

A photograph of a forest floor covered in a thick layer of green moss. Fallen leaves are scattered across the ground. In the background, the trunks of many tall, thin trees rise into a dense forest. The lighting is natural, filtering through the canopy.

BFW BUNDES
FORSCHUNGS
ZENTRUM
FÜR WALD



Living Planet Index
(1970-2020)
-73%



Muséum national d'histoire naturelle, CC0, via Wikimedia Commons

A close-up, horizontal photograph of a black cat's face. The cat has intense, glowing orange eyes with vertical pupils. Its dark, textured fur is visible around the eyes and nose. The lighting highlights the contours of the face and the veins on the forehead.

Charles J. Sharp, CC BY-SA 4.0, via Wikimedia Commons



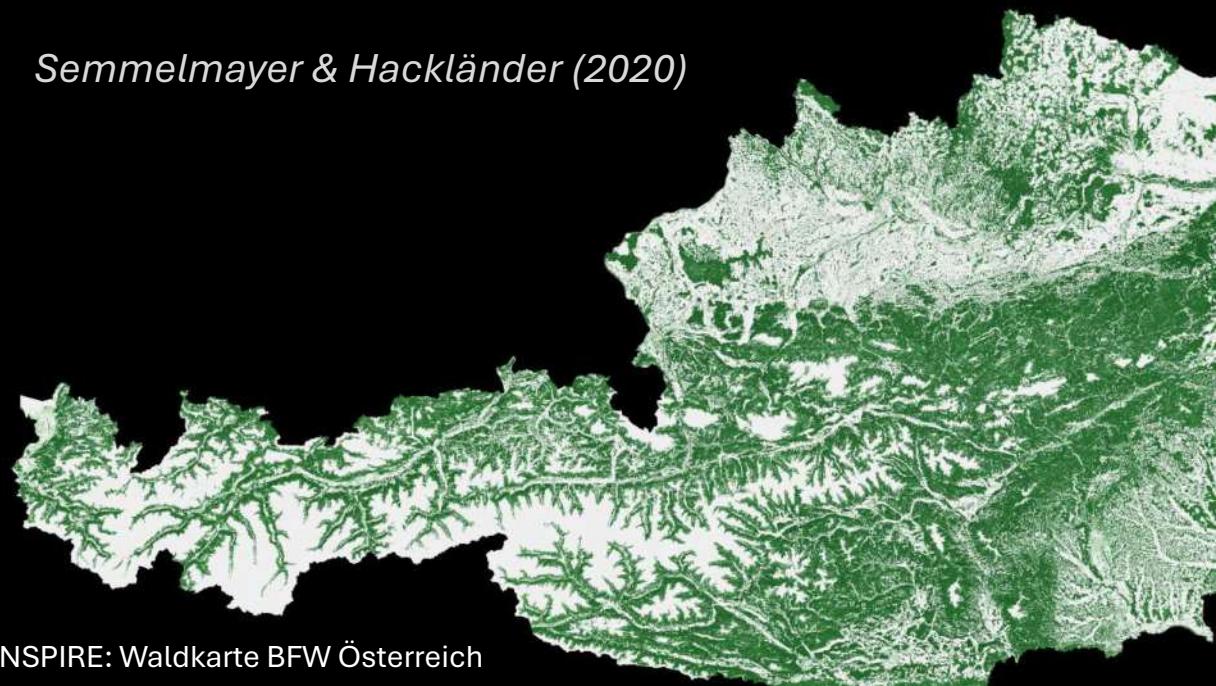
NOAA Photo Library, Public domain, via Wikimedia Commons



Living Planet Index Österreich (1990-2015)

-40%

Semmelmayer & Hackländer (2020)





Skot, CC BY-SA 4.0, via Wikimedia Commons





Gilles San Martin, CC BY-SA 2.0, via Wikimedia Commons

Chancen

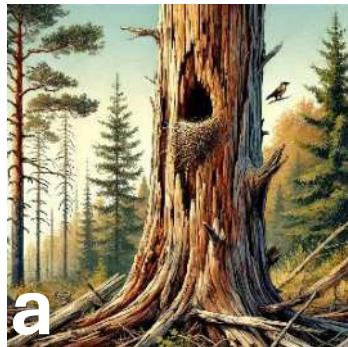
“ *Integrative Maßnahmen zur Erhaltung und Förderung der Biodiversität [...] sollen auf der gesamten Waldfläche stattfinden.*

- Verbesserung von Status und Trends von Arten und Lebensräumen
- Stärkeres Bewusstsein für den Wert der biologischen Vielfalt
- Forschung zu Biodiversitätszielen fördern
- Verbesserung der Indikatoren zur biologischen Vielfalt in Wäldern
- ...



