Genetic Variability in Hatchery and Wild Populations of Coho Salmon *Oncorhynchus kisutch* in Oregon

By

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Abstract

Biochemical genetic data was collected and analyzed for twenty three populations of coho salmon (*Oncorhynchus kisutch*) from Oregon, USA. A total of twenty-four enzymes were examined, proposed to represent 53 loci. Variability was found in 16 of 24 enzymes, at 31 of the 53 loci examined.

Estimates of genetic identity indicated four major population groupings with distinct identity differences between groups. Levels of variability at loci examined were generally low with differences among many populations being qualitative rather than quantitative.

These qualitative differences were the result of many variant alleles occuring at low frequencies. The presence of these alleles in conjunction with a selective breeding program could form the basis for the genetic marking of hatchery stocks providing a valuable asset in fisheries management.

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