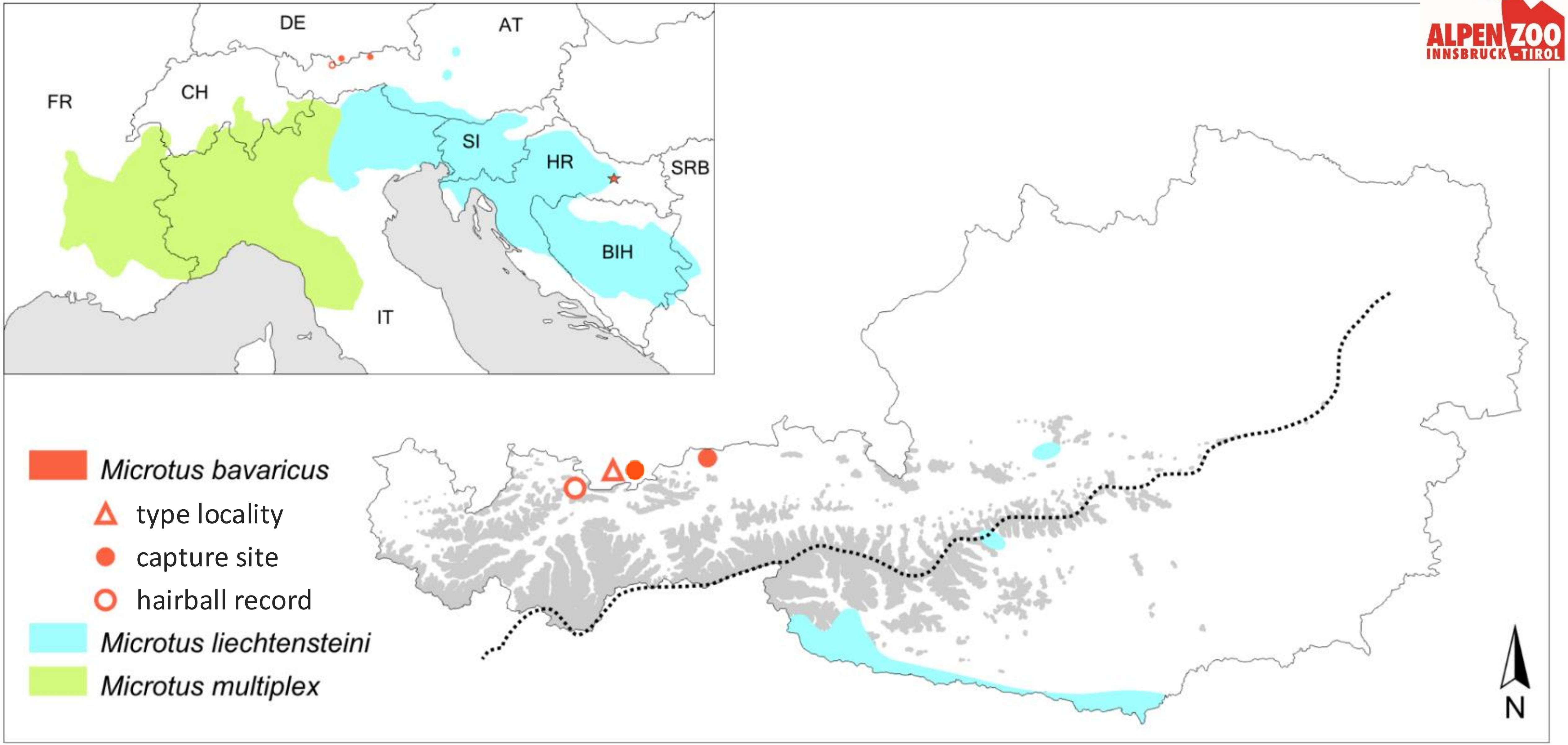
The Critically Endangered Bavarian pine vole:
A case example of small mammal conservation using ex-situ and in-situ measures

Dr. André Stadler & Laura Ganner - Alpenzoo Innsbruck-Tirol

EAZA Annual Conference, Łódź, Poland - 12 September 2025


DE
AT
FR
CH
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Microtus bavaricus
type locality
capture site
hairball record
Microtus liechtensteini
Microtus multiplex
N

RED LIST

CRITICALLY ENDANGERED

CR

The Critically Endangered Bavarian pine vole - Dr. André Stadler & Laura Ganner - Alpenzoo Innsbruck-Tirol

- **enabling survival and improving the status of the species through**

- establishment of an EAZA ex-situ programme (Alpenzoo)

- collection and publication of biological data, e.g.
    - communication
    - behaviour
    - physiology etc.

