

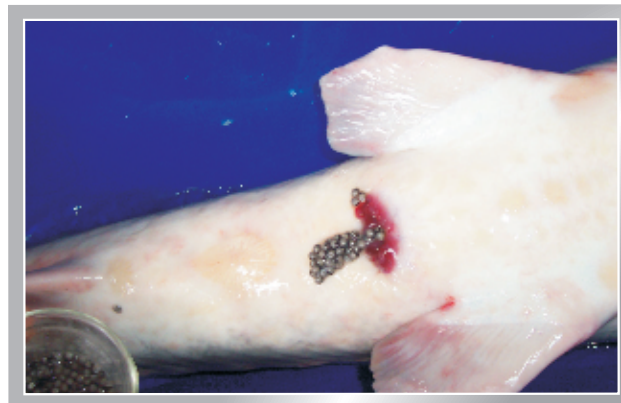
## PROJECT

### STUDIES ON STURGEON JUVENILE PRODUCTION

This study has been carried out within the framework of the “Reproduction Studies” work package of our main project titled “Determination of the Current Status of Sturgeon Populations and Research on the Production Possibilities” project no. TAGEM/HAYSUD/2006/09/02/01, commenced in 2006 under the leadership of our institute and in cooperation with the Fisheries Faculty of the Sinop University, Fisheries Faculty of the Istanbul University, Fisheries Faculty of the Rize University, Provincial and District Agricultural Directorates of the region and the Union for the Conversation and Survival of Sturgeon.

The aim of this study is to build a broodstock

consists of natural sturgeon species inhabiting in Turkish rivers and coastal waters and launch artificial production. When we assess situation of the naturel stocks of sturgeon in Turkish rivers and coastal



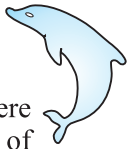
**Dr. Bilal Akbulut**  
Department of Aquaculture

waters. They have been declined within the last century, in line with the worldwide decrease. In 1971 legal arrangements were brought in order to prevent extreme fishing during the spawning season and fishing of the small fish of these species. Thanks to these arrangements, sturgeon fishing has been completely forbidden in Kızılırmak, Yeşilirmak and Sakarya rivers and length prohibitions have been introduced for other rivers. In 1979 sturgeon fishing was forbidden other than sturgeons (*H. huso*) taller than 140 cm. Sturgeon fishing was totally and legally stopped in 1997 (Ustaoğlu and Okumuş, 2005).

Although studies on artificial sturgeon production first commenced by Ovsyannikov in 1870 in the Russian Federation (Dettlaff and Goncharov, 2002). Following 130 years this development, artificial sturgeon production studies were commenced in Turkey while *Siberian sturgeon* (*Acipenser baeri*, Brandt, 1833) juveniles from France in 1997 (Koksal *et al.*, 2000) and *Russian sturgeon* eggs (*Acipenser gueldenstaedtii* Brandt, 1833) from Russian Federation in 2001 were brought to Turkey (Celikkale *et al.*, 2004) due to experimental study.

These studies triggered the studies on sturgeon and caused to start extended projects. Sturgeon has recently become very popular in Turkey for its being one of the fastest growing fish among the fresh-water fish with an annual 1.0-2.2 kg weight increase (Mims *et al.*, 2002) and for the production of worldwide famous black caviar from its eggs. However, investors do act prudently when it comes to sturgeon production since sexual maturity age of sturgeon is higher than that of rainbow trout, seabass and seabream, which are currently being produced.





During the project, to build broodstock including beluga, Russian sturgeon and stellate species, live fish accidentally fishing collected from fishermen and transferred our facility. On the other hand, to support artificial reproduction a group of Russian sturgeon which the eggs brought from Krosnadar, Russian Federation and incubated in the Sapanca Production and Research Unit of the Fisheries Faculty of the Istanbul University grown in the Research Unit of the Trabzon Central Fisheries Research Institute.

One group of members of World Sturgeon Conservation Society visited to our Institute on April 8, 2008 and that visit enhanced and motivated our reproduction works. In the course of visiting Prof. Dr. Michail S. Chabanov, examined our sturgeon with an ultrasound instrument and stated that sperm could be taken from some male Russian sturgeon with hormone injection and egg could be taken from the females within 2 years with good care and feeding.

After the ultrasonographic examination, LHRH-a hormone in the amount of 0,03 mg/kg and in the form of pellet was applied to male fish of approximate of 9-12 kg in weight. The fish were controlled 24, 48, 60, 84, 120 and 160 hours after the hormone application and sperms were taken. The taken-sperms were preserved with the cryopreservation method.

Following these activities three Russian sturgeons of approximate of 10-14 kg in weight transferred from a fisherman in Giresun city to our facility. With examination for spawning, two of them were seen to be candidate to reproduction. Hormone injection procedure set up and it was observed that one of them did not yield any eggs or sperms. Eggs were taken from the second fish by way of stripping. However, it was seen that the eggs were overripe.

Some of the eggs, taken from the third fish, were overripe, but there could be a possibility of fertilization existed for some others. The subject eggs were fertilized through watering the previously through-cryopreservation method-preserved sperms with farm water at a rate of 1:100.

Samples were taken from the eggs for examination during incubation, the expected embryo developments of the eggs could not be observed tough.

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