Artikel 12

Wiederherstellung von Waldökosystemen



a

Stehendes Totholz



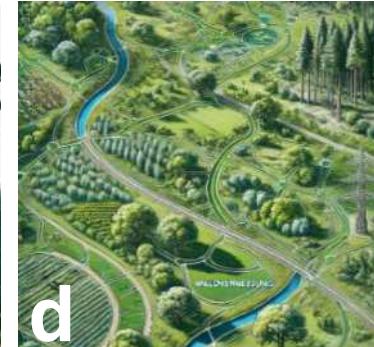
b

Liegendes Totholz



c

Uneinheitl. Altersstruktur Waldvernetzung



d



Index häufiger Vogelarten



e

Organ. Kohlenstoff



f

Baumarten-Vielfalt

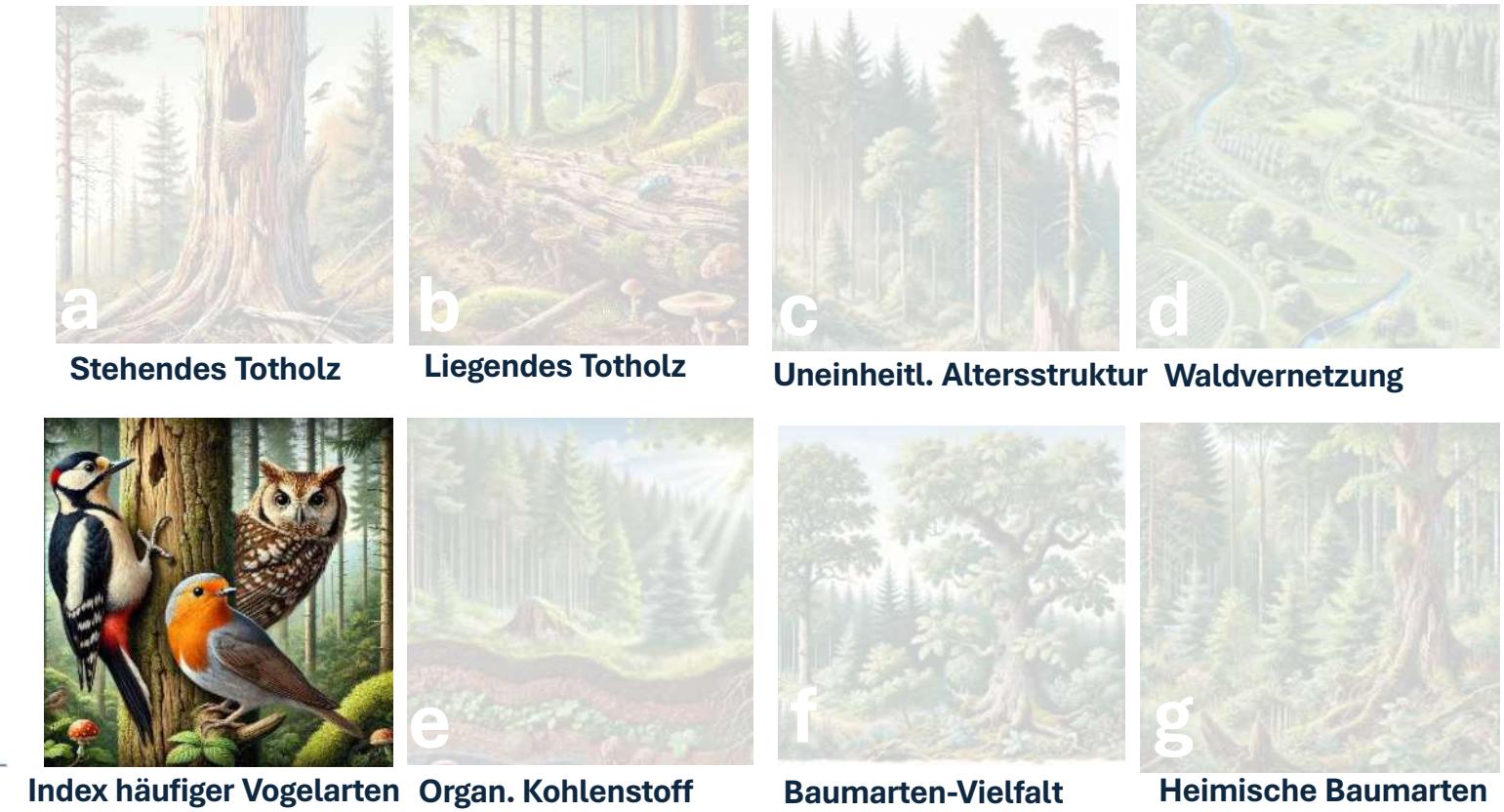
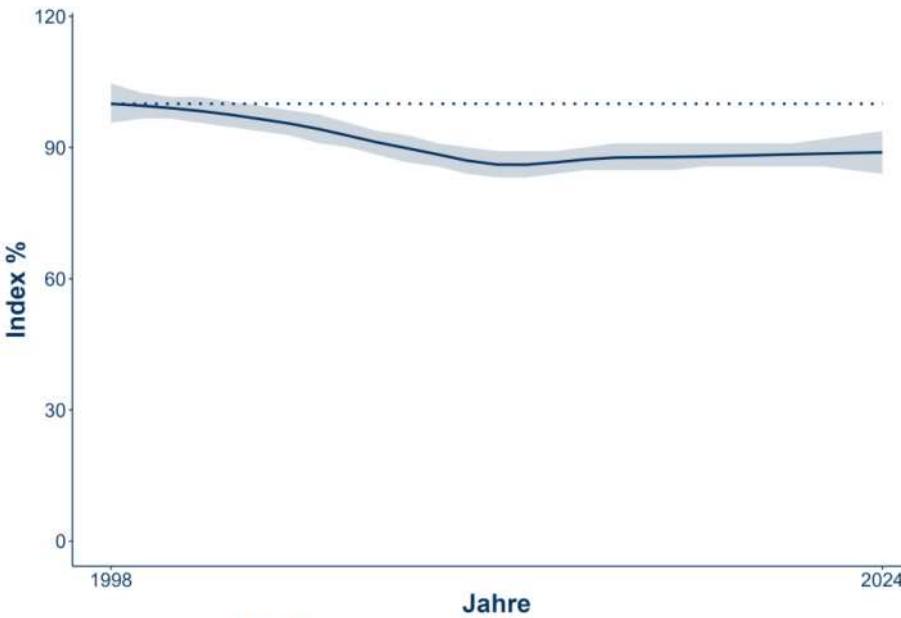


g

Heimische Baumarten

Artikel 12

Wiederherstellung von Waldökosystemen



„Chancen für die Waldbiodiversität“

Institut für Waldbiodiversität und Naturschutz

Frederik Sachser

Wien
Januar 2026

Das Ziel des

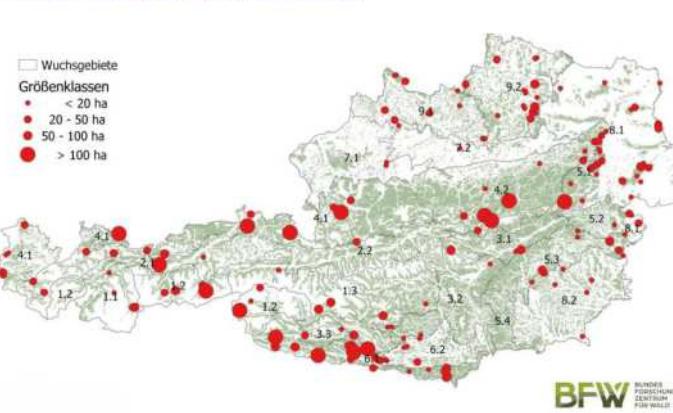
Institut für Waldbiodiversität und Naturschutz

ist es, die Waldbiodiversität auf allen Ebenen, [...] zu
erforschen.

Wien

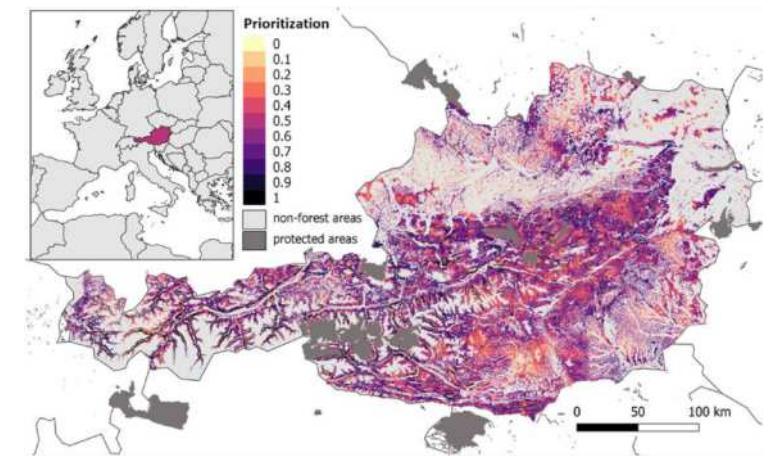
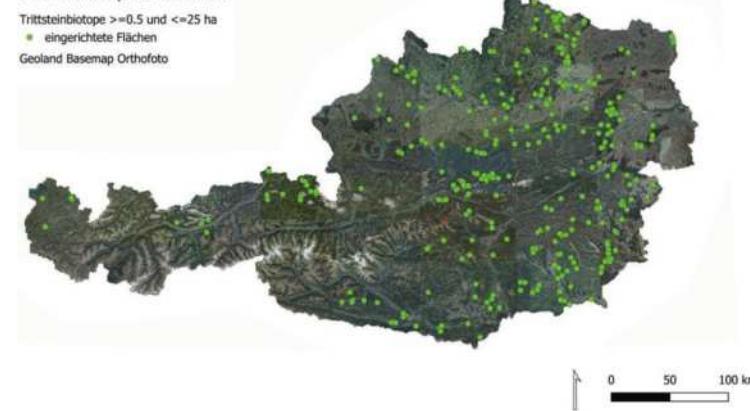
Januar 2026

Naturwaldreservate in Österreich



naturwaldreservate.at

Trittsteinbiotope in Österreich



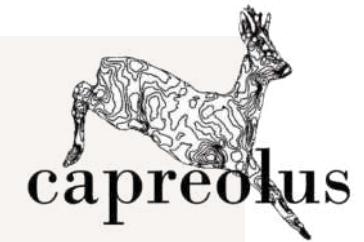
Amon C., Bradley O., Haslinger R., Hoffmann J., Lapin K., Neidel V., Oettel J., Püspök J., Sachser F., Sandfort R., Steinkellner M., 2025: Trittsteinbiotope im Wald: Ergebnisbroschüre zum Projekt ConnectForestBiodiversity. Bundesforschungszentrum für Wald (BFW), Wien: 67 S.

Lapin, K., Hoffmann, J. A., Braun, M., & Oettel, J. (2024). Identification and prioritization of stepping stones for biodiversity conservation in forest ecosystems. *Conservation Science and Practice*, 6(7), e13161.



