

MP and IP subjects

<https://www.uantwerpen.be/en/research-groups/eveco/education/masterproject-and-ipsubjects/>

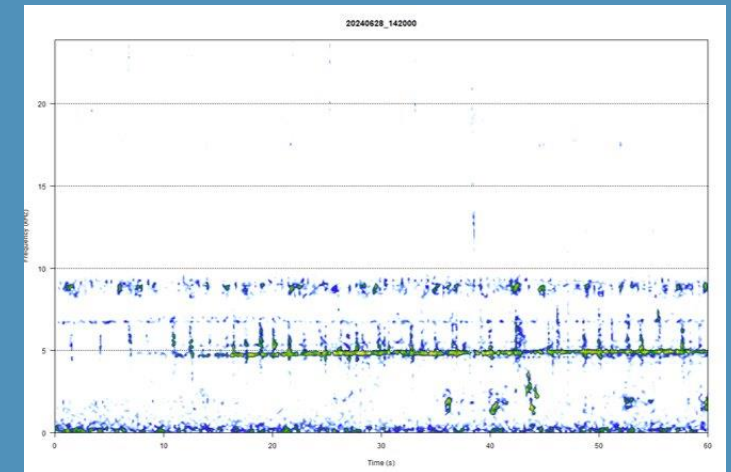
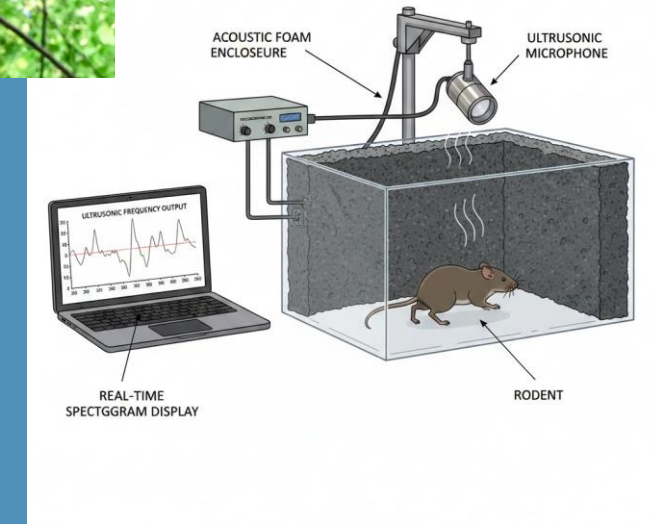
BioAcoustic Monitoring

Recording of ultrasound and audible sound with audiomoth loggers is gaining popularity as a non-invasive tool for monitoring biodiversity.

With the available sound frequencies, one can either build soundscapes that associate with diversity or use advanced AI techniques to match individual calls with specific species.

TOPIC 1 – IP: For rodents, calls have been recorded for a limit set of species only. In this project we aim to record calls for rodent species and explore to what extent we can use the loggers for rodent diversity monitoring in Tanzania.

TOPIC 2 – MP/IP: Soundscape analysis and template matching for acoustic recordings from Belgian sites from diverse ecological context. To what extent does the soundscape correlate with actual diversity?



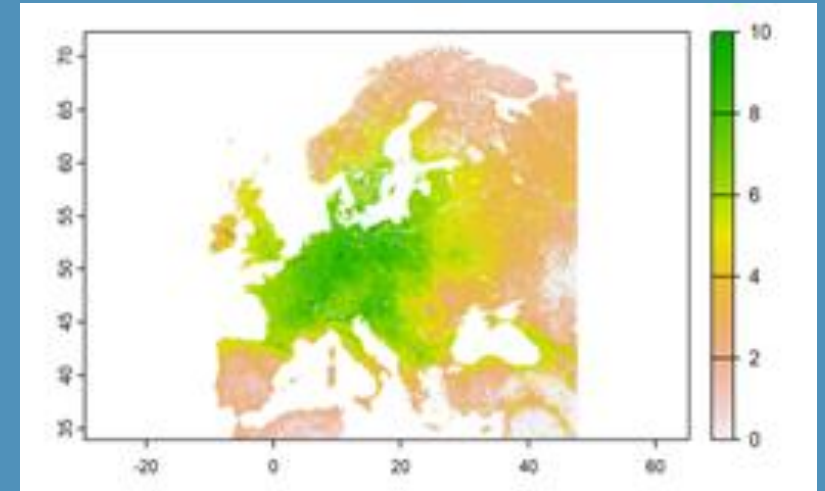
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Biodiversity and Diseases

Rodent diversity's impact on disease transmission is unclear. More host species may either amplify pathogen spread or dilute transmission through reduced contact rates, ultimately affecting disease and vector distribution.

Urbanisation creates shift in species distribution, with more generalist rodents in urban areas. Here we aim to combine high-resolution GIS open-source information, with data on rodent captures from our own collections and information from GBIF to create a high-resolution rodent diversity index.



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Urban Rat Activity - STYGOO

We have access to a Strygoo dataset documenting citizen complaints about rat presence and information on captured rats in urban contexts. In collaboration with Strygoo and UGent, we aim to conduct an initial exploratory analysis, focusing in particular on rat colony displacement patterns. Students can work on questions on population dynamics and modelling using the data that Strygoo have already collected.

Topic 1 — Do Poison Campaigns Displace Urban Rat Hotspots?

Topic 2 — Urban Rat Chronobiology



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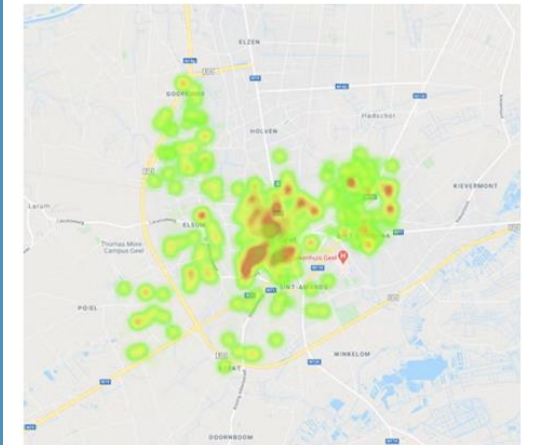
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Rodent Activity Heatmap

Per customer, a heatmap can be created based on the registered movement data in every SmarTrap in the past.

This gives great spatial insight in activity of the rats.



Introducing Strygoo

For a poison-free, safe future

Strygoo SmarTrap is a SigFox/LoRa-connected multi-catch trapping device; highly effective against rats in urban zones. Our Strygoo method is already deployed in small and major cities, adding big data to their daily rat control operations.

Its smart sensors and patented TRUST algorithm will give you real-time data on when the rats visit the SmarTrap, how often and how much they eat with each visit. The online follow-up of this pre-baiting process is crucial, allowing big rats to gain confidence.

Through remote online management a SmarTrap can instantly switch between detection and catching modes. The result: bigger and better catch results, with a smart insight into your city's rat population.

SmarTrap is a patented innovation, proudly developed and manufactured in Belgium!