



The Use of Microsatellites to Detect Molecular Diversity in an Isolated Bahamian Seahorse Population

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Sweetings Pond (Eleuthera Island, Bahamas) is a saltwater lake with a large population of lined seahorses (*Hippocampus erectus*). The pond's unique biology stems from its low connectivity to the ocean, with evidence of reduced tidal flow through porous limestone rock. As a result, it is possible pond seahorses have been isolated from ocean populations, presenting the opportunity for speciation. Fin clip samples were obtained from animals from six locations in Sweetings Pond and the DNA was extracted. PCRs were conducted using microsatellite primers for four loci that were originally designed using DNA sequences from *Hippocampus zosterae* specimens. The PCR products were run on 2% agarose gels to confirm if the *H. zosterae* primers were successful in amplifying DNA from Bahamian *H. erectus* seahorses and to determine the percent heterozygosity for four *H. zosterae* microsatellite loci. Preliminary results show that three *H. zosterae* microsatellite primers successfully amplify *H. erectus* alleles and indicate that *H. erectus* have smaller allele sizes at these loci than *H. zosterae*. Final results from the project will include genotyping 24 seahorses from each of the six microhabitats within Sweetings Pond to compare with the genotypes from Bahamian *H. erectus* seahorses outside of the pond.