BFW

BILDUNG
FORSCHUNG
WALD





08/25/2023 00:58:48 FRI

Rohdaten

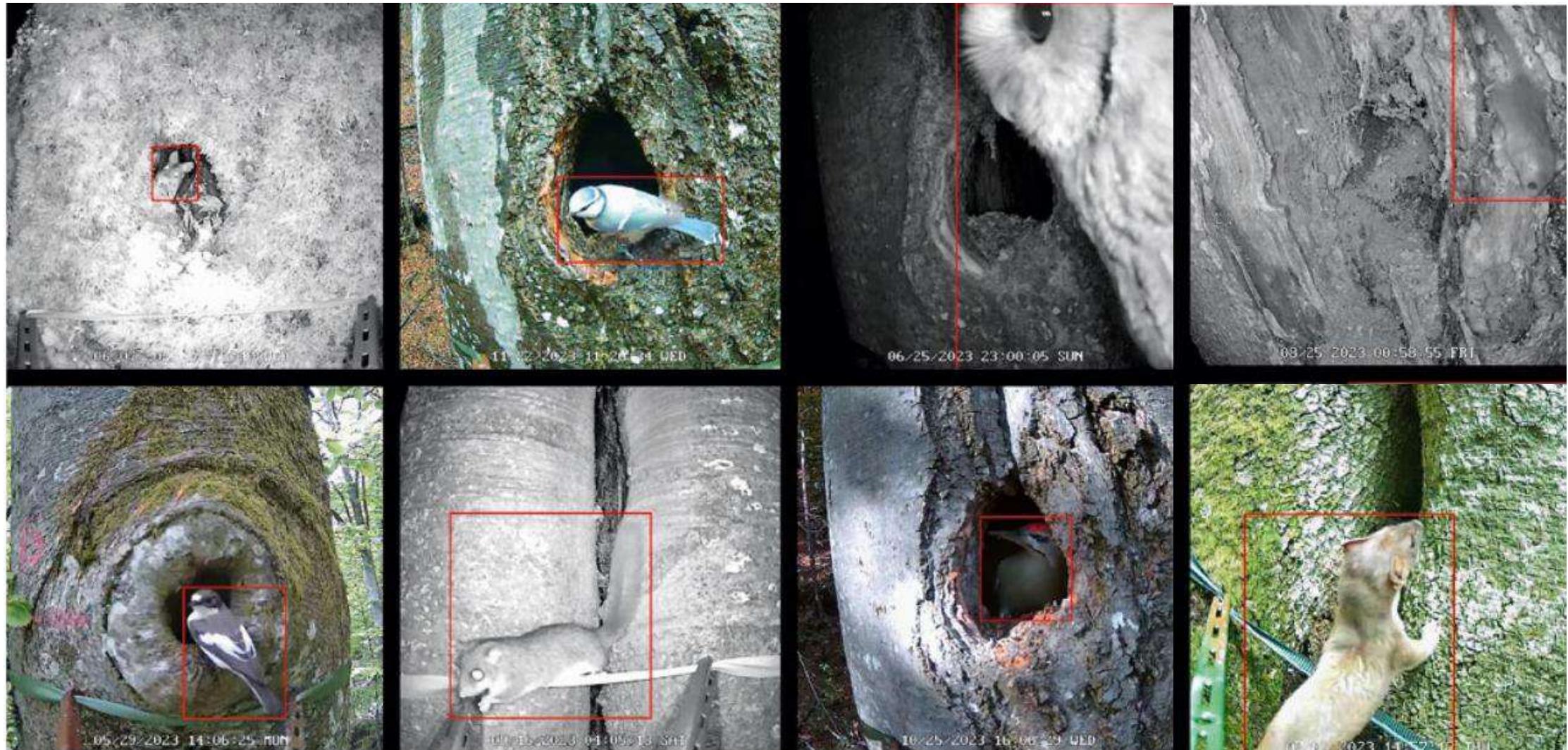
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Rohdaten

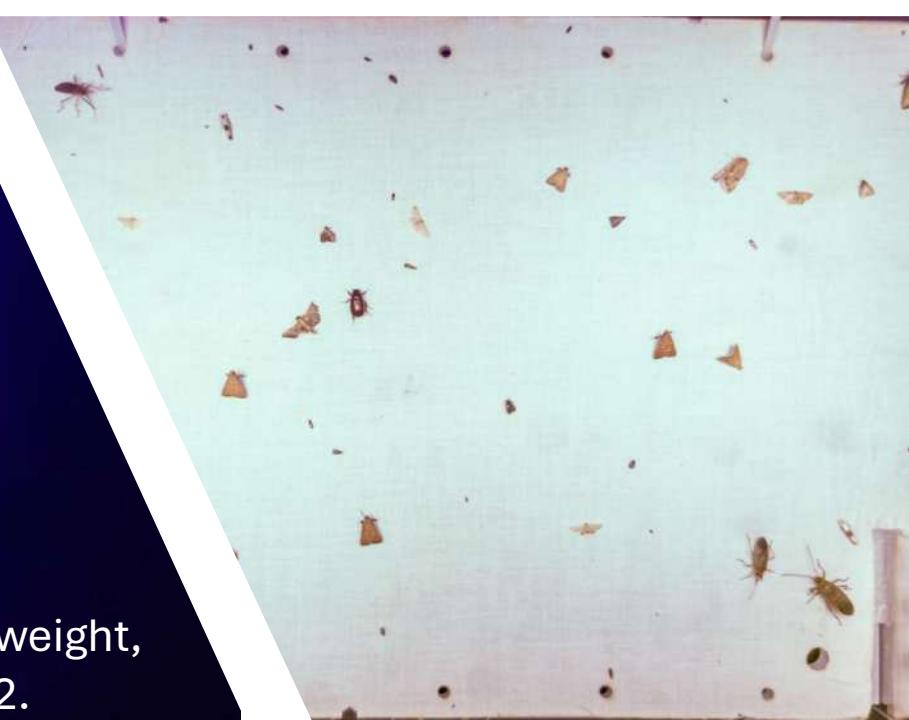
connect_7



squirrel (verified)

08/27/2023 11:52:41

connect_7



Szczygiel, H. A., Dent, D. H., & Quitmeyer, A. (2025). Mothbox: inexpensive, lightweight, automated light trap for scalable insect biodiversity monitoring. *bioRxiv*, 2025-12.

