Genetic diversity of Dolly Varden populations in Norton and Kotzebue Sounds, and of Arctic char populations in the Noatak National Preserve

Abstract: Anadromous northern form Dolly Varden *Salvelinus malma* are common throughout most of northwestern Alaska and are an important component of subsistence harvests. This species has complex migratory patterns involving annual summer feeding migrations to sea and annual fall movements back to freshwater rivers where they remain during the winter. Subsistence harvests are primarily taken from mixed stock wintering aggregations during fall seining, winter jigging, and spring gill netting. This project was a first step in achieving the goal of estimating stock contribution to mixed-stock subsistence harvests in northwestern Alaska. Fin tissue was collected from known stock Dolly Varden populations in streams used for spawning both north and south of the Bering Strait. Populations were sampled in the Kugururok, Kaluktavik and Nimiuktuk rivers of the Noatak River drainage and in the Wulik and Kivalina rivers draining into the Chukchi Sea. Five lakes were also sampled for the presence of Arctic char *S. alpinus*, but only Dolly Varden were found and sampled from two of these lakes. A total of 112 clones were sequenced and 34 appeared suitable for primer development. These collections will be coupled with future collections to create a stock specific genetic base line for anadromous Dolly Varden in northwestern Alaska.

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