
Poster Session 1 – Rodent Behaviour

13 Sexual differences in home ranges of *Apodemus peninsulae* in Korea

Sung Jin Park, Woo-Shin Lee

Seoul National University Arboretum, Anyang, Korea, lutralutra@naver.com

The spatial distribution of a species may imply their mating system strategies. In order to investigate home range characteristics of *Apodemus peninsulae*, we used capture-mark-recapture method from total 18,000 trap nights through 5 study sites in Korea. Home ranges were estimated with Minimum Convex Polygon method from individual data captured at least 3 different trap locations. Whether social ranks were related to home range patterns, generalized linear mixed models were employed with a Poisson error distribution and log link function. Fixed factors were weights (social ranks) and numbers of captures of each individual and random factors were study sites and years in study sites. Home ranges of 41 males and 26 females were estimated. Home ranges of males often overlapped with both males (23 in 41 males) and females (16 in 41 males) (Chi-square 1.723, df=1, p=0.189). However, home ranges of females overlapped more with those of males (19 in 26 females) than females (7 in 19 females) (Chi-square 9.308, df=1, p=0.002). Home range sizes increased with male weights but decreased with female weights. Home range sizes of both sexes increased with numbers of captures. Numbers of captures and weights in each sex were not correlated. Our results show two sexes of *Apodemus peninsulae* have different spatial distribution patterns. These patterns may imply that males of the species have a promiscuous mating strategy (polygynous mating) but females secure their territories in related to resource competition in order to maximize reproductive success of each sex.

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6th International Conference of Rodent
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Jens Jacob¹ and Jana Eccard²

¹Julius Kühn Institute, Federal Research Centre for Cultivated Plants,
Institute for Plant Protection in Horticulture and Forests, Vertebrate Research,
Toppeideweg 88, 48161 Münster, Germany

²University of Potsdam, Institute of Biochemistry and Biology,
Animal Ecology Group, Maulbeerallee 1,
14469 Potsdam, Germany

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