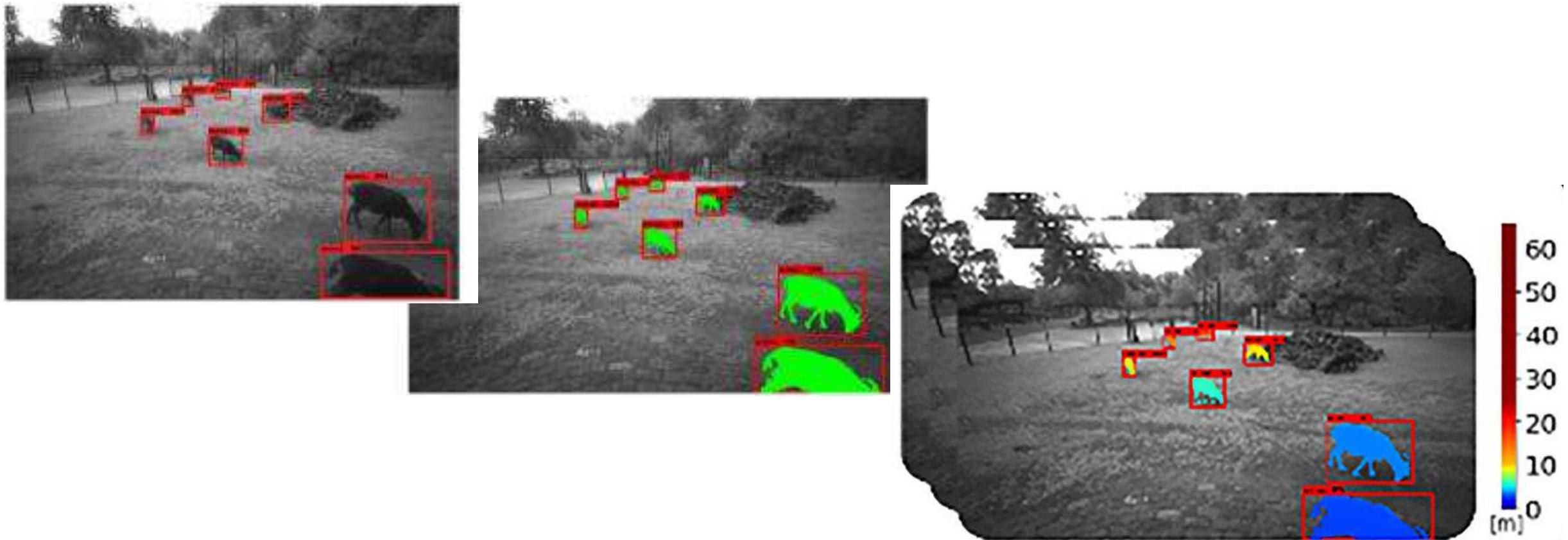
Detektion

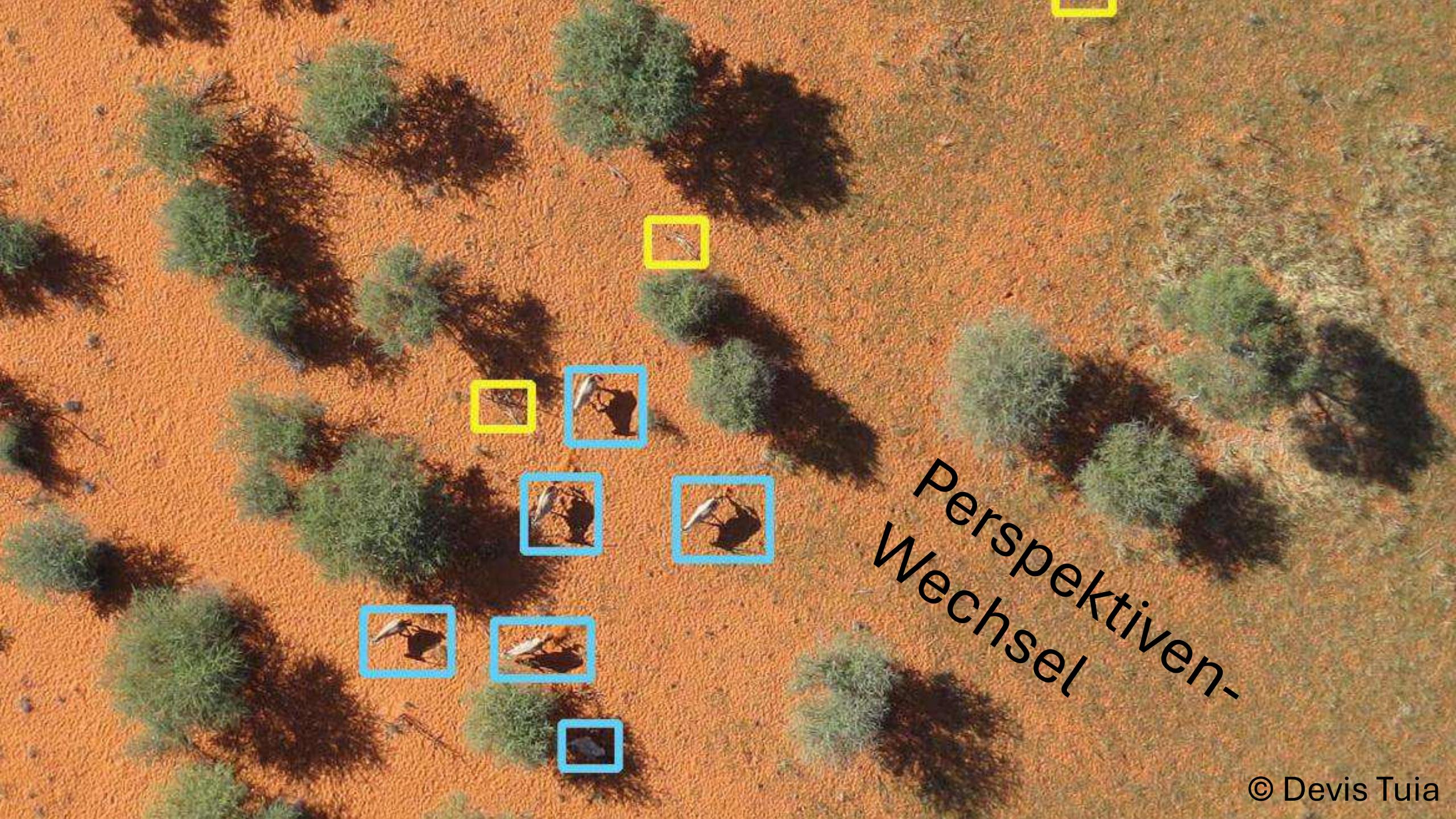
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Klassifizierung

→

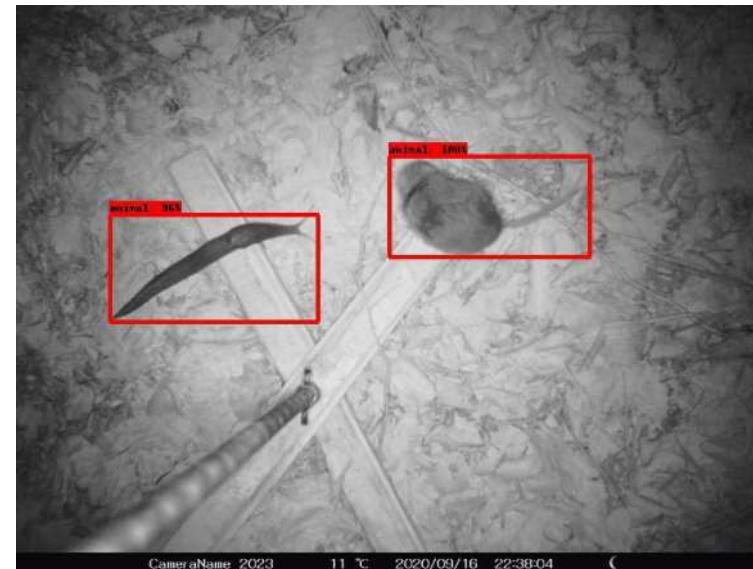
Distanzschätzung





Tracking individual seed fate confirms mainly antagonistic interactions between rodents and European beech

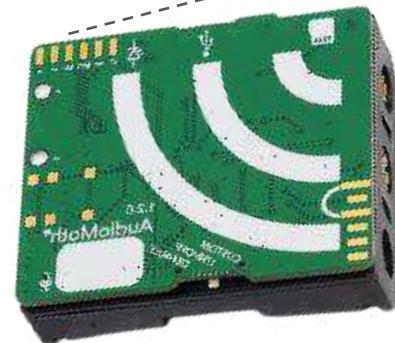
Frederik Sachser^{1,2,3}, Georg Gratzer², Mario B. Pesendorfer^{2,4}, Heino Konrad³, Iris
Kempter⁵ and Ursula Nopp-Mayr¹



Passiv akustisches Monitoring

oder

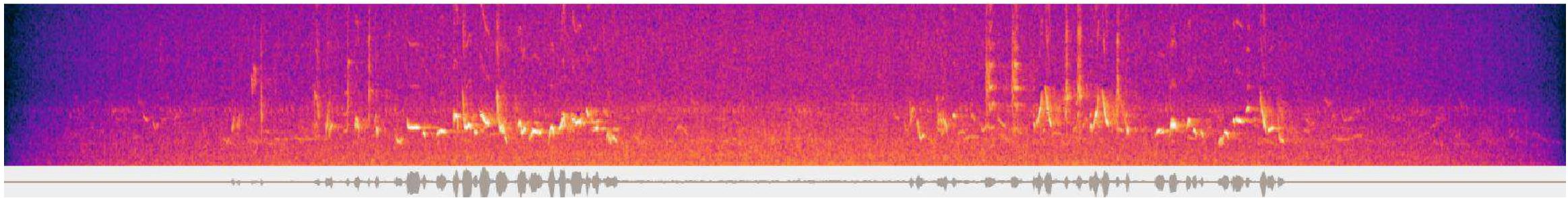
*Was wäre, wenn wir an hunderten Orten
gleichzeitig die akustische Vielfalt
erheben könnten?*



