

# Spatial and temporal variation of westslope cutthroat trout habitat in the Rocky Mountains

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## POSTER

Westslope cutthroat trout (*Oncorhynchus clarki lewisi*) is an important subspecies to Alberta, as a representative of a rich and diverse fish taxon that intrinsically holds many local adaptations to their native range. The reduction of westslope cutthroat trout from their historical range to isolated headwaters is mainly a result of the introduction of nonnative salmonids (ex. *Oncorhynchus mykiss*) and consequent genetic introgression. This study aims to describe habitat diversity in three Rocky Mountain tributaries in Alberta associated with pure strains of westslope cutthroat trout. Environmental variables including riparian vegetation, cover, substrate composition, and stream morphology were assessed on June 15, 2014. Water chemistry and hydrologic variables of streams were measured every two weeks from June to August of 2014 and once in September, 2014. Results of environmental analysis show temporal and spatial differences of the three streams; the correlations between environmental variables are also discussed. The three tributaries studied (Blairmore Creek, Gold Creek, and Daisy Creek) represent critical habitat for remaining populations of westslope cutthroat trout; describing environmental parameters and habitat diversity is essential in establishing criteria for suitable habitat available for westslope cutthroat trout.