

Study of Three DNA Microsatellite Markers in *Pygoscelis papua* Penguins (Aves: Sphenisciformes) from the Livingston Island

*Elmira Trakiiska*¹, *Stojan Bichev*², *Genadii Telegeev*³, *Myhaylo Dybkov*³,
*Volodimir Bezrukov*⁴, *Jordan Jankov*⁵, *Aleksey Savov*²

Abstract: In this research we present data from one study of three microsatellite DNA loci in a population of *Pygoscelis papua* penguins, inhabiting the Livingston Island. One hundred and two individuals were genotyped in order to determine the levels of genetic variation in the colony and to evaluate its genetic structure. Our data showed slight allele variations in the studied loci. Two of them were monomorphic and the third demonstrated a low level of polymorphic content with only two alleles presented in the locus.

The obtained data allow us to conclude that the three analysed STR markers appeared to be not enough informative for the investigation of genetic variations within the studied population of *Pygoscelis papua* penguins - this could be due to its very homogeneous genetic structure.

On the other hand, the three microsatellite markers showed to be an appropriate tool for the study of the genetic diversity among the species in genus *Pygoscelis* - for the comparative analyses of the allele frequencies in the studied loci among the 3 species *Pygoscelis papua*, *Pygoscelis antarctica* and *Pygoscelis adeliae*.

Key words: The Antarctic, DNA microsatellites, genetic variation, *Pygoscelis papua*, *Pygoscelis adeliae*.