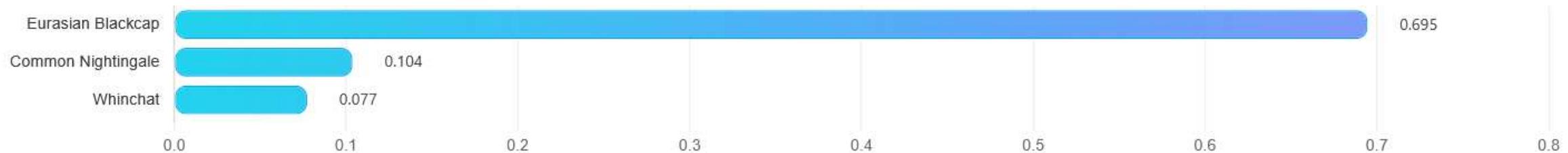
Rohdaten



2-dimensionale Daten



Konfidenzwerte

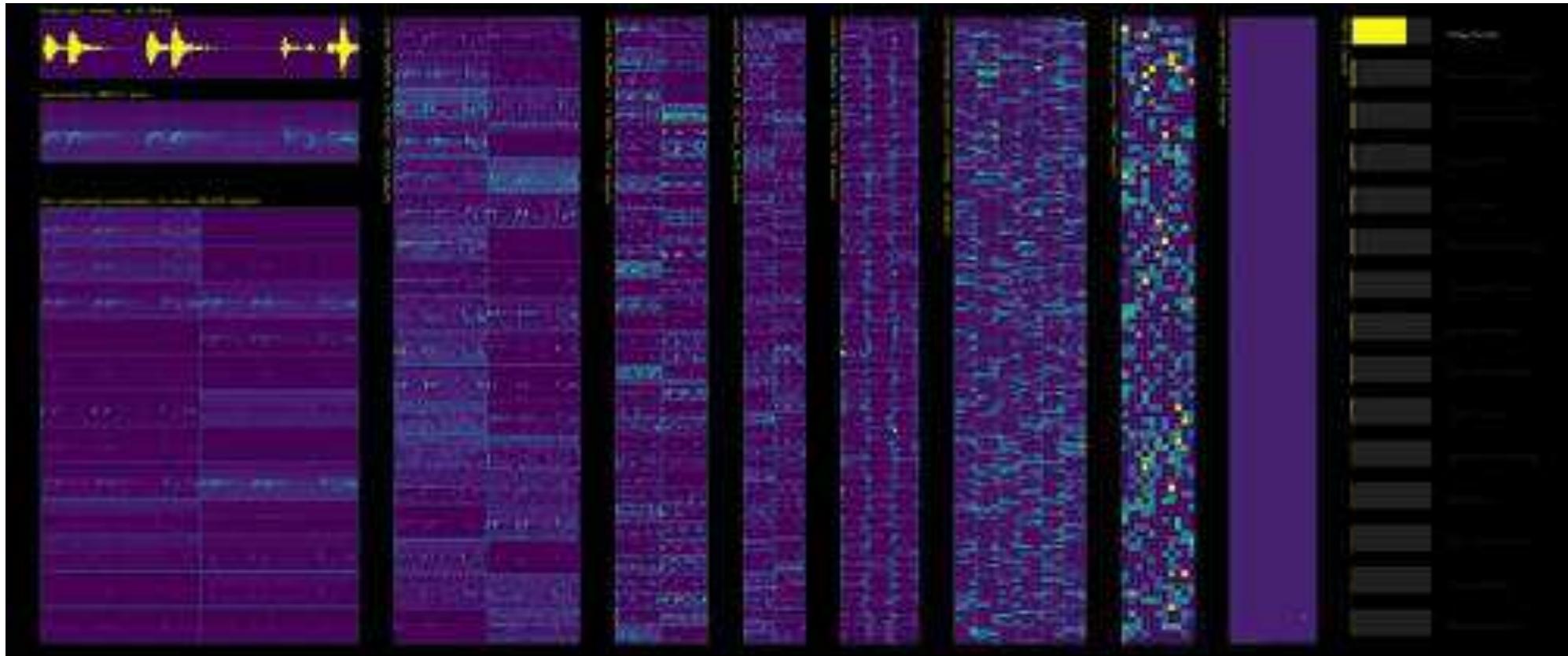


BirdNET

Input: 3 Sek. Audio



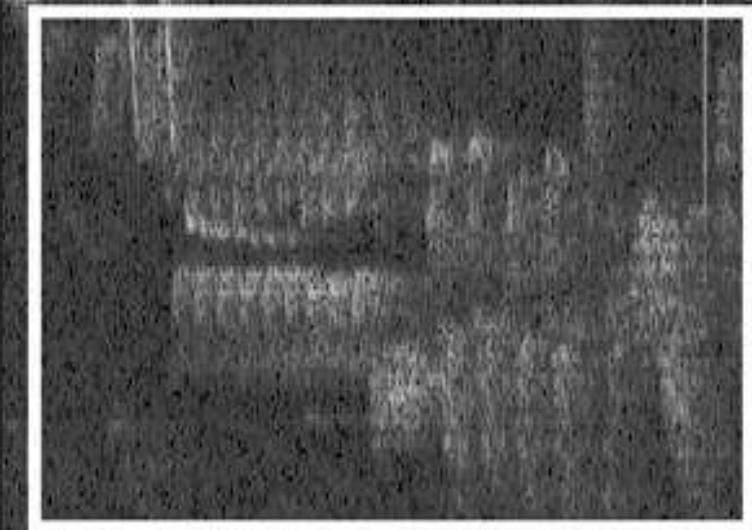
Output: Konfidenzwert



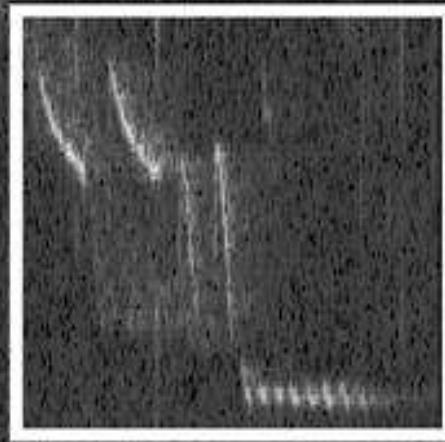


Mustererkennung durch KI

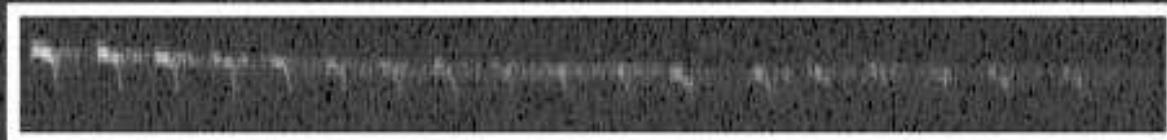
Buchfink (0,89)

