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July 21, 1999

Pat Price
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1299 Highway 93 N.
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Pat,

We have completed the genetic analysis of fin clips from fish collected from West Branch Big Creek. Sample site is located at T33NR30WNW of NW of S22.

Our analysis is based on vertical polyacrylamide gel electrophoresis of nuclear DNA fragments. These fragments are the result of amplifying specific regions of DNA using the polymerase chain reaction (PCR). Primers for the PCR are chosen to amplify the DNA between paired interspersed nuclear elements (PINEs) in the DNA. Multiple fragments are produced with each primer pair. Many of these are specific to each species of trout, that is, they are diagnostic. A diagnostic marker exists in all individuals of the species and never shows up in the other species. We use these diagnostic markers to detect hybridization between trout species.

We scored eight diagnostic loci between westslope cutthroat trout, *Oncorhynchus clarki lewisi*, and rainbow trout, *O. mykiss*, in these fish. The markers characteristic of rainbow trout were detected in all fish. These fish had from zero to all six of the markers characteristic of westslope cutthroat trout.

These results indicate that the West Branch Big Creek sample is from a hybridized population comprised of 83% rainbow and 17% westslope cutthroat trout. Percent of each species genes in the population was calculated by averaging allele frequencies at markers diagnostic for westslope cutthroat trout (Table 1).

Sincerely,

Kathy L. Knudsen
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