Seasonal And Spawning Movements Of Genetically Pure And Hybridized Westslope Cutthroat Trout In The Fan Creek Drainage, Yellowstone National Park

Carrie Brooke, Montana Cooperative Fisheries Research Unit, 301 Lewis Hall, Montana State University. Bozeman, MT 59717, cebrooke@montana.edu

Once the dominant salmonid of the Gallatin River, westslope cutthroat trout (*Oncorhynchus clarkii lewisi*) have been reduced to four isolated headwater populations in this river drainage. We used radio telemetry to investigate the seasonal movement of westslope cutthroat trout and hybrids in the Fan Creek drainage, focusing on the North Fork. Fish were tracked for an average of 60 days throughout the summer of 2001 and an average of 262 days throughout the end of 2001 and 2002. Westslope cutthroat trout moved an average of 2143 m in the summer of 2001 and an average of 2990 meters throughout the study period of 2001-2002. The majority of movement for 2001-2002 occurred in the spring and summer months, whereas sedentary behavior was observed in the fall and winter months. R1/R4 inventory data was collected for the North Fork of Fan Creek and personal observation was used for the main stem. Westslope cutthroat trout were relocated in areas of increased instream habitat complexity and a high percentage of cover in the North Fork of Fan Creek. There was no discernable difference found in habitats where fish were relocated and where fish were not located in the North Fork of Fan Creek. In the mainstem, westslope cutthroat trout were relocated in areas where deep bends provided undercut banks and areas with root wads. In summation, fish moved throughout the Fan Creek drainage throughout the study. Adequate habitat appeared to be provided for fish to remain in the North Fork for all seasons.