Sturgeon's death highlights threat to ancient fish

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(AP) -- Alas, poor Harald. Wired up to a satellite transmitter, he had much to teach science about the life of the great sturgeons of the Danube River and Black Sea.

His probable demise is a cautionary tale of the multiplying threats to the great sturgeons, sought since Roman times for the wealth they yield in meat and caviar.

Consider: A living creature from the age of the dinosaurs, a fish that can grow as long as a minibus, lives longer than most men, sniffs its way to its birthplace to spawn and can yield a fortune in caviar.

When in 2009 a team of Romanian and Norwegian researchers attached a satellite transmitter to Harald's 2.9 meter (9 1/2-foot) body, they hoped the data beamed back would show them ways of halting the rapid drop in the sturgeons' numbers. But now the Beluga sturgeon is missing, presumed to be a victim of poachers.

Sturgeon have thrived in the Danube for 200 million years, migrating from feeding grounds in the Black Sea to Germany 2,000 kms (1,200 miles) upstream. Archaeologists have found wooden sturgeon traps in the ruins of Roman fortresses behind the willow trees on the Danube's banks, along with sturgeon bones dated to the 3rd century.

In the 1970s and '80s Romania built giant dams across the Iron Gates gorge, cutting off half the sturgeons' spawning grounds.

Fishermen, unrestrained after the collapse of order in eastern Europe in 1989, caught them in huge numbers as they began their migration, trapping them before they could reproduce. Pollution from agricultural run-off and expanding cities put them under further pressure, although the construction of water treatment plants in the last decade has lessened the flow of filth.

Now environmentalists are trying to head off the latest threat: a European Union plan to deepen shipping channels in the Danube that they fear could eliminate the last shallows where the sturgeon deposit their eggs, which would doom the fish to vanish in its last stronghold in Europe.

"Right now it's teetering on the edge of extinction," said Andreas Beckmann, director of the Danube-Carpathian program of the Worldwide Fund for Nature, or WWF. "That one project, depending on how it's done, could push it over the edge."

Under the plan, engineers would block partially several side channels of the Danube and divert water to the main fairway, enabling year-round shipping through what are now low-water bottlenecks. Concrete would reinforce the banks of some islands.

European and Romanian officials insist the proposed action would not further endanger the fish in the wild, free-flowing waters of the Lower Danube.

"There will be enough water to ensure migration," said Serban Cucu, a senior Transport Ministry official and Romanian negotiator. Still, construction has been delayed for a year to allow more monitoring of the channels.

"If the data collected shows there is some influence, we will decide

together whether to stop the project," said Cucu, interviewed in his Bucharest office.

Sturgeon, which can live a century or more in both salt and fresh water, are genetically wired to reproduce only where they themselves were born. Equipped with four nostrils, each fish sniffs its way to its birthplace, says researcher Radu Suciu.

After the Iron Gates went up, fish west of the two dams effectively were rendered infertile. The reproduction rate was reduced by half, said Suciu, of the Danube Delta National Institute in Tulcea, at the mouth of the Danube Delta.

Even now, 40 years later, older fish congregate at the foot of the dam in spawning season.

This month, conservationists, governments and the U.N. Food and Agriculture Organization agreed to explore building a fish ladder for the sturgeon to crawl around the Iron Gates dams. But unlike salmon, sturgeon cannot jump and would have to use powerful underside muscles to climb nearly 40 meters (130 feet) through a chain of pools.

In a separate attempt to revive sturgeon stocks, experiments have begun to breed sturgeon in fish farms, safe from poachers who kill them for their roe, which is processed into expensive caviar.

In 1999, Stelic Gerghi, an unemployed aquaculture engineer from the Tulcea area, famously caught a 450 kilogram (990-pound) fish and extracted 82 kilograms (180 pounds) of roe. It earned him enough to finish building his home and buy a new car. He is now serving his third term as mayor of the Vacareni district.

International trade in sturgeon was banned in 2001, and in 2006

Romania outlawed sturgeon fishing, followed by Serbia, Ukraine, Moldova and lately Bulgaria.

"We stopped the clock," says Suciu.

But as Harald's story illustrates, the threats have not disappeared.

Harald, named for the king of Norway because that country sponsors sturgeon research, was 12 years old and weighed 80 kilograms (175 pounds) when he was caught and taken to an experimental farm. There his sperm was harvested to artificially fertilize the eggs of females.

After a month he was tagged with a transmitter and released back into the Danube in May 2009, carrying the hopes of scientists to learn how sturgeons travel and behave.

"He was in very good health, a strong fish," said Suciu.

He made his way downstream to the Danube Delta and into the Black Sea. Abhorring light, he stayed in murky depths of 10 to 50 meters (30-150 feet).

Scientists pieced together his movements from 11,000 messages transmitted over five days after the tag reached the surface six months later.

Harald had foraged for herring, sprats, mackerel and other small fish for several weeks. Then in October he swam north.

Suddenly, on Nov. 2, he stopped moving. For three days he stayed on the bottom of the sea, 65 meters (215 feet) down, immobile.

During the night of Nov. 6, sometime after 2 a.m., Harald rose swiftly to

the surface and went in a straight line 11 kilometers (7 miles) to Ukraine's Crimean coast. He remained offshore for two days and on land for another two. The transmitter's final messages, plotted with the help of Google Earth, indicated movement along a railway line.

Much of Harald's data was lost during transmission to the satellite, but the scientists had enough information to surmise his fate: he had been snared by a hook or net, then hauled up in the dead of night and taken ashore by rowboat.

"This was really sad. It was a young fish. He came into the Danube to spawn for the first time," said Suciu.

But the scientist was consoled that Harald left offspring that were released into the river. "The sons and daughters of Harald are safe in the Black Sea. He didn't die for nothing," he said.