

Common hamster | Photo: Bärbel Franzke

32nd Meeting of the International Hamster Workgroup

Conference Book

Preface

The International Hamster Workgroup brings together conservationists, scientists, ecologists, and experts from various fields each year to exchange ideas on the common hamster, its habitat, and its protection. In 2025, NABU Sachsen and Zoo Leipzig will host this 32nd traditional meeting.

For many years, a dedicated Saxonian working group from fields including agriculture, public authorities and nature conservation has been committed to the protection of the common hamster. Even in the face of setbacks – such as the drought years since 2003, which placed additional pressure on the species – conservation partners have remained determined. With renewed energy, they have strengthened their cooperation through a long-term strategy that extends well into the future. Since 2024, the population has been further supported through the release of captive-bred animals.

NABU Sachsen and Zoo Leipzig are partners in common hamster conservation in the region. As hosts of this year's meeting, they not only provide the opportunity to learn about their ongoing work but also invite participants to visit the zoo's breeding facility. Together, they represent the strong alliance of nature conservation in Saxony.

In addition, participants can look forward to an engaging program featuring both national and international perspectives on common hamster conservation. We warmly welcome you at Zoo Leipzig for this important gathering.

We look forward to welcoming you to Leipzig!

The Organizing Committee
Zoo Leipzig and NABU Sachsen

NABU Landesverband Sachsen

ZOO LEIPZIG Der Natur auf der Spur.

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Venue and public transport service

The meeting takes place at the unique event venue Mekong in the tropical experience world Gondwanaland of Zoo Leipzig, Pfaffendorferstraße 29, 04105 Leipzig.



Photo: Zoo Leipzig

➔ Access via Pfaffendorferstraße – next to the “Wirtschaftseingang” (Google-Maps-Link)

Airport Leipzig/Halle to Leipzig main station

Tickets:

You can easily purchase a ticket using the following apps: LeipzigMOVE, MOOVME or DB Navigator. Of course, you can also buy tickets at the DB ticket machines or at the Deutsche Bahn service center. Within Leipzig, at least one single ticket for fare zone 110 is required. You can also choose another option, for example the Leipzig Card:

- any numbers of trips on trams, buses, S-Bahn and regional trains in fare zone 110 (Leipzig)
- available at the Tourist Information, the LVB Mobility Center, the LVB Service Center as well as in the LVB online shop, at Auensee campsite, in many hotels in the city, from tour operators, and on the Internet.
- available as a day ticket (9,90 €), 2-day ticket (17,90 €) or 3-day ticket (24,90 €)

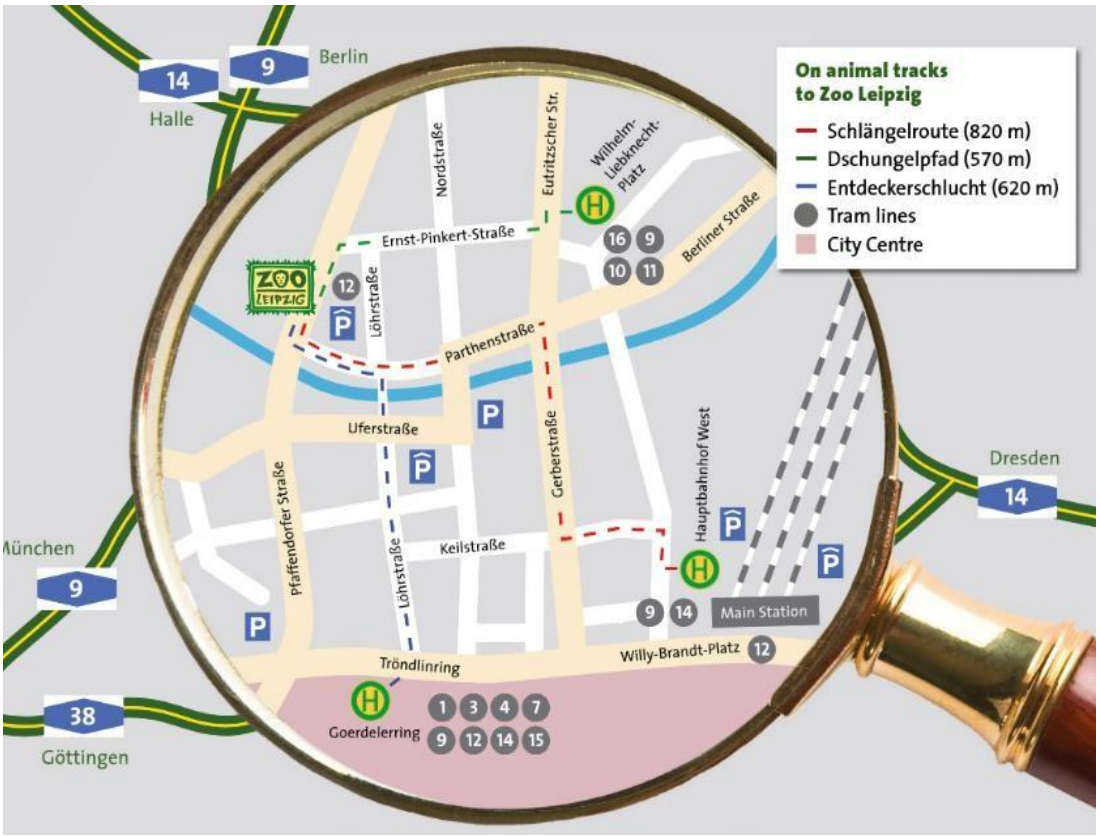
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Directions:

