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## Poster Session 2 – Response to Human Induced Changes

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### **106 Multiple paternity in common hamster (*Cricetus cricetus*) from urban and suburban population**

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The common hamster (*Cricetus cricetus*) over the past fifty years dramatically decline in wild. Along with this, it began actively to settle in the cities. Urban areas are characterized by special environmental conditions. Animals that inhabit the city demonstrate a variety of adaptations, led to breeding strategy changes. In this connection, it is interesting to compare their reproductive strategy in the city and in the wild. During three years, we studied the structure of the urban population of the common hamster in the Gagarin park (Simferopol, Russia) on the plot of 2.2 hectares. In April 2016, during the peak of breeding activity, we observed 5 mating groups simultaneously. Each one has included one female and up to five males. Chasing and mating of males with females occurred several times during 2–3 hours. These observations allowed us to suppose a multiple paternity possibility. In the spring, 2017 in the city Park we found a dead female at the last stage of pregnancy. Another dead pregnant female was found in Chisten'koe village (10 km apart Simferopol – agrophytocenosis habitat). Estimation of the population density by active burrows calculating has shown that in urban population of the common hamster the density is about 50 animals/ha that is at least 3 times higher as in Chisten'koe village ones. Samples of fifteen embryos and the mother from Gagarin park and of the female with eleven embryos from Chisten'koe were used for molecular-genetic analysis. Allelic composition of 10 microsatellite loci of nDNA, has shown that in the urban population we assumed at least 3 fathers of the litter and at least 2 fathers in the suburban habitat. Thus, for the first time, we have evidence for multiple paternity in *Cricetus cricetus* in the urban and as well as in wild habitats. The study was supported by RFBR grant 17-04-01061.

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# Julius-Kühn-Archiv

Jens Jacob, Jana Eccard (Editors)

6<sup>th</sup> International Conference of Rodent  
Biology and Management  
and  
16<sup>th</sup> Rodens et Spatium

Potsdam, Germany, 3-7 September 2018

Book of Abstracts



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