



Book of Abstracts

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Universidad de Valladolid

May 22nd – 26th, 2023 - Valladolid, Spain

Conde Ansúrez Palace, Real de Burgos s/n, 47011, Valladolid





B chromosomes in urban populations of yellow-necked wood mice, *Apodemus flavicollis* (Mammalia, Rodentia)

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B chromosomes (Bs), or supernumerary chromosomes, are highly polymorphic special chromosome group. Among rodents, 37 species harbour individuals with Bs in their populations. Genus *Apodemus* is specific, with even six species having Bs. Furthermore, long-term studies in natural populations of the yellow-necked wood mouse *Apodemus flavicollis* showed that one-third of individuals carry Bs on average. In more than 40 natural populations we analysed in Serbia, the frequency of animals with Bs ranged from 0.11 to 0.63 and correlated negatively with average temperature and positively with altitude. In general, non-Mendelian transmission and frequent heterochromatic composition are characteristics that have classified Bs as selfish genetic elements in the past. However, there are increasing confirmations of active genes in them, which opens the discussion on their adaptive significance. We aim to investigate how urbanisation influences the frequency of Bs in this species. Urbanisation is rapidly changing natural habitats and affecting animal community composition, genetic diversity, and the interrelationship between populations of native species. Habitat fragmentation is the leading course of genetic diversity loss. We analysed the frequency of animals with Bs in four managed city forests on the territory of Belgrade, the capital of Serbia, characterised by different sizes and degrees of isolation. Our study revealed that the frequency of animals with Bs varies significantly among studied sites, from 0.04 to 0.50. We assume that, besides other factors, genetic drift plays a significant role in obtained differences.

Keywords: B chromosomes; *Apodemus flavicollis*; urbanisation; habitat fragmentations

Symposium: TAXONOMY, GENETICS & CONSERVATION