You can reach Leipzig main station from the airport via the S-Bahn lines S5 and S5X (Altenburg). The train departs from platform 1 and will take about 15 minutes.

From here, you can reach Zoo Leipzig by a brief walk of around 15 to 20 minutes (see "Schlängelroute" on the map below) or by public transport:

Take tram No. 12 (Leipzig, Gohlis-Nord) directly to Zoo Leipzig or tram No. 1 (Lausen), 7 (Böhlitz-Ehrenberg) or 15 (Miltitz) to Goerdelerring and turn right at the junction, then walk 665 meters to Zoo Leipzig.



Source: Zoo Leipzig

Directions description: www.zoo-leipzig.de/en/your-visit/directions

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Supporting program

Friday – 26. September – Individual Zoo Leipzig visit and guided tours

You can start the arrival day comfortably with a self-guided visit through Zoo Leipzig. Please register from 10 am at our office (“Safari-Büro”), which is located directly behind the main entrance on the left. Here you will receive your name badge and your Zoo Leipzig admission ticket.

If you are interested in a guided park tour of about 1–1.5 hours, please meet at 2 pm at the tour meeting point, directly behind the main entrance on the right (or, if you are already inside the park, on the left) located in the founders garden (see yellow asterisk on the map below). Our guides will welcome you there. The tour also includes a brief look at our common hamster breeding facility.

We wish you a lot of fun in advance.