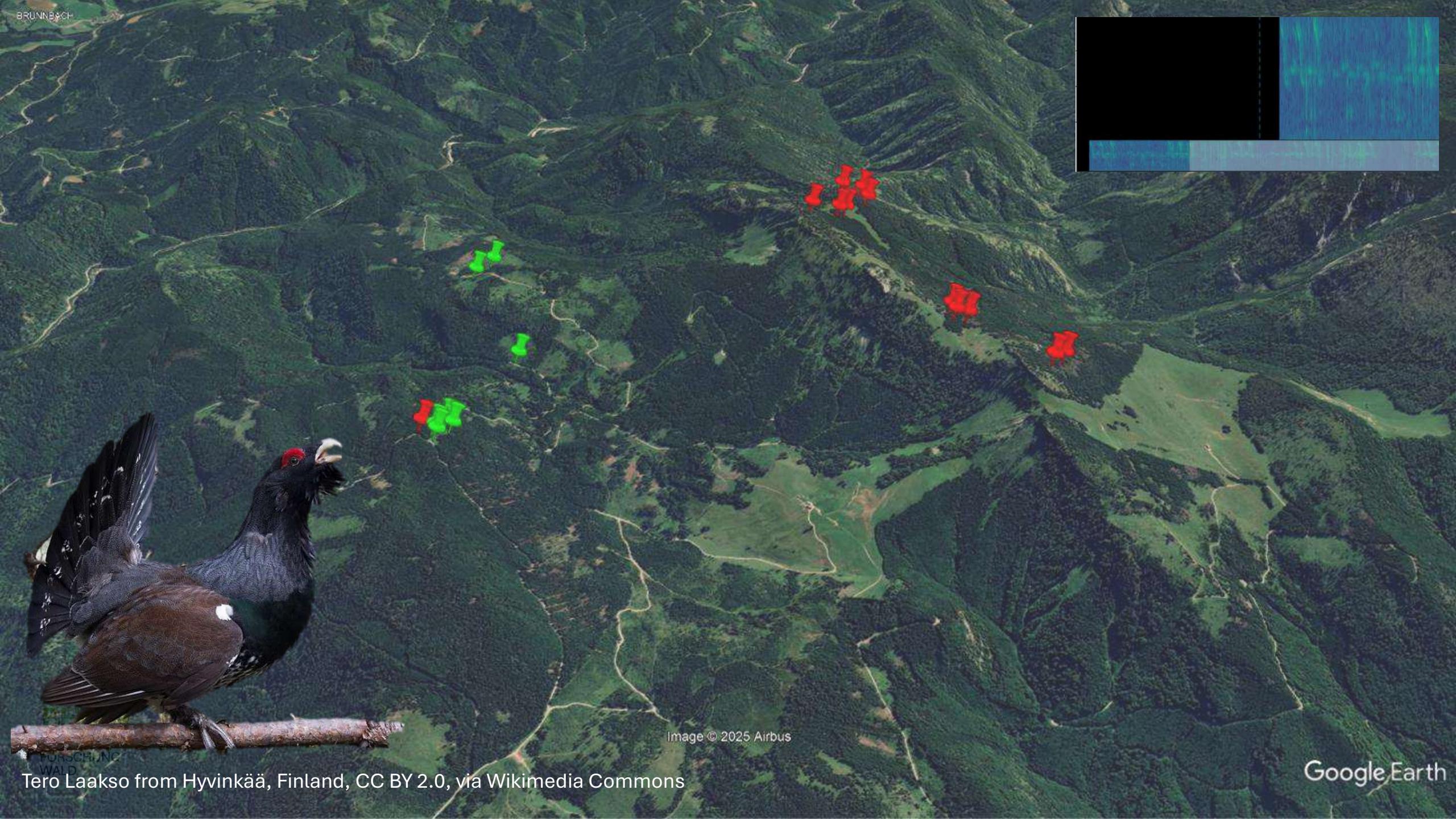


Blaumeise (0,98)



Grauspecht (0,82)





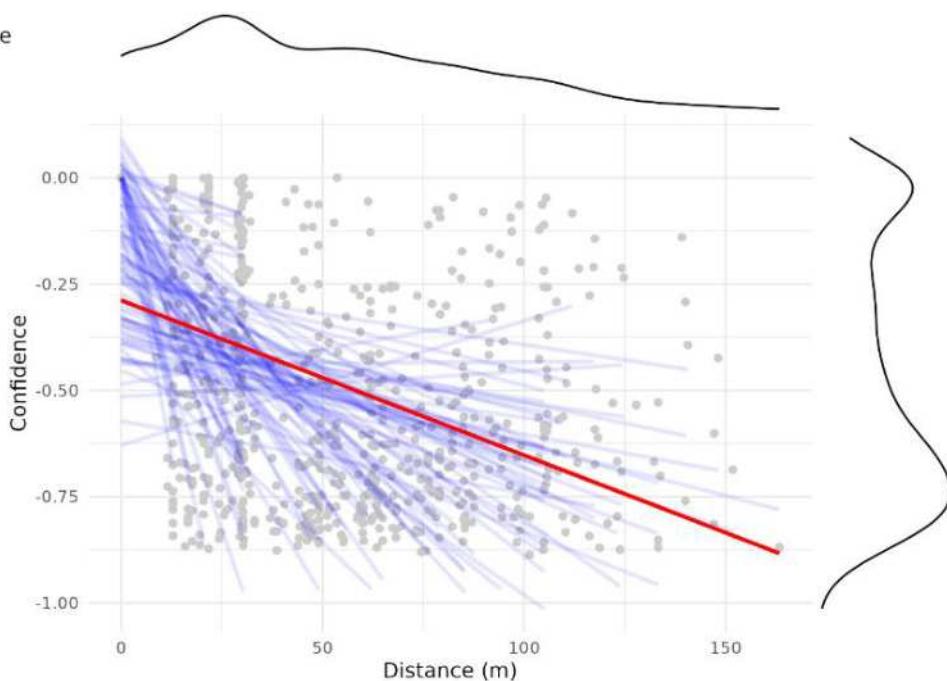
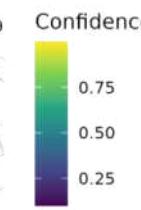
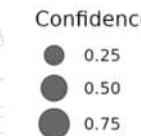
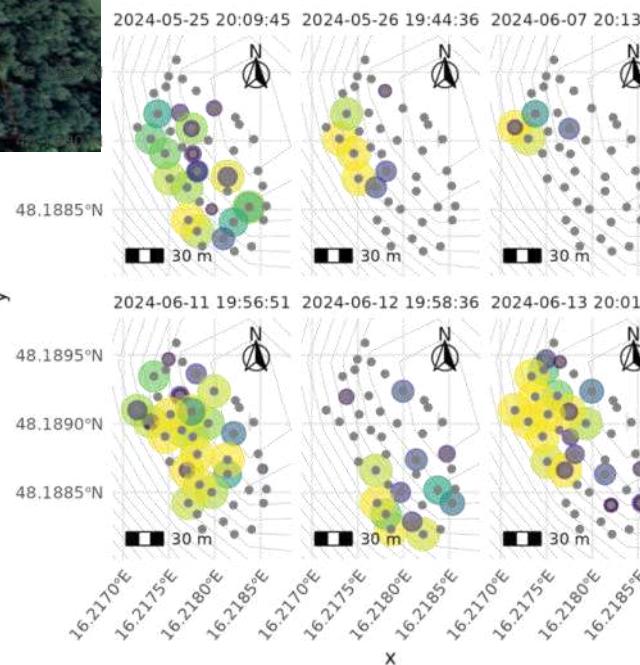
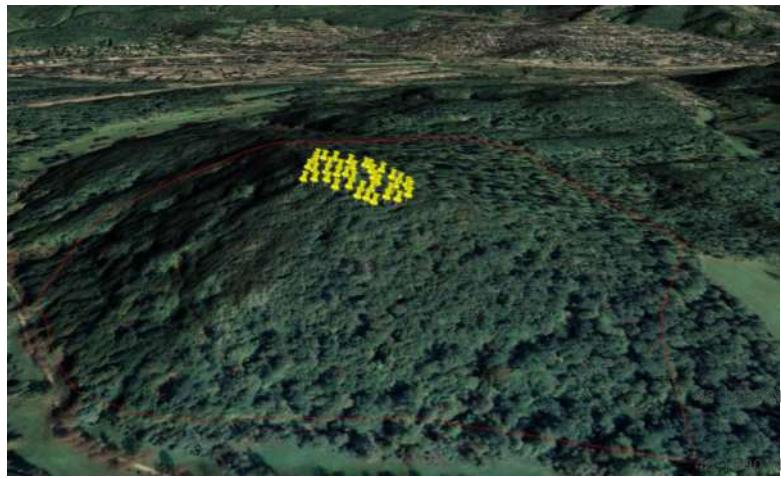
BRUNNEN

