

Evidence of fall spawning by Atlantic sturgeon in Virginia river

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Scientists studying the Atlantic sturgeon, one of the oldest species of fish in the world, have found evidence that the James River population in Virginia spawns in the fall, according to scientists at the Virginia Commonwealth University Center for Environmental Studies and VCU Rice Center.

The finding challenges the longstanding view that this specific species only spawns in the spring and may ultimately lead to the development of guidelines and protections for future management and recovery of the fish. Experts assume that there is spring spawning here in the James River, just as there is one in the [Hudson River](#) and in some of the few remaining other rivers with the fish. Therefore, there may be some unique ecological trait of the James River yet to be determined and understood.

Little is known about the biology and life history of the [sturgeon](#). There has been a significant decline in the number of fish in the past 100 years, due largely to overharvesting and the construction of dams that have altered its habitat. Between 1900 and 1920, nearby fisheries collapsed and the James River population was assumed to be extirpated as recently as 10 years ago. All populations of Atlantic sturgeon were given protection under the federal [Endangered Species](#) Act earlier this year. The James River fish are considered to be endangered.

In a new study published online this month in *Transactions of the American Fisheries Society*, a journal of the American Fisheries Society,

researchers report [empirical evidence](#) of fall spawning by the Atlantic sturgeon in the James River in Virginia. During the three-year study, the team captured and observed 125 adult Atlantic sturgeons to determine sex and stage of maturity, track movement of adults via ultrasonic tags and collect data and examine seasonal frequency of reported vessel strikes on sturgeon.

In the study, breaching of adult sturgeon was reported by a number of fishers, guides and watermen starting in August 2010 and lasting for several months. One female that was captured in the three-year window showed signs consistent with female sturgeon that had spawned recently.

One notable observation – following the publication of the study – was a spawning female sturgeon that was captured and released at the end of September 2012 near Hopewell, Va.

"There is still a lot about this population of Atlantic sturgeon that we do not know," said co-author Greg Garman, director of the VCU Center for Environmental Sciences.

"We're still in discovery mode and as we uncover new things we'll be much better able to protect and restore it. We need to learn how we can share this part of the [James River](#) with this iconic and now federally protected species," he said.

According to Garman, the VCU research team will next identify critical habitats used by [Atlantic sturgeon](#) in the James and try to understand more about the biology and ecology of young sturgeon, which reside in the river for several years before starting oceanic migrations. Research will focus on effective management and recovery of this unique species.

There are approximately 20 different species of sturgeon worldwide and almost all of those are in peril of some form. Individual populations

within the species have been extirpated - completely lost beyond recovery.

More information: www.tandfonline.com/doi/pdf/10.1080/00028487.2012.703157

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