Assessment of Post-Stocking Dispersal of Age-1 Pallid Sturgeon: Implications for Acclimation

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A propagation program for pallid sturgeon (*Scaphirhynchus albus*) in the upper Missouri River was implemented by the U. S. Fish and Wildlife Service in 1997. However, evidence suggested that many hatchery-reared pallid sturgeon were experiencing significant downstream post-stocking dispersal, negatively affecting the population. Therefore, the objective of this study was to evaluate the effects of acclimation to flow and site-specific water conditions on post-stocking dispersal. Fish from three acclimation treatments were radio-tagged, released at two locations, and monitored using passive remote telemetry stations. Treatment 1 fish were acclimated to flow and site specific water conditions for 35 d in tanks on the Marias River, treatment 2 fish were acclimated in cages in the Marias River for 3 d, and treatment 3 fish were reared with no acclimation at the Bozeman Fish Technology Center. Treatment 2 fish experienced 100 percent mortality. Pallid sturgeon from treatment 1 and 3 drifted less in the lower reaches of the study area where more sand substrate is present. Treatment 1 fish drifted less than treatment 3 fish, experienced lower mortality and nearly twice as many remained in suitable pallid sturgeon habitat. These preliminary data suggest that acclimation can reduce post-stocking dispersal.