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The monotony of transferrin and esterase electrophoretic patterns in pirarucu, *Arapaima gigas* (Schinz, 1822) from Santa Cruz Lake, Tefé River, Amazonas, Brazil

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ABSTRACT. Starch gel electrophoresis was used for examining the transferrin gene locus (Tf) and two esterase gene loci (Est-1 and Est-D1) of a pirarucu (*Arapaima gigas*) population sample collected from Santa Cruz Lake, Tefé River, Amazonas, Brazil. The Tf locus was tentatively classified as being polymorphic, showing two double-banded patterns (Tf^{12} and Tf^{22}) of the three theoretically expected ones (Tf^{11}, Tf^{12} and Tf^{22}), presumably controlled by two co-dominant alleles, Tf^{1} and Tf^{2}. The monotony detected in pirarucu Tf locus genotypes showing a very high proportion of the double-banded heterozygote pattern Tf^{12} (95% of the sampled individuals) may indicate the possibility of their having come from representatives of the same brood begotten by a pair of fish, where a single-banded Tf^{11} homozygote pattern male would have crossed with a single-banded Tf^{22} homozygote pattern female, or vice versa. One zone

of electrophoretic activity was detected in esterase, presumably controlled by a monomorphic Est-1 locus with the fixed allele Est-1^{1} where all individuals showed the single-banded Est-1^{11} homozygote pattern. Esterase-D also displayed one zone of electrophoretic activity, presumably controlled by a monomorphic Est-D1 locus with a fixed allele Est-$D1^{1}$ where all individuals revealed the single-banded Est-$D1^{11}$ genotype pattern. The monotony comprised by single-banded genotype patterns in both esterase systems tested may also indicate the possibility of the individuals from the sample examined having come from representatives of the same brood begotten by a pair of fish with both the male and female having the same genotypes.

Key words: Pirarucu; Amazon; Electrophoresis