- monitoring of the in-situ population

- public relations & awareness-raising for the species

- long-term:
    - protection of natural habitat
    - reintroduction in known and other suitable habitats (IUCN guidelines)

Ex-situ holding of this unknown species: Quarantine station

Ex-situ holding of this unknown species: first enclosures

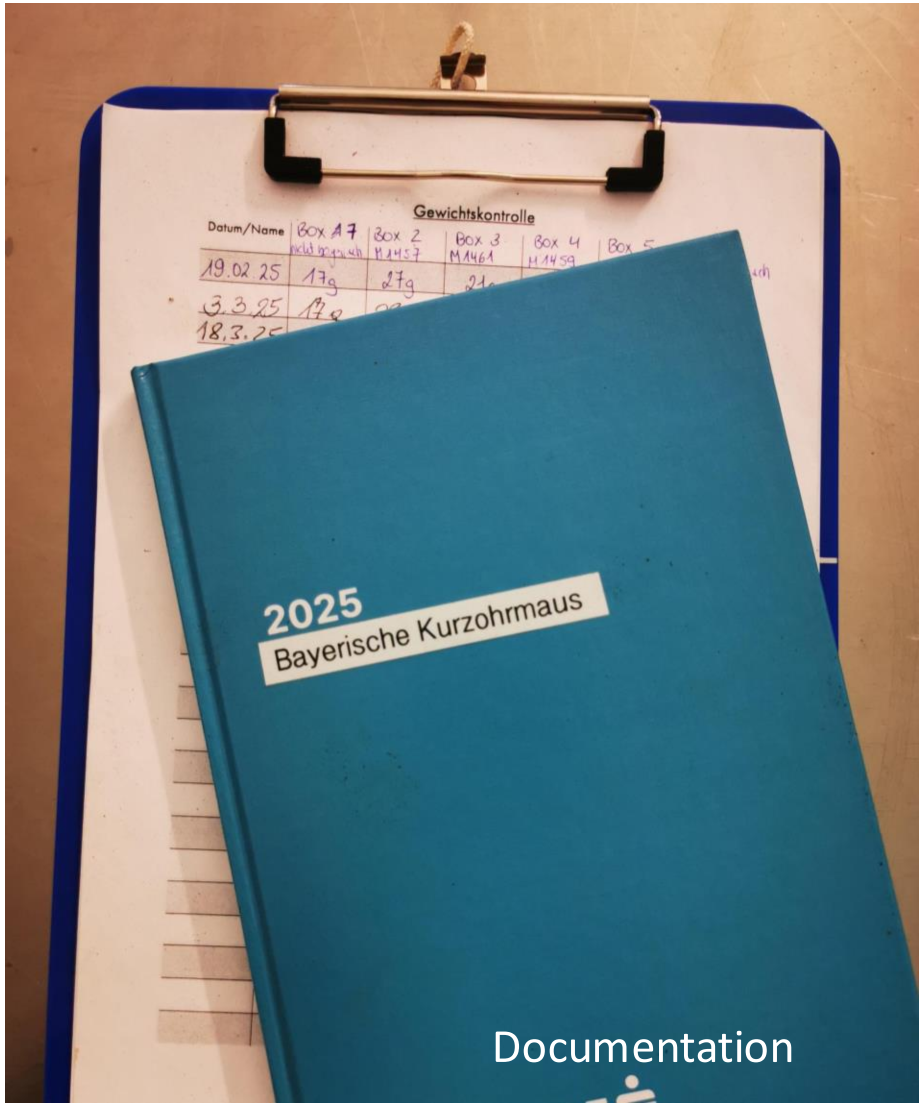
Ex-situ holding of this unknown species: current enclosures

Our successes since 2021:

- ca. 65 offspring in total
- ca. 30 individuals in current ex situ population:
  - Alpenzoo Innsbruck: 4,5
  - Haus des Meeres Wien: 1,0
  - Zoo Salzburg: 2,0
  - Tierpark Berlin: 4,1
  - Zoo Berlin: 7,2
  - Zoo Zagreb: 2,2


Catching


Sexing

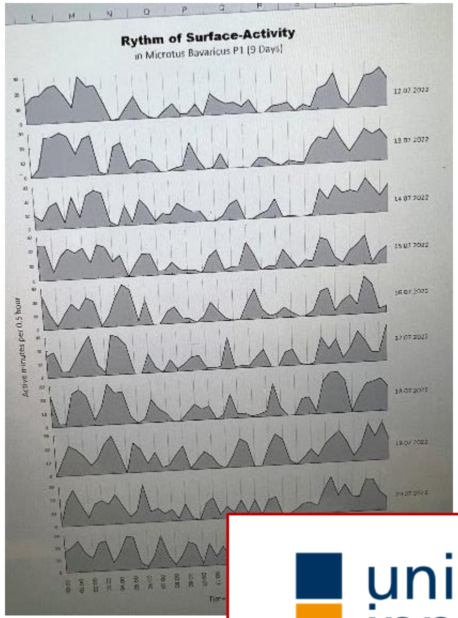


Documentation

Veterinary examinations and first CT scans

Successes to date

- great public interest generated
- first research outputs
    - nest building behaviour
    - gestation period (21-24 d)
    - litter size (2-3)
    - activity patterns (diurnal & nocturnal)
    - communication (audible & ultrasonic sounds)