Source: Zoo Leipzig

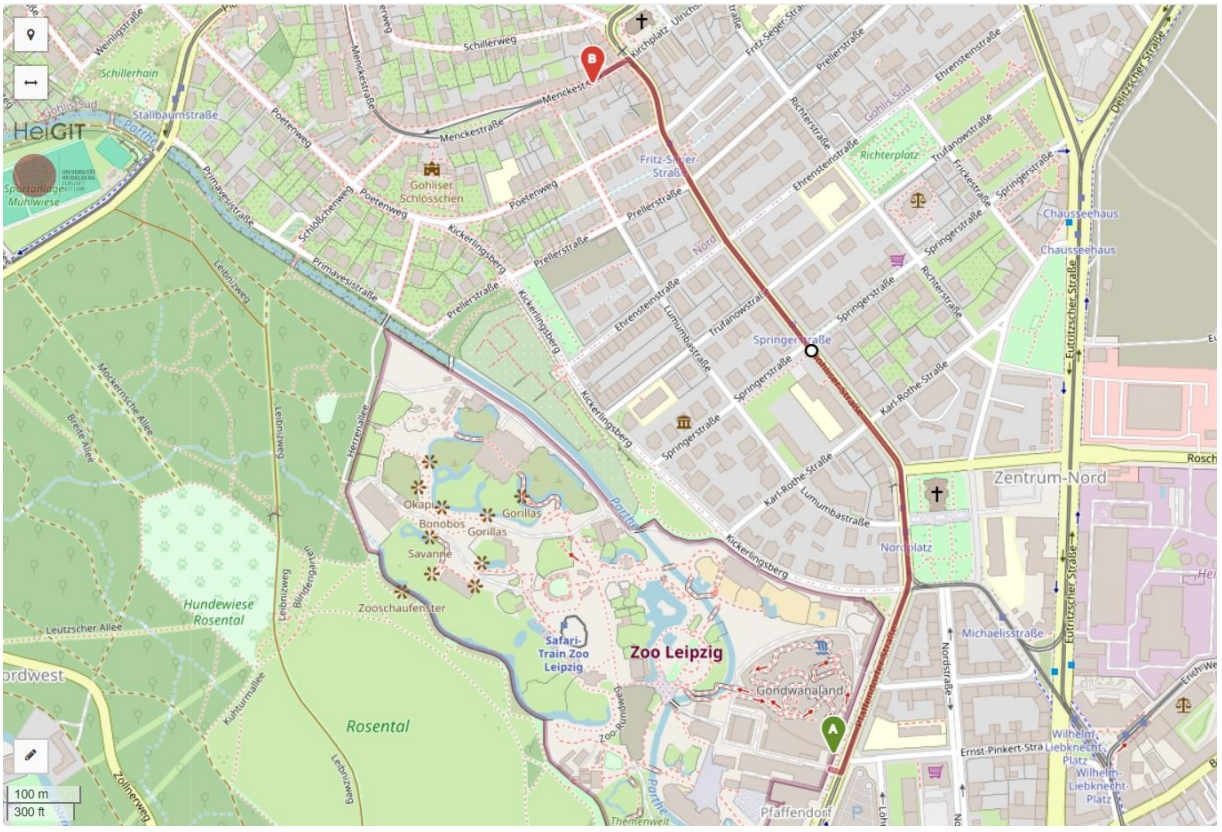
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Friday – 26. September – Icebreaker

The event starts in the evening at 6 pm. The venue is the “Gosenschenke” at Menckestraße 5, 04155 Leipzig (Google-Maps-Link). Since our arrangements are limited to sheltered outdoor seating only, we recommend bringing a jacket or other warm clothing.

Because it became the most popular drink for Leipzig citizens and visitors, especially trade fair guests, from the 18th to the mid-20th century, you should try a typical Gose on site.

Please find attached the menu for the evening and kindly pre-select a dish. And please remember that the Icebreaker is on a self-pay basis.



Source: https://www.openstreetmap.org, open database license

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Timeline

	Friday, 26.09.2025	Saturday 27.09.2025	Sunday, 28.09.2025
08:15 – 08:30			Registration
08:30 – 09:00		Registration	Session 5: Agricultural Measures
09:00 – 09:15		Opening & Welcome	
09:15 – 09:20		Session 1: Conservation Measures	
09:20 – 09:30			Session 6: Statuses of Common Hamster Populations
09:30 – 10:00			
10:00 – 10:30	Independent zoo visit		
10:30 – 10:55			
10:55 – 11:00		Coffee Break	
11:00 – 11:25			Coffee Break
11:25 – 11:30		Session 2: Genetics & New Research Insights	
11:30 – 12:15			Session 7: Policy & Strategic Frameworks
12:15 – 13:00		Session 3: Renewable Energies	
13:00 – 13:05			
13:05 – 13:10		Discussion	
13:10 – 13:30			
13:30 – 13:35		Lunch	
13:35 – 14:00			Closing Forum
14:00 – 14:30	Guided zoo tours		
14:30 – 15:00		Session 4: Coexistence & Synergies with Other Species	Lunch
15:00 – 15:30			
15:30 – 15:45			
15:45 – 16:00		Poster Session	
16:00 – 16:30			
16:30 – 17:00			
17:00 – 17:30		Coffee Break	
17:30 – 18:00		Discussion & Closing Day 1	
18:00 – 18:30	Icebreaker		
18:30 – 19:00			
19:00 – 19:30			
19:30 – 20:00			
20:00 – 24:00		Conference dinner	

