



Master Environment & Biodiversity

Master Thesis 2026/2027

Post-fire recolonisation by the Iberian water shrew (*Neomys anomalus*)

Supervisor

Prof. Dr. Sophie von Merten, [University of Salzburg](#)

The **Iberian water shrew (*Neomys anomalus*)** is a semi-aquatic small mammal, endemic to the Iberian Peninsula and classified as “vulnerable” in Portugal. The species inhabits high-quality riparian habitats, which are increasingly threatened by wildfires. In the Serra da Estrela Natural Park, Portugal, **our project** (project conducted at the University of Lisbon, Portugal, in collaboration with Dr. Sofia Gabriel, Dr. Joaquim Tapisso and PhD student Joana Pereira) combines field ecology, molecular tools, and spatial modelling to assess distribution and population status, and identify the impacts of wildfires, and ultimately evaluate possible recovery actions such as habitat restoration or captive breeding for reintroduction. This work will contribute to the preservation of freshwater biodiversity in mountain ecosystems and strengthen the scientific basis for postfire restoration planning.

Your Master thesis will be an integrative part of this project: Using the non-invasive method of **hair-tube sampling**, your work will complement camera-trapping and eDNA analysis. Together, the three methods will give a complete picture of the current distribution and population status of the species.

During this master thesis, the following methods and techniques will be applied:

- (Optional: Field work in **Spring 2027** in [Serra da Estrela, Portugal](#), with camera- and hair-tube trapping. Attention: Unfortunately, only travel inside Portugal and stay at the field station can be covered. Travel to Portugal and any stay in Lisbon would be at own cost.)
- Hair-preparations in the lab: mounting of cuticula prints, total hairs, cross-sections of hairs
- Species determination from slides with cuticula, medulla, cross-section samples
- Data exploration and statistical analysis (Excel, R)
- Literature research and the preparation of a scientific manuscript: your thesis ☺

**Don't hesitate to contact me if you
are interested or have questions:
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All images created by Joana Pereira with the help of AI.