

The Importance of Juvenile Shad in the Fall Diets of Smallmouth Bass and Walleye in the Middle Columbia River

Matthew G. Mesa, Brien P. Rose, Gabriel S. Hansen, and David E. Ayers
U. S. Geological Survey, Western Fisheries Research Center
Columbia River Research Laboratory
5501 Cook-Underwood Rd., Cook, WA 98605

American shad *Alosa sapidissima* in the middle Columbia River—a high energy food available in the summer and fall—may be contributing to the increased growth and enhanced condition of nonnative piscivores. To test this hypothesis we quantified the late summer and fall diets of smallmouth bass *Micropterus dolomieu* and walleye *Sander vitreus* in the three lowermost reservoirs on the Columbia River (Bonneville, The Dalles, and John Day). We then evaluated these diets relative to changes in the mean mass, condition factor, and liver somatic index of fish over time. Here, we will discuss the possible connections between predator diet and condition and the possible consequences of improved condition to subsequent predation on salmonids or reproductive performance. Our results should be useful for future discussions regarding predation and shad management in the Columbia River.