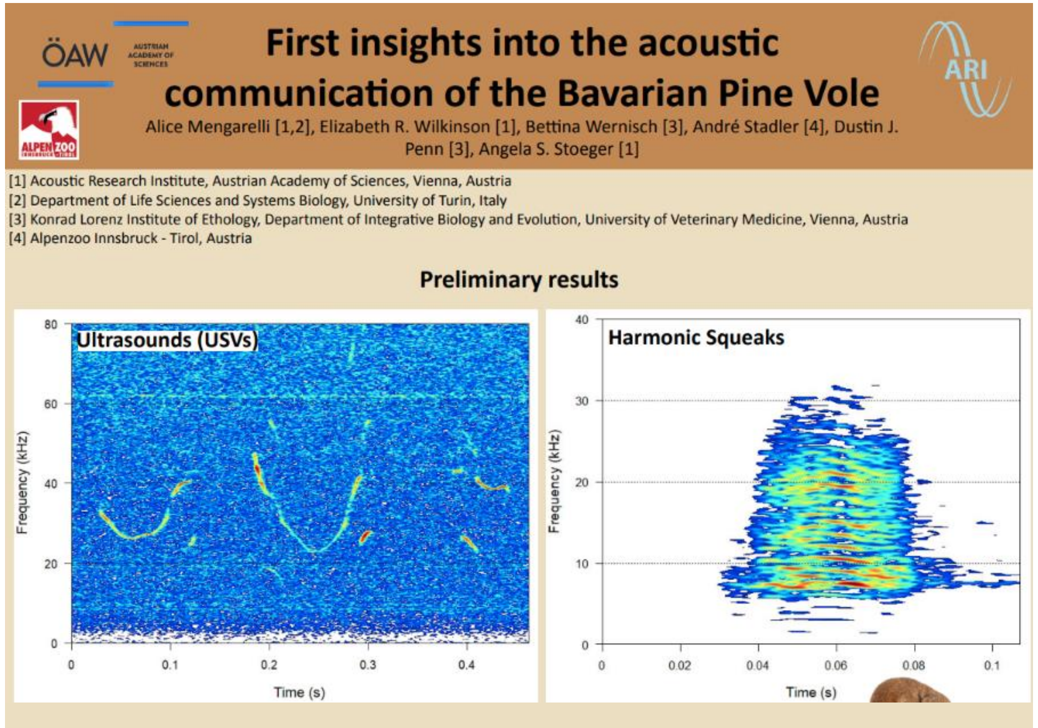

NATIONAL GEOGRAPHIC

Sensationsfund in Bayern: Angeblich ausgestorbene Kurzohrmaus wiederentdeckt

Sie galt bereits als ausgestorben. Jetzt hat ein Forschungsteam die Bayerische Kurzohrmaus im deutschen Alpenraum aufgespürt.

VON JENS VOSS
VERÖFFENTLICHT AM 14. FEB. 2024, 12:33 MEZ

Doch nicht ausgestorben: Diese Bayerische Kurzohrmaus tappte in eine Lebendfalle bei Mittenwald.
FOTO VON DAVID STILLE, STILLE NATUR

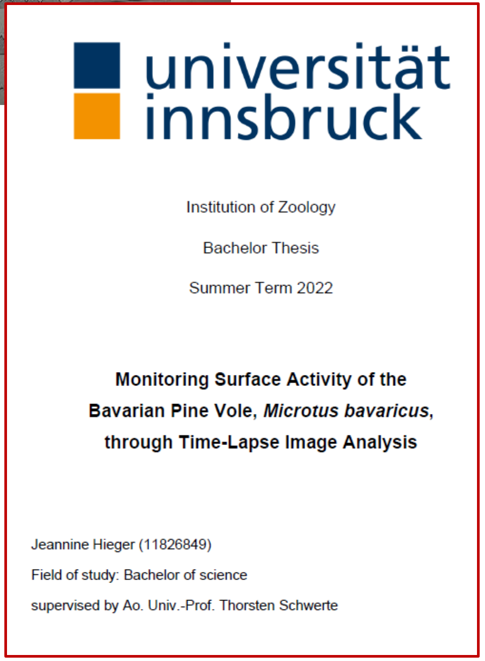

ÖAW AUSTRIAN ACADEMY OF SCIENCES

First insights into the acoustic communication of the Bavarian Pine Vole

Alice Mengarelli [1,2], Elizabeth R. Wilkinson [1], Bettina Wernisch [3], André Stadler [4], Dustin J. Penn [3], Angela S. Stoeger [1]

