



United States Department of the Interior



FISH AND WILDLIFE SERVICE Mountain-Prairie Region

IN REPLY REFER TO:
FWS/R6/FR
Pallid sturgeon

MAILING ADDRESS:
Post Office Box 25486
Denver Federal Center
Denver, Colorado 80225-0486

STREET LOCATION:
134 Union Blvd.
Lakewood, Colorado 80228

JAN 20 2006

Kate Walker, President
Montana Chapter AFS
5646 Prospect Drive
Missoula, Montana 59808

Dear Ms. Walker:

I would like to thank you and the Montana Chapter of the American Fisheries Society (Society) for taking the time to provide support for the use of genetic marks in pallid sturgeon recovery efforts.

In the past, there have been concerns expressed about stocking non-physically marked pallid sturgeon and the subsequent inability to monitor population demographics like natural spawning and recruitment success. The U.S. Fish and Wildlife Service (Service) and Pallid Sturgeon Recovery Team (Recovery Team) were also concerned about past failures to meet Recovery Priority Management Area (RPMAs-as defined in the Pallid Sturgeon Recovery Plan) stocking goals, and due to these concerns, the referenced study was funded by the Service, with the intent of developing a genetic pedigree database that would allow early stocking of hatchery reared pallid sturgeon fry and juveniles using microsattelite loci as markers to identify lineage. The delay in stocking non-physically marked hatchery produced pallid sturgeon has not been due to any "...reluctance of the Service..." to stock physically unmarked fish, but rather to develop the appropriate techniques and database, as well as to comply with Service regulations and policies that have been developed to recover and safeguard the species. While the results of DeHaan et al. (2005)¹ are promising, the technique retains some drawbacks. Among these are logistical and cost issues yet to be resolved inherent in large scale use of the technique and the inability to differentiate hatchery produced pallid sturgeon from the same family lots stocked as different size classes. However, we agree with the Society's assessment that the genetic mark as outlined in DeHaan et al. (2005)¹ is a valid technique for determining if an unmarked pallid sturgeon is of hatchery or natural origin. We also feel that the potential drawbacks of this marking technique can be accommodated through funding initiatives and careful planning to enhance our stocking efforts in RPMA 1 and 2.

You may not be aware that a draft range-wide stocking plan for pallid sturgeon is being developed that identifies genetic marks as one technique that will allow stocking multiple size classes of hatchery produced pallid sturgeon. This likely will reduce the need to euthanize hatchery-produced pallid sturgeon exceeding a facility's carrying capacity at life stages too small to physically mark. As part of this plan's development, the Recovery Team has solicited review

hatchery-produced pallid sturgeon exceeding a facility's carrying capacity at life stages too small to physically mark. As part of this plan's development, the Recovery Team has solicited review and comments from the three pallid sturgeon basin workgroups. The upper basin workgroup does include representation from state, federal, and non-governmental biologists working with pallid sturgeon in Montana. The comments from these workgroups are important to insure that concerns like those expressed by the Society are addressed in this stocking plan.

The draft range-wide stocking plan considers available survival estimates, habitat, current demographic and genetic data, and other information to identify stocking needs and to develop stocking goals for each RPMA. This stocking plan will help promote persistence of pallid sturgeon, not just within Montana but throughout the species' range, until habitat improvements can be implemented at levels sufficient enough that pallid sturgeon populations can maintain themselves.

Once finalized, the stocking plan will identify RPMA specific stocking targets and account for hatchery supplementation with various size classes utilizing genetic marks for fish too small to physically mark. Stocking pallid sturgeon beyond these target levels can have deleterious effects like genetic swamping, inbreeding depression, and increased rates of competition. Hatchery produced fish in excess of those stocking targets will be subject to the disposition process.

Again I appreciate the comments provided from the Society and look forward to the Society's input as this stocking plan is developed. Please feel free to contact me if you have any questions or would like to discuss this issue further.

Sincerely,



Acting Regional Director

¹DeHaan, P. W., D. E. Campton, and W. R. Ardren. 2005. Genotypic analysis and parental identification of hatchery-origin pallid sturgeon in the upper Missouri River: Phase I Inheritance of Microsatellite, Nuclear DNA Markers. June 23rd, 2005. 35pp. USFWS Abernathy Fish Technology Center Final Report.