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Conference program

Session 1: Conservation Measures — Sat., 27.09. 09:15 – 10:55

Title	Presenter	Institution
Current status of the common hamster conservation project in Saxony	Maria Vlaic & Thomas Liebenstein	NABU Sachsen & Zoo Leipzig
European hamster conservation in Poland – actions planned by WWF Poland for the next year	Olga Poleszczuk-Tusińska	Fundation WWF Pl.
At the last Second. Rescue of the isolated and genetically impoverished Common hamster population in Göttingen, Lower Saxony	Tobias Erik Reiners	AG Feldhamsterschutz Niedersachsen e.V.
Knuthenborg Safaripark and the European Hamster (*Cricetus cricetus*)	Camilla Husted Steinfurth	Knuthenborg Safaripark Denmark

Session 2: Genetics & New Research Insights — Sat., 27.09. 11:25 – 12:15

Chromosome level genome of the European Hamster (*Cricetus cricetus*) and its genome-wide population structure across Western Europe	Tobias Erik Reiners	Arbeitsgemeinschaft Feldhamsterschutz der HGON (Hessische Gesellschaft für Ornithologie und Naturschutz) e.V. (Common hamster conservation working group of Hessian Society for Ornithology and Nature Conservation)
Conservation Genetics of the Critically Endangered European Hamster: Integrating Microsatellite and Genomic Approaches for Population Management	Juan Manuell Ortega	Senckenberg Institute Gelnhausen

Session 3: Renewable Energies — Sat., 27.09. 12:15 – 13:05

Compensation concepts for photovoltaic power plants in the context of the uprise of renewable energy systems and their impact on conservation efforts for the common hamster in Lower Franconia	Jonas Stelz & Carola Rein	Regierung von Unterfranken (Government of Lower Frankonia)
Legal species protection: European hamster and grid expansion	Denis Lippok	Bundesamt für Naturschutz (Federal Agency for Nature Conservation)

Session 4: Coexistence & Synergies with Other Species — Sat., 27.09. 14:30 – 15:45

Small mammals, big challenges – synergies in Hamster and Bavarian Pine Vole conservation	Nora Weyer	Alpenzoo Innsbruck-Tirol
Common hamsters and Norway rats: coexistence or competition?	Carina Siutz	University of Vienna
Habitat-use of the Common Buzzard in areas with hamster-friendly management	Lune Moonen	Radboud University Nijmegen

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Session 5: Agricultural Measures — Sun., 28.09. 08:30 – 09:20

Top crop associations can yield up to 4 litters and 15 young per female common hamster	Caroline Habold	CNRS (Centre national de la recherche scientifique)
Hamster protection in modern agriculture Measures, demonstration plants with suggestions for optimization and color variation of hamster	Gabriel Leicht	TLLLR Landesamt für Landwirtschaft und Ländlichen Raum (State Office for Agriculture and Rural Areas)

Session 6: Statuses of Common Hamster Populations — Sun., 28.09. 09:20 – 11:00

The Situation of the Common Hamster at the Western Edge of Its Polish Range	Urszula Eichert	Adam Mickiewicz University, Forest Biology Center
Hamster population in district Euskirchen NRW Germany	Ute Köhler	Biologische Station Kreis Euskirchen (Biological station Euskirchen district)
Survival and reproductive success of reintroduced Common Hamsters in Langgöns	Hannah Zerbe	AG Feldhamsterschutz, HGON e.V.
Core Areas as a chance for the conservation of the Common Hamster in Saxony-Anhalt	Kerstin & Ubbo Mammen	Ökotop GbR

Session 7: Policy & Strategic Frameworks — Sun., 28.09. 11:30 – 13:35

Extinction is (not) legal: lessons from the 2025 Wild hamster ruling of the Brussels court of first instance.	Hendrik Schoukens	Ghent University
Conservation of the Common Hamster – the federal perspective	Frauke Krüger	Bundesamt für Naturschutz (Federal Agency for Nature Conservation)
LIFE4HamsterSaxony: a second chance for the common hamster in Saxony	Henning Stahl & Thomas Liebenstein	LfULG & Zoo Leipzig
LIFE Cricetus	Michael Stevens	Biologische Station im Rhein-Kreis Neuss
Operational Framework for *Cricetus cricetus* Breeding Facilities in Alsace	Aymeric Hoyois, Marie Bruppacher & Manon Brunstein	NaturOparC

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Posters **Sat., 27.09. 15:45 – 17:00**

