

Population Structure in Gulf Sturgeon

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The anadromous Gulf sturgeon occurs along the north central coast of the Gulf of Mexico and is federally listed as threatened. We have genotyped over 1200 individuals from nine drainages for fourteen microsatellite loci. Multiple analyses provide clear evidence of strong population structure across its range. These genetic groups are mostly represented by individual drainages (Pearl, Pascagoula, Escambia and Apalachicola) or drainages with a common estuary (Blackwater and Yellow). However, both the Choctawhatchee and the Suwannee Rivers seem to possess two distinct stocks, which may represent spatial or temporal segregation in the spawning groups within these rivers. We also detected interdrainage movements by the adults as has also been found in previous telemetry studies. Most of the interdrainage movements detected by the genetic data occur at a regional level. Both the reproductive fidelity and patterns of adult movements across the Gulf of Mexico have important implications for conservation efforts.