FORSCHUNG
WALD

Tero Laakso from Hyvinkää, Finland, CC BY 2.0, via Wikimedia Commons

Image © 2025 Airbus

Google Earth



BFW

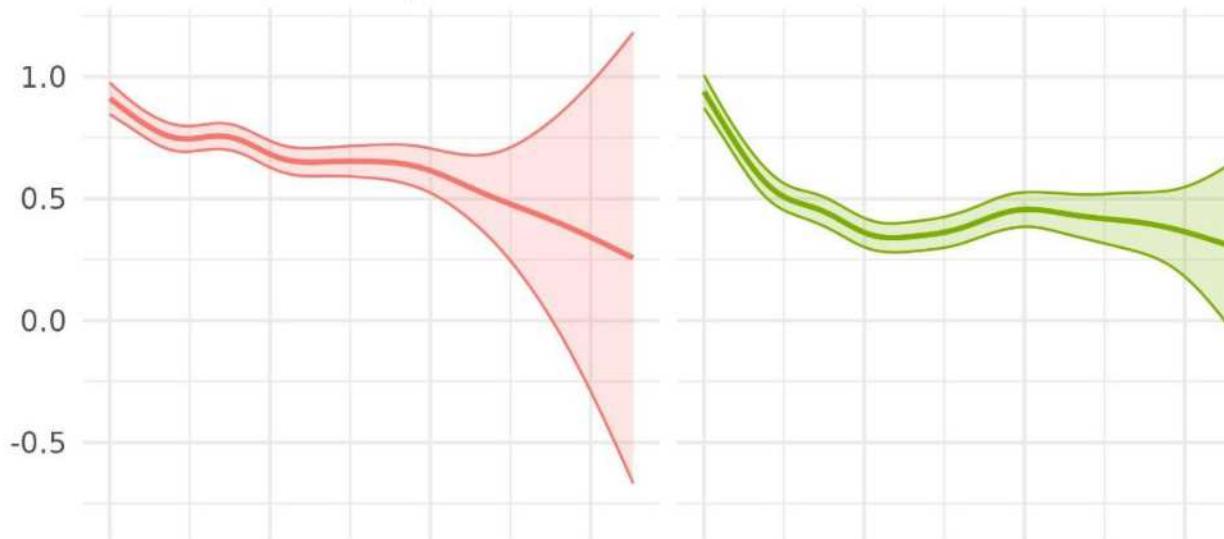
BILDUNG
FORSCHUNG
WALD



Black Woodpecker

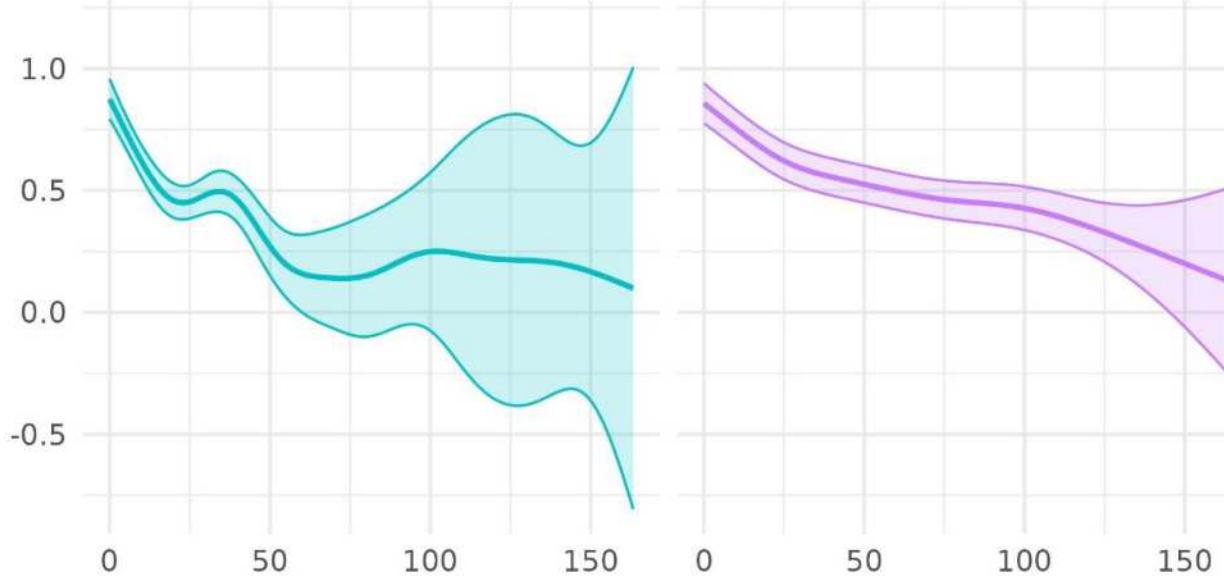
Common Chaffinch

Predicted confidence scores



Goldcrest

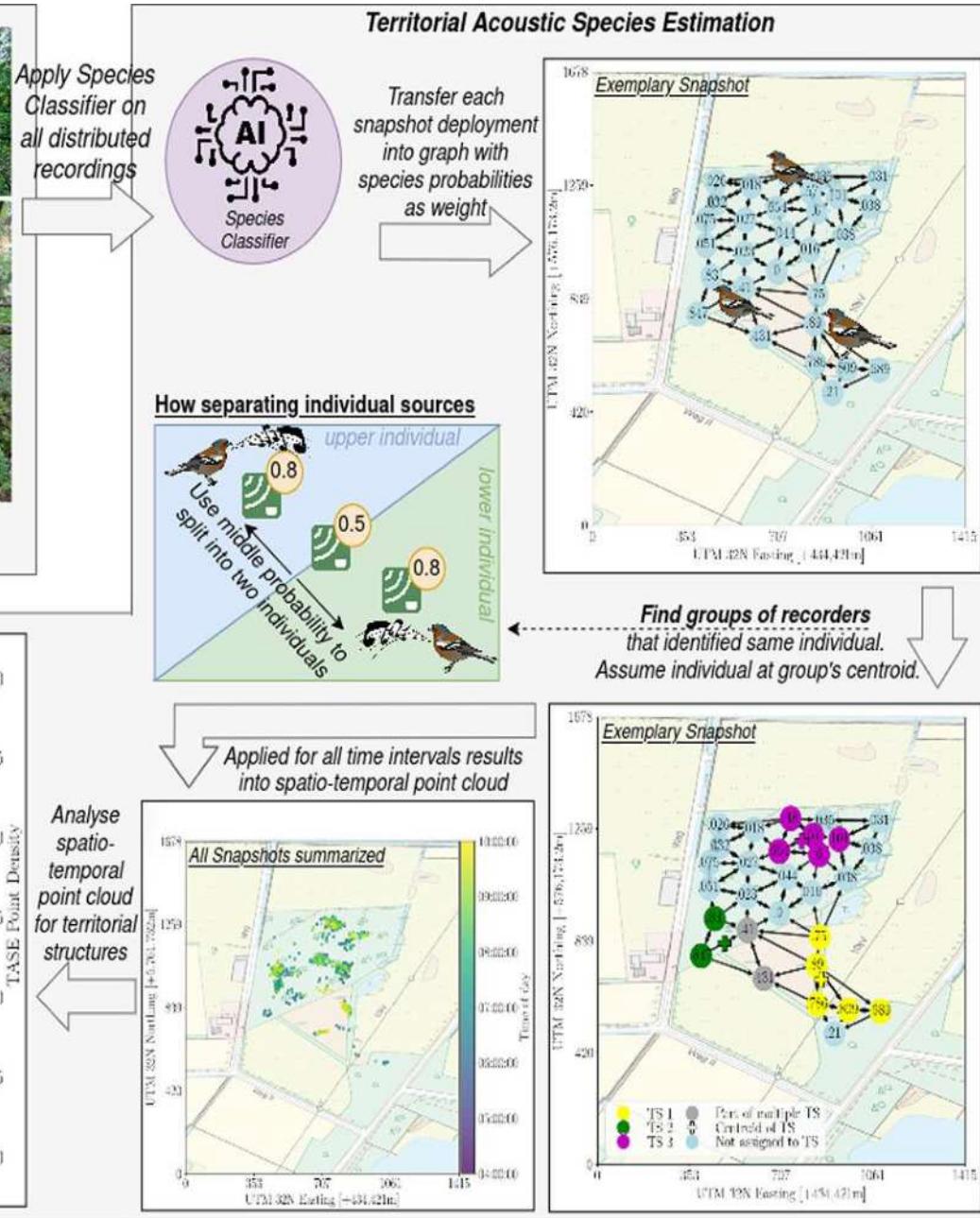
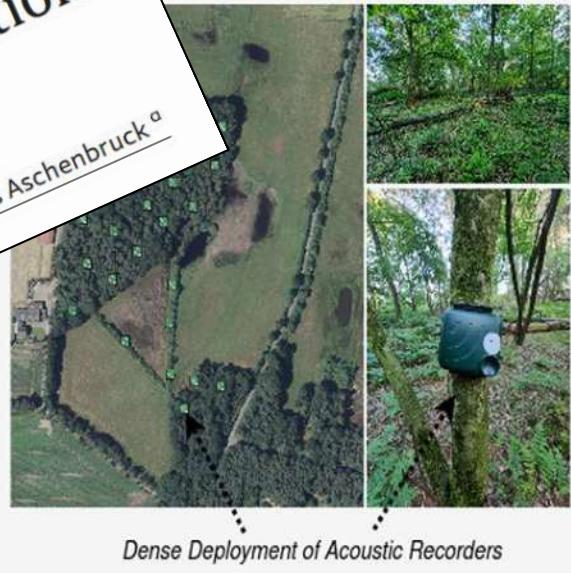
Tawny Owl