Title	Presenter	Institution
Challenges in Breeding the "North" Lineage of Common Hamsters at Zoo Wrocław	Monika Górska	Zoo Wrocław
Successful release of common hamsters via assisted migration	Julia Heinze	AG Feldhamsterschutz, HGON e.V.
Common hamster in Rhineland-Palatinate, Germany - current status of distribution, conservation breeding and protective measures	Sylvia Idelberger, Antonia Schraml & Silvia Waldinger	Stiftung Natur und Umwelt Rheinland-Pfalz
Conservation breeding of the Syrian hamster (*Mesocricetus auratus*) by the Federal Association for Small Mammals (Bundesarbeitsgruppe Kleinsäuger e.V.)	Björn Jordan	Federal Association for Small Mammals (Bundesarbeitsgruppe Kleinsäuger e.V.)
Support in establishing an ex-situ population for the Romanian hamster (*Mesocricetus newtoni*) by the Federal Association for Small Mammals (Bundesarbeitsgruppe Kleinsäuger e.V.)	Björn Jordan	Federal Association for Small Mammals (Bundesarbeitsgruppe Kleinsäuger e.V.)
Environmental Impact Avoidance Measures for the Common Hamster: The SuedLink-project as showcase for the integration of mitigation translocation, hamster-friendly cropping and conservation breeding	Sebastian Klaus	TenneT TSO GmbH
Abnormalities and Curiosities of Juvenile Common Hamsters in a Breeding Stock	Sophie Luczak	Institut für Faunistik
Reproductive success, mortality and activity of released male European hamsters	Angelina Lutz	Arbeitsgemeinschaft Feldhamsterschutz der HGON e.V.
Establishment of a near-exhaustive bibliographic database on the Common Hamster (*Cricetus cricetus*)	Aurélie Saussais	CNRS (Centre national de la recherche scientifique)
Diversity in the composition of staphylococci in the skin microbiota of the European hamster (*Cricetus cricetus*)	Ewa Szczuka & Joanna Ziomek	Department of Systematic Zoology, Adam Mickiewicz University, Poznań; Department of Microbiology, Institute of Experimental Biology, Faculty of Biology, Adam Mickiewicz University

Abstracts talks

Current status of the common hamster conservation project in Saxony

Maria Vlaic[1] and Thomas Liebenstein[2]

[1] NABU (The Nature and Biodiversity Conservation Union) Saxony
[2] Zoo Leipzig

The common hamster (*Cricetus cricetus*) is a species listed in Annex IV of the Habitats Directive with a conservation status assessed as "unfavourably-poor" (U2-) for the continental region in Germany. It was once widespread in Central Germany and roamed through nearly all parts of Saxony. However, fragmentation of populations through land consumption, large-scale agriculture and climate change led to a drastic decline of the field-dwelling species. Today, the common hamster is not only listed as critically endangered by the German and Saxon Red List, but also by the IUCN. From 2020 to 2023 the Saxon common hamster population was below the detection limit and was deemed to go extinct without further strengthening of the conservation efforts. To prevent the imminent extinction, the working group for "Cooperative Common Hamster Protection in Saxony" intensified their conservation efforts and developed the "Strategy for the Conservation of the Common Hamster in Saxony", which led to the first population reinforcement releases of common hamsters in Saxony in 2024 and again in 2025. In this presentation, two of the working group partners – NABU Saxony, one of the founders of the working group, and Zoo Leipzig, which joined the cooperation in 2021 as newest member – are going to highlight the history of the working group, the first results of the reinforcement measures as well as the current developments and chances of the conservation project for the common hamster in Saxony.

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European hamster conservation in Poland – actions planned by WWF Poland for the next year

Olga Poleszczuk-Tusińska[1] and Magdalena Zadrąg[1]

[1] Fundation WWF Poland

The European hamster (*Cricetus cricetus*) is a critically endangered, protected species that symbolises biodiversity. Grassroots efforts to improve its living conditions have been ongoing for many years. However, over the last 40 years, the range of this species in Poland has decreased by 80%.

The European hamster is still considered a pest by farmers, ignored by developers, and viewed by city authorities as a source of problems and an obstacle to development. In 2024, WWF Poland decided to take action to protect the species. We began by working with experts in the field, learning from them, and planning for the future.

