in danger of extinction Foundation intends to rethink about the export quotas for caviar-producing countries. In the earliest future an absolute ban on caviar export will be reviewed. Meanwhile, according to some observers this radical measure will only lead to the decreasing of legal trade, while the illegal one will stay as it is. During the last 30 years the numeracy of sturgeons in seas has lessened a lot. If in the 80-s – 90-s the sturgeons inhabited the waters from the Apsheron Peninsula to the Chechen Island (village), now you could rarely see them "souther" than Derbent. During the last several years, the Southern-Caspian populations dominate. In other words, not only the numeracy of the sturgeons changed a lot, but also their distribution.

Thus, nowadays the problem of saving and re-establishing sturgeon bio-resources of the Caspian sea is quite topical. One of the main means of solving this problem is not the spontaneous and unsystematic creations of sturgeon-breeding farms, but a series of activities based on the fundamental rules of population genetics, so that the structure of brood stocks would be introduced in all the populations, races and biological groups of sturgeons species of the Caspian sea.

And that problem is being solved. In the nearest future, within the framework of the federal program "The development of the Fisheries complex" (in the Astrakhan area) a base will be created for breeding and centralized content of brood stocks – a "kindergarten" for sturgeons.

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