Frederik Sachser (2025, unpubl.)

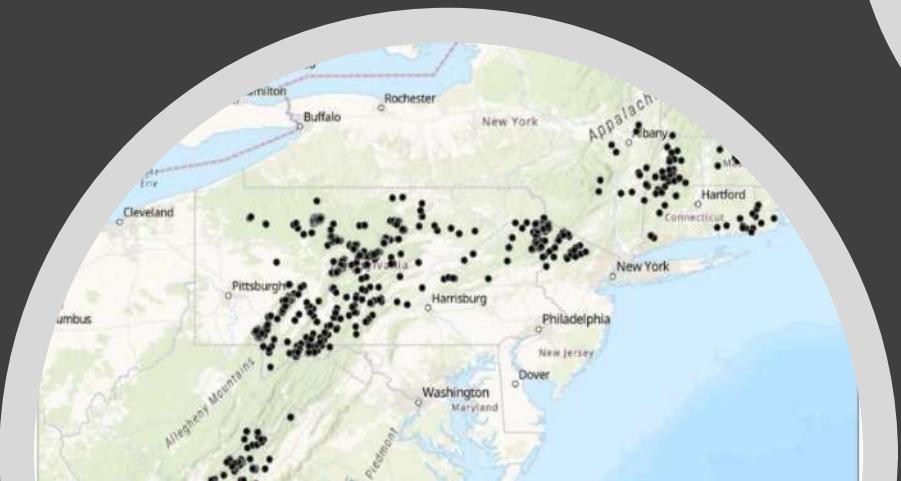
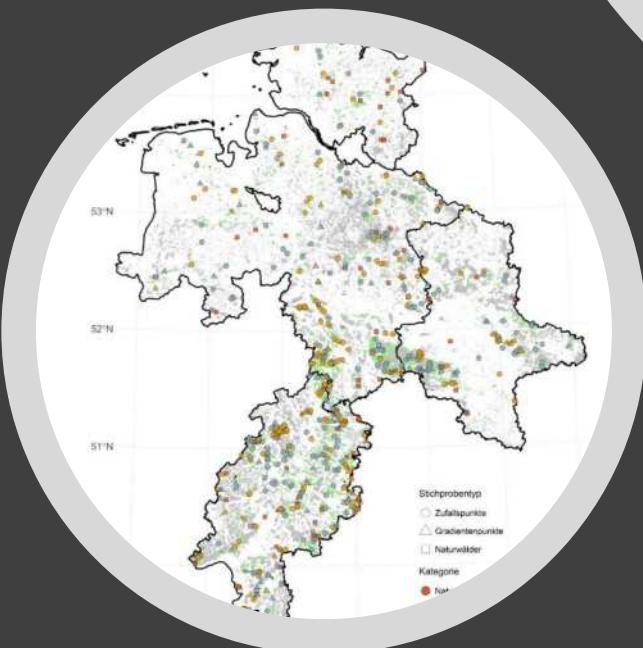
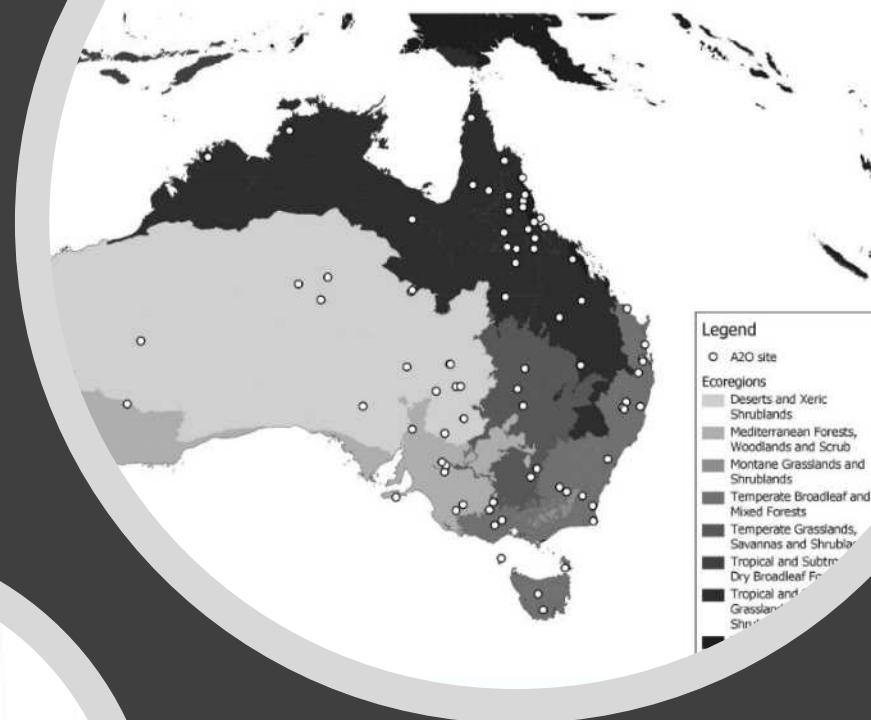
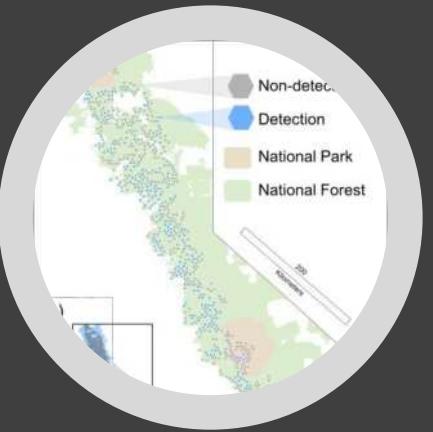
Territorial Acoustic Species Estimation using Acoustic Sensor Networks

Leonhard Brüggemann ^a   , Daniel Otten ^a , Frederik Sachser ^b , Nils Aschenbrück ^a



Akustische Sensornetzwerke

Skalierbar
in Raum
& Zeit



Bioakustisches Langzeitmonitoring auf eLTER-Flächen



European long-term ecosystem, critical zone and socio-ecological systems research infrastructure
PLUS

Standard Observation
SOBIO_018

Acoustic recording

28th December 2024

Main author(s): Frederik Sachser¹, Tanja Lindholm², Ika Djukic³, Robin Sandfort⁴

Review team: Cam Desjonqu⁵, Christophe Piscart⁶, Gisela Pröll⁷, Jan Dick⁸

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⁴ capreolus e.U., Fodenbuchstrasse 19, 2304 Orth an der Donau, Austria

⁵ Information missing

⁶ Information missing

⁷ Information missing

⁸ UKCEH, Bush Estate, Penicuik, Midlothian, EH26 0QB, UK Information missing





422 South and Movebank (2020).
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Wo Wissen
auf Bäume trifft

