Group 2
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Biology

“24andMore: Using Genomics to Improve Walleye (Sander vitreus) Stocking in Iowa”
24ANDMORE: USING GENOME-WIDE SNPS TO INVESTIGATE THE GENOMIC DIVERSITY OF IOWA WALLEYE (SANDER VITREUS) BROODSTOCK

DNA Extraction & Sequencing

Build Loci De Novo

Populations

Results

Abstract

Walleye, Sander vitreus, is one of the top gamefish in Iowa. Due to poor natural reproduction in many Iowa waterbodies, populations are managed with stocking. There are two strains of walleye used to stock Iowa’s inland waters: a river strain derived from the Mississippi River near Genoa, WI and a lake strain derived from Spirit Lake, IA. Each strain may have unique characteristics relative to their environment that could affect the fitness and success of fish stocked. The goal of this study is to understand the genetic diversity within and between each strain to offer stocking guidance to the Iowa Department of Natural Resources. Genome-wide single nucleotide polymorphisms (SNPs) were used to genotype individuals. Broodstock individuals from each strain and various year classes were sampled. Population genetic analyses were performed and preliminary analyses will be presented.