The most important step so far has been the establishment of a partnership with the University of Agriculture in Krakow. Thanks to this collaboration, a professional winter shelter has been created for 30 hamsters. This winter (2025/26), hamsters caught in areas where development work is being carried out near Krakow and Lublin will spend the winter there.

As well as responding quickly to situations such as trapping, we also aim to take long-term action and bring together experts, ecologists, and enthusiasts of this species. To this end, we have recently organised a conference in cooperation with the University of Agriculture in Krakow, titled *"Protection of the European Hamster in Poland: Compromise between Infrastructure Development, Agriculture, and Biodiversity Protection."* The conference attracted over 80 participants.

We were joined by representatives of non-governmental organisations, city authorities, Regional Directorates for Environmental Protection, and the General Directorate for National Roads and Motorways. We got to know each other by discussing the different ways in which we impact the European hamster population.

The next step was to organise the first *European Hamster Summer School* in cooperation with the Wildlife Monitoring Project, led by Jolanta Jurkiewicz-Azab. Interesting and informative lectures and practical sessions enabled us to share knowledge and experience.

Next year, in 2026, we plan to educate and promote farmers practising extensive, biodiversity-friendly agriculture, including practices that support the European hamster. We plan to organise a Hamster-Friendly Farmer competition. We are looking for farmers to become ambassadors for the protection of this species.

In cooperation with the Naturalnie Association, we are organising a travelling exhibition to promote the protection of the European hamster, bringing people closer to this amazing species. Many people are unaware that it lives so close to us.
We have identified significant legal shortcomings and a general disregard for the regulations governing the protection of the European hamster. This is an issue that we must address alongside the foremost experts in European hamster conservation.

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At the last Second. Rescue of the isolated and genetically impoverished Common hamster population in Göttingen, Lower Saxony

Nina Lipecki[1], Sonja Yaman[1], Mareike Schneider[1] and Tobias Erik Reiners[1]

[1]Arbeitsgemeinschaft Feldhamsterschutz Niedersachsen e.V.

In the late 1990s, a small population of the Common hamster (*Cricetus cricetus*) on the campus of the University of Göttingen became the subject of a compensation project linked to a construction development. Although the available space was already limited, a compensation scheme was implemented in order to protect the remaining hamsters within the campus area.

More than 20 years later, fewer than 50 individuals remained. Genetic analyses revealed that the population was severely affected by inbreeding and a loss of genetic diversity. Demographic modelling further demonstrated that the long-term survival of the population was impossible, as the habitat was too small and the implemented compensation measures showed serious shortcomings in quality.

In 2022, the Arbeitsgemeinschaft Feldhamsterschutz Niedersachsen e.V. subsequently decided – after obtaining the necessary permissions from the relevant authorities—to capture some of the last remaining individuals in order to genetically rescue the population by crossbreeding them with hamsters from the nearby Hildesheim region. For this they set up a small conservation breeding Station, following all nessecary standards. Following successful breeding, the first reintroduction of mixed offspring closely outside the city of Göttingen took place in 2024.

After the second year of releases in 2025, there is cautious optimism that the genetic rescue has helped secure the persistence of the Göttingen hamster population and prevented its extinction in this part of Lower Saxony.

Knuthenborg Safaripark and the European Hamster (*Cricetus cricetus*)

Camilla Husted Steinfurth[1]

[1] Knuthenborg Safaripark

Knuthenborg Safaripark, located in Denmark, is expanding its conservation efforts through the development of a new biodiversity center aimed at supporting European species reintroduction programs. A central focus of this initiative is the European hamster (*Cricetus cricetus*).
Our vision is to establish a dedicated facility for the European hamster that combines ex situ breeding, public education, and conservation outreach. The center aims to engage visitors and serve as a platform for school programs emphasizing biodiversity and the ecological role of the European hamster.
In parallel, we aim to contribute to long-term reintroduction efforts. Initial plans include breeding programs and knowledge exchange, with a goal of reintroducing hamsters, including initiatives involving populations from Ukraine. Knuthenborg Safaripark has the space and capacity to maintain a substantial breeding population, ensuring genetic diversity and the ability to support conservation programs at scale.
We are seeking collaboration with conservation organisations, researchers, and institutions for knowledge sharing and the exchange of individuals to strengthen European hamster conservation. Through these efforts, Knuthenborg Safaripark intends to become a key contributor to the preservation and awareness of this emblematic species, linking hands-on animal care with broader biodiversity education.

