# GLOBAL TRANSLOCATION STUDY

## *Individual, environmental and management drivers of home range formation and translocation success*

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To participate in this collaborative project and provide data on translocated, reintroduced, relocated or rehabilitated vertebrates**, please fill this brief survey before the 1st of May 2026** https://tinyurl.com/global-translocation-study. This deadline concerns the survey only – we will then contact those who have responded to proceed with data sharing, though late responses may limit our ability to follow up with everyone.

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| **Data** | ***Data requirements*** | Movement data of translocated, reintroduced, relocated or rehabilitated vertebrates, from either captive or wild origin |
| | ***Timespan*** | All post-release data are relevant (including in subsequent years after release) |
| | ***Primary data (required)*** | - Location data (GPS or VHF) and associated timestamps<br>- Individual metadata (e.g., sex, age class)<br>- Translocation metadata (e.g., method of release, capture/release site coordinates and timestamps) |
| | ***Optional data*** | - Location data from the translocated individuals measured before their translocation<br>- Location data from resident individuals where translocated animals originate from and/or are released<br>- Activity or accelerometry data<br>- Individual fate (survival/reproduction)<br>- Personality proxies |
| **Anticipated timeline** | ***Data selection*** | 02/2026 – 09/2026 |
| | ***Analysis*** | 04/2026 – 08/2027 |
| | ***Writing*** | 02/2027 – 10/2027 |
| | ***Submission*** | 12/2027 |

**Project collaboration structure**
We aim to engage a diverse group of researchers and managers studying translocated, reintroduced, relocated or rehabilitated vertebrates. All data providers will be invited to contribute to the project and to be co-authors of the resulting publications. I.K., S.C-J., N.M. and N.R. are the main investigators and coordinators of the project (core analysis group).

## Overview of the project

Most animals live, at least seasonally, in a home range (HR) – an area that fulfils their requirements for survival and reproduction (Burt 1943). Understanding how HRs form is a central question in spatial ecology and wildlife conservation, particularly in the context of wildlife translocations. Translocating animals into novel environments provides a unique opportunity to document how individual experience develops over time and shapes HR formation (Berger-Tal & Saltz 2014; Ranc et al. 2022). Furthermore, post-release spatial behaviour of translocated individuals, and in particular their ability to rapidly establish a stable HR within the area targeted by managers, is a major determinant of translocation success (Berger-Tal & Saltz 2014; Berger-Tal et al. 2020). In this project, we aim to quantify how individual traits, environmental conditions and management practices jointly influence HR formation and, ultimately, translocation success. We propose to address these questions through a multi-species, global analysis of post-translocation movement in vertebrates. To this end, we call for movement and location datasets from translocated, reintroduced, relocated or rehabilitated vertebrates across a wide range of populations, species, and geographic regions.

## Project results and publications

We plan to structure the project around three complementary sub-analyses, leading to separate scientific publications.

***1. Drivers of home range formation and settlement.*** We will examine how individual (e.g., sex, age, personality), environmental (e.g., conditions at release site, dissimilarity with environmental conditions of origin), and management drivers (e.g., release method) influence HR formation and settlement. We will primarily focus on settlement speed (or duration of the exploration phase, before settlement) and HR stability after release. Analyses will combine approaches such as spatio-temporal clustering, trajectometry, net squared displacement, time since last visit and recursions. These results will help characterize how individual traits and management practices influence translocation success.

***2. Resource selection and temporal dynamics of settlement.*** We will then evaluate how resource selection influences HR formation, and notably its variation with the time since release. We will characterize resources using large-scale land-use datasets, allowing us to identify habitat features that facilitate settlement and to inform site selection for conservation translocations.

***3. Cognitive mechanisms underlying home range formation.*** We will use mechanistic movement models to explore individual-, populational- and species-level variations in cognitive drivers (learning, memory, perception) underlying HR formation. This work will provide insight into how animals adjust to novel environments, with implications for translocation outcomes.

## Data sharing statement

All data providers will be offered co-authorship on resulting manuscripts. Any additional analyses or manuscripts will be developed only after consultation with, and approval from, data contributors. Co-authors will have the opportunity to provide feedback on manuscript drafts and will be asked to approve the final version prior to submission. Data will be used exclusively for the research purposes outlined above and will not be repurposed without explicit permission of data contributors. All datasets will be stored on a secure database, with access restricted to members of the core analysis team, who have a direct research need.

## Literature


Burt, W. H. (1943). Territoriality and home range concepts as applied to mammals. *Journal of Mammalogy*, 24, 346–352.

Berger-Tal, O., & Saltz, D. (2014). Using the movement patterns of reintroduced animals to improve reintroduction success. *Current Zoology*, 60, 515–526.

Berger-Tal, O., Blumstein, D. T., & Swaisgood, R. R. (2020). Conservation translocations: A review of common difficulties and promising directions. *Animal Conservation*, 23, 121–131.

Ranc, N., Cagnacci, F., & Moorcroft, P. R. (2022). Memory drives the formation of animal home ranges: Evidence from a reintroduction. *Ecology Letters*, 25, 716–728.