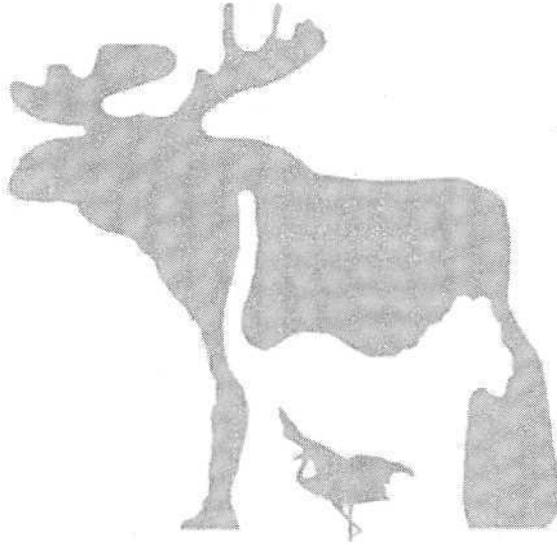


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with the rut, when the bucks visited several lek territories. Although the activity of does did not increase significantly in autumn (3,551 m, N=18, SE=179.7) if compared with summer, they made some short-time excursions. The does were the most passive in winter (3,105 m/day, N=18, SE=136.5). In this period the bucks moved (3,576 m/day, N=18, SE=117.1) significantly more ($p=0.01$). The reaction to the shortening of daytime is very spectacular as the activity of both sexes at dawn is much lower than that in dusk

Keywords: GPS telemetry, distances covered, daily movement

D53 Longitudinal monitoring of stag calling activity during the rut in two Siberian red deer *Cervus elaphus sibiricus* facilities in Central Russia

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Roaring counts are often used as indices of red deer abundance. Hunting managers apply from one to a few counts by ear per roaring season, what does not consistently synchronous with the roaring peak. Automated recording systems can be used for formal validation of red deer censuses by ear. They can be scheduled for recordings in the absence of human observers. This allows longitudinal recordings through day and night and through the season for assessment of the dynamics of calling activity of red deer populations. Using two automated recording systems Song Meter SM2+, we recorded rutting calls of Siberian red deer stags *Cervus elaphus sibiricus* in two semi-captive populations kept in private facilities on the European part of Russia, separated by a distance of 510 km. The "Tver" population has been introduced in 2006 on a fenced 5000-hectare territory, and in the year of recording (2013) counted in total 400 animals. The "Kostroma" population has been introduced in 2010 on a fenced 70-hectare territory with intensive supplementary feeding, and in the year of recording (2013) counted in total 108 animals. The recording schedule was set at 5 min per hour (120 min in total per day), from 3 September to 11 November 2013 (for 70 days or 10 weeks in total), with



simultaneous registration of air temperature. The total number of calls recorded during the 70 days, was 30 times higher at Tver than at Kostroma population (4341 and 145 calls respectively). While the call number per day did not correlate between populations ($r=0.05$, $p=0.67$, $n=70$), the correlation between average temperatures per day in the two study sites was positive and highly significant ($r=0.85$, $p<0.001$). At Tver population, the call number significantly negatively correlated with average temperature per day ($r=-0.29$, $p=0.01$), whereas at Kostroma population the correlation was non-significant ($r=-0.15$, $p=0.20$). At Tver population, the rut calling activity was single-humped, with highest call-per-hour values distributed between 24 September and 21 October, and with peak at 6 October. At Kostroma population, the rut calling activity was two-humped, with two small peaks at 22 September and 25 October, and a close to zero depression between the peaks. At Tver population, the call number per hour was significantly related to daytime, with peak values from 18.00 to 09.00, whereas at Kostroma population, the maxima of calling activity per day were found between 07.00-09.00 and between 16.00-18.00. Substantial differences in rut calling dynamics between the two populations, located in the same climate conditions can be explained by management conditions. In Tver population, there is 12 hectares of territory per individual, whereas in Kostroma population, only 0.65 hectares. In addition, the Kostroma population contained many young stags below the reproductive age.

Key words: automated recording system, red deer, rutting calls, vocal activity

D59 Semen Characteristics and Sperm Morphology Of Pudu (*Pudu pudu*)

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The southern pudu (*Pudu pudu*) is the smallest of South American deer species;