

**6<sup>th</sup> International Wildlife and  
Game Management Symposium**

**Modern Aspects of Sustainable Management  
of Game Populations**

13 – 16 June 2018, Sofia, Bulgaria

**Book of Abstracts**

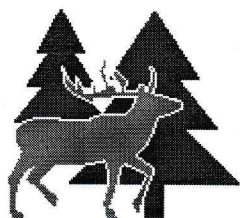
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**CAN THE RIVER ACT AS GENETIC BARRIER  
FOR ALPINE CHAMOIS POPULATION?**

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**Abstract**

Alpine chamois (*R. rupicapra rupicapra*) occupy Alpine and Dinaric region between Slovenia and Croatia. In Slovenia, populations are distributed in Alps, Pohorje Mts. and in the Dinaric Mts. where they merge with Croatian chamois. In its upper course, the Kupa River flows through the Dinaric Mts. and forms a natural and political border between countries north-west Croatia and southeast Slovenia. Such natural fragmentation of habitats may have influence on genetic structure of populations by restricting gene flow among them. We used nuclear microsatellite markers to analyze the genetic population structure and movement behavior (true estimation of gene flow and isolation by distance) of chamois in fragmented area separated by natural barrier. The 56 geo-referenced individuals (39 samples from the Croatian side and 17 samples from the Slovenian side) were collected during regular hunting season. Genetic assignment of samples was performed using methods implemented in two software STRUCTURE and GENELAND. The obtained results suggested that Kupa River do not act as genetic barrier for studied chamois populations. Meanwhile, in November 2015 the refugee crisis in Europe caused construct of border security fence along the most exposed parts (178 km) of Slovenia-Croatia border. Border fence presence would determine the degree to which chamois and their genes can move among habitat patches. This would lead to limited exchange of genetic diversity between populations which may seriously affect spatial behavior of individuals and populations.

**Keywords:** *chamois, habitat fragmentation, genetic barrier, Slovenia-Croatia border, fence*