Columbia Environmental Research Center

Publication Brief

Distribution of Potential Spawning Habitat for Sturgeon in the Lower Missouri River, 2003–06

Little has been documented about the spawning habitat needs for pallid sturgeon (*Scaphirhynchus albus*), although availability and quality of spawning habitat are thought to be important factors in recovering this endangered species (U.S. Fish and Wildlife Service, 2003; Quist and others, 2004). The U.S. Geological Survey report "Distribution of Potential Spawning Habitat for Sturgeon in the Lower Missouri River, 2003–06" documents a reconnaissance level survey of potential spawning substrate along the Missouri River, from St. Louis, Missouri to Gavins Point dam, South Dakota. The objective of the report is to document where suspected spawning habitat occurs along the river in order to optimize efforts to document spawning and to quantify conditions that lead to successful spawning. In the absence of direct observations of spawning, experts have assumed that pallid sturgeon would use areas with physical characteristics similar to those used by other sturgeon species: coarse gravel- boulder or bedrock substrates where water velocities are swift.

U.S. Geological Survey scientists surveyed 811 miles (1,300 km) of the Lower Missouri River during low-water conditions in 2003–06 to identify and map coarse substrate deposits and bedrock exposures that might serve as spawning areas. More than 330 deposits were identified, including tributary fans, bars, and habitat-enhancement projects. The location and extent of 113 riverside bedrock exposures immediately adjacent to the channel also were mapped. Maps illustrating the distribution of deposits and their density were developed to aid researchers studying reproductive ecology of sturgeon and other lithophilic fishes.

Photograph of gravel-cobble substrate in the Missouri River just downstream from Yankton, SD.

References cited:

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