SACRAMENTO – Sturgeon spawning has been verified for the first time in the San Joaquin River, according to a U.S. Fish and Wildlife Service study.

The study was jumpstarted by the California State Department of Fish and Wildlife (DFW), which for years has documented angler reports of sturgeon being fished in the San Joaquin River. The study was led by Zachary Jackson, a Service fish biologist in the agency’s Lodi office. The study was recently highlighted in an Interagency Ecological Program newsletter article that can be found at (http://www.water.ca.gov/iep/docs/IEP_Vol26_1.pdf). A copy of both years of the studies and downloadable pictures can be found on the Bay-Delta Fish and Wildlife Office website at: http://www.fws.gov/sfbaydelta/newsroom/newsroom.cfm.

The study detected that for the first time, sturgeon spawning activity was verified at a total of four sites on the San Joaquin during 2011 and 2012. The study indicated that white sturgeon use the river for spawning not only during wet high-flow years, but also during dry years. White sturgeon are thought to be found in only three major river systems on the West Coast of North America including the Sacramento (in California), Columbia (in British Columbia, Idaho and Washington) and Fraser systems.

Anglers and state wildlife enforcement officials had indicated that sturgeon caught during March and April commonly expel milt or eggs during handling, showing that spawning was occurring nearby. DFW wardens told the Service that every year a group of poachers targeted spawning sturgeon at a location on the San Joaquin called Laird Park, near Grayson, spurring speculation that sturgeon were spawning there. Spawning
sturgeon contain a high number of coveted eggs, which can be processed into caviar, capturing up to $150 a pound on the black market, according to the DFW.

“Understanding the effects of water management in a regulated system like the San Joaquin River may result in increased spawning activity, spawning success, and recruitment of white sturgeon,” Jackson said. “Additionally, a better understanding of white sturgeon distribution and use, and the potential to encounter a green sturgeon within this system may enhance the understanding and ability to manage for both species.”

Despite researchers’ hypotheses that spawning of white sturgeon occurred in the San Joaquin River, it had not been documented before 2011. In April of 2011, Service biologists deployed egg mats in locations where anglers and state DFW enforcement personnel had reported regularly seeing or capturing adult sturgeon. The egg mats consisted of furnace filter material secured within a 2x3-foot welded steel frame. These mats were anchored in place, and checked for eggs twice a week for approximately a month. Throughout the 2011 sampling period, 23 fertilized white sturgeon eggs were collected, likely representing a single spawning event, Jackson said. During 2012, egg mats were installed in February and observed through May. A total of 65 fertilized white sturgeon eggs were collected in 2012 – at the 2011 site again and at three new locations, likely representing six distinct spawning events. Documentation of at least six distinct spawning events during 2012, a dry year with flows half or less than the 20-year average, showed that spawning occurs in dry years and may occur annually, which can be an important source of production for the Central Valley white sturgeon population, Jackson said.

“Continued study of the response of white sturgeon to changes in river discharge and temperature would be important for informing fishery and water management decisions,” Jackson said.

“The Department’s collaboration with the Service on behavior of white sturgeon in the San Joaquin system is part of California’s nearly decade-old increased emphasis on reducing impediments to sturgeon migration, assessments of the population and the fishery, improved fishing regulations, and the arrest of poachers,” said Marty Gingras, Program Manager in DFW’s Bay-Delta Region. “Most work with sturgeon has taken place in the San Francisco Estuary and in the Sacramento system, because sturgeon have for decades been very rare in the San Joaquin system. This evidence of spawning in the San Joaquin will help the two agencies protect and manage sturgeon habitat there.”

California’s green and white sturgeon can be easily over exploited because they mature late, spawn infrequently and are dependent on unusual environmental conditions. More-protective sturgeon regulations including a Sturgeon Fishing Report Card, three-fish annual white sturgeon bag limit and a zero-fish green sturgeon bag limit were implemented 2007. Also, AB 1187 (DeSaulnier; D-Concord) was signed into law giving courts authority to issue a fine between $5,000 to $10,000 and/or up to a year in county
jail for sturgeon poaching offenses. Much of the Sacramento River was closed to sturgeon fishing in 2009, and in 2012 several restrictions on fishing gear were implemented in an effort to improve the condition of sturgeon that are released by anglers. Green sturgeon is a federally threatened species under the Endangered Species Act and can’t be taken for sportfishing.

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