3rd International Jackal Symposium

02-04. November 2022

Gödöllő, Hungary

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abstract book

Editor: Miklós HELTAI

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HUNGARIAN UNIVERSITY OF AGRICULTURE AND LIFE SCIENCES
Institute for Wildlife Management and Nature Conservation

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16-Ecology-6-Oral

Preliminary determinants of (long distance) dispersal behaviour in Golden jackal

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1 Purpose In recent decades, the golden jackal (*Canis aureus*) has experienced a remarkable expansion of its range, with vagrant individuals observed far outside the species' permanent range in the north and west - as far as the Arctic Circle in Norway, Denmark, and France. The species is highly adapted to thriving in human-dominated landscapes, where it benefits from abundant food sources. Dispersal affects the redistribution of organisms and is therefore a key factor in species range expansions. There is limited knowledge of the dispersal ecology of the golden jackal, based largely on indirect approaches. Occasional detections of vagrant individuals or large-scale genetic studies in Europe indicate the dispersal ability of the species and support the occurrence of long-distance dispersal in this species. 2. Methods We report dispersal characteristics of golden jackals at birth in six individuals (2 females and 4 males) aged 7 – 24 months, monitored between 2018 and 2022 using GPS telemetry. The individuals were observed during studies conducted in three countries: NE Italy, SW Slovenia, and in Serbia. We quantified some measures of movement paths from the pre-dispersal home-range (HR)/release site to post-dispersal HR. 3. Results The observed individuals started dispersal between January and April and lasted between 8 and 97 days. The maximum linear distance from pre-dispersal HR/starting site was between 23.6 and 163 km during dispersal, and the final linear distance to post- dispersal HR ranged from 6.5 to 159 km. The total distance travelled during dispersal ranged from 98.5 to 627.7 km, with the average daily distance ranging from 3.74 to 15.3 km. Different individuals travelled through extremely diverse gradient of habitat types, from urban and industrial areas to agricultural landscapes and contiguous mixed deciduous forests from lowlands to mountains. On their routes, some were frequently crossing highways and large rivers, such as the Sava or the Danube, at widths ranging from 300 to 600 m. 4. Conclusion Our study demonstrates the adaptability and ability of the species to disperse rapidly across human-dominated landscapes as well as through contiguous forested areas, and to cross major linear barriers such as large rivers, fenced highways, and mountain ridges. This high dispersal ability explains the past and ongoing rapid expansion of the golden jackal in Europe and may expand to large parts of still unoccupied Europe in the near future.