[1] Acoustic Research Institute, Austrian Academy of Sciences, Vienna, Austria
[2] Department of Life Sciences and Systems Biology, University of Turin, Italy
[3] Konrad Lorenz Institute of Ethology, Department of Integrative Biology and Evolution, University of Veterinary Medicine, Vienna, Austria
[4] Alpenzoo Innsbruck - Tirol, Austria

Preliminary results


universität innsbruck

Institution of Zoology

Bachelor Thesis

Summer Term 2022

Monitoring Surface Activity of the Bavarian Pine Vole, *Microtus bavaricus*, through Time-Lapse Image Analysis

Jeannine Hieger (11826849)
Field of study: Bachelor of science
supervised by Ao. Univ.-Prof. Thorsten Schwerte

International conservation collaborations

- ex-situ success through international zoo collaboration
- collaboration with IUCN SSC Small Mammal SG
- established IUCN Centre for Species Survival at Alpenzoo

- launched transnational in-situ conservation initiative
  - Austria (Tyrol) & Germany (Bavaria)
  - EU-funded (INTERREG Bay-Aut VI-A 2021-2027)

Next steps for the Bavarian pine vole – I

- **Establish a large, stable ex-situ population**
  - evaluate & improve keeping and husbandry
- **Exhibit the species to Alpenzoo visitors**
  - populate the on-show enclosure with animals

Next steps for the Bavarian pine vole – II

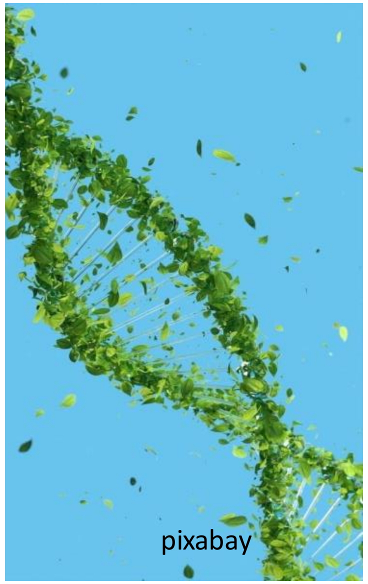
➢ Continue and expand monitoring:

- field season 2025 starting soon
  - monitoring existing sites
  - live-trapping to boost the ex-situ population
  - exploration of identified potential additional sites

- identify potential areas of occurrence
  - species distribution modelling
  - field scouting

Next steps for the Bavarian pine vole – III

- **Expand Research**
  - ongoing research topics, e.g.:
    - bioacoustics & communication
    - parasites
    - reproduction management
  - new topics:
    - ex- & in-situ physiology
    - monitor rewilding responses and success



Next steps for the Bavarian pine vole – IV

- **Increase public awareness**
  - media interaction
  - outreach
    - schools
    - landowners
    - general public
  - information campaigns at field population sites

We are grateful to our colleagues, supporters & partners…

IUCN

SSC Species Survival Commission

CSS IUCN SSC SMALL MAMMALS
Center for Species Survival
Proudly hosted by Alpenzoo Innsbruck-Tirol

ALPEN ZOO INNSBRUCK - TIROL

SMSG IUCN SSC Small Mammal Specialist Group

LAND TIROL

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ZOO SALZBURG HELLBRUNN

ZOO Zagreb

TIERPARK BERLIN

ZOO BERLIN

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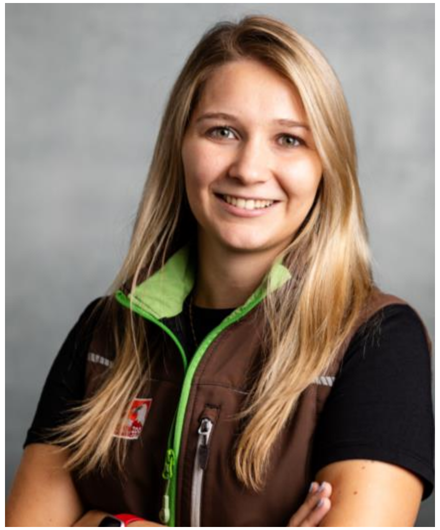
Bayerisches Landesamt für Umwelt



Thank you for your interest!

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Laura Ganner, BSc – Curator Alpenzoo Innsbruck-Tirol

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