

Pacific States Marine Fisheries Commission Steelhead Management Meeting
Virtual, March 2021

Conservation and Management of Adaptive Genomic Variation

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Research on the evolutionary genomic characteristics of natural populations has made spectacular progress in the past few years, largely due to the advances in sequencing technology and analysis. However, it is far from clear how our understanding of adaptive genomic variation can or should inform wildlife conservation practice. Before this occurs, consideration must be given to the biological realities of dynamic natural habitats and the factors that affect the distribution of adaptive genomic variation among populations. In this talk I will present examples of genomic variants associated with specific phenotypes in salmonids and other taxa. These studies demonstrate the complex ways in which genomic variation and the environment interact to affect phenotypic variation and individual fitness, and highlight the implications of using specific genomic targets to set conservation priorities.