Chromosome level genome of the European Hamster (*Cricetus cricetus*) and its genome-wide population structure across Western Europe

Tobias Erik Reiners[1,2,3], David Prochotta[5,6], Tilman Schell[3,4], Carola Greve[3,4], Alexander Ben Hamadou[3,4], Charlotte Gerheim[3,4], Juan-Manuel Ortega[2,3,6], Carsten Nowak[2,3], Marcel Nebenführ[3,5,6] and Axel Janke[3,5,6]

[1] Arbeitsgemeinschaft Feldhamsterschutz der HGON e.V., Echzell, Germany
[2] Centre for Wildlife Genetics, Senckenberg Research Institute and Natural History Museum Frankfurt, Gelnhausen, Germany
[3] LOEWE-Centre for Translational Biodiversity Genomics (TBG), Senckenberg Nature Research Society, Frankfurt am Main, Germany
[4] Senckenberg Research Institute and Natural History Museum Frankfurt, Frankfurt am Main, Germany
[5] Senckenberg Biodiversity and Climate Research Centre (BiK-F), Frankfurt am Main, Germany
[6] Institute for Ecology, Evolution and Diversity, Goethe University, Frankfurt am Main, Germany

The European hamster (*Cricetus cricetus*) was once a pest on European farmland, but its numbers have declined dramatically in recent decades, making it a critically endangered species throughout Europe and beyond. While it is strictly protected by EU law and several conservation, breeding and release programs have been initiated, little is known about the level of genetic erosion and inbreeding on a European scale.
Here we present a chromosome-level de novo genome of a female hamster and a first population genomic analysis from the western range of the species' distribution, using Illumina short-reads (10x coverage) from 34 individuals. The genome is 2.89 Gbp long, with 11 chromosome-level scaffolds. The genome is above the average length of a mammalian genome and longer than that of other studied hamster species. Four distinct hamster populations with no admixture can be identified. Analysis is indicating highly isolated populations with limited connectivity. Heterozygosity (Ho) is generally low (< 0.05%, comparable to polar bears) with some exceptions of populations with Ho near zero and a few with Ho as high as 0.2%. Most dramatically, the genomes of individuals used as founders for conservation breeding programs show exceptionally long runs of homozygosity, questioning its long-term suitability. This study confirms earlier concerns about the dramatically decreasing genetic diversity of the European hamster and provides a basis for future conservation efforts, which requires consideration of population genetic factors.

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Conservation Genetics of the Critically Endangered European Hamster: Integrating Microsatellite and Genomic Approaches for Population Management.

Juan Manuel Ortega[1,2,4], Paige Byerly[1,4], Carsten Nowak[1,4], Axel Janke[2,3,4], David Prochotta[2,3,4], Marcel Nebenführ[2,3,4] and Tobias Erik Reiners[1,4]

[1] Centre for Wildlife Genetics, Senckenberg Research Institute and Natural History Museum Frankfurt, Gelnhausen, Germany
[2] Institute for Ecology, Evolution and Diversity, Goethe University, Frankfurt am Main, Germany
[3] Senckenberg Biodiversity and Climate Research Centre (BiK-F), Frankfurt am Main, Germany
[4] LOEWE-Centre for Translational Biodiversity Genomics (TBG), Senckenberg Nature Research Society, Frankfurt am Main, Germany

Agricultural intensification has caused severe population declines and fragmented populations of many European farmland wildlife species. The European hamster (*Cricetus cricetus*), a small rodent with limited dispersal, is now Critically Endangered, with one population vanishing annually in the German state of Hesse since 1995. We investigated the genetic consequences of this decline by analyzing population structure and genetic erosion in remaining hamster populations. We categorized 841 individuals into four groups: **Core** (large, connected populations), **Satellite** (small, fragmented populations), and **Extirpated** (from recently extinct sites), and a **historical Reference group**. We used 17 microsatellite markers and sequenced the genomes of 12 individuals for high-resolution analysis. Our results show that isolated **Satellite** and recently **Extirpated** populations have significantly reduced heterozygosity and increased inbreeding. These populations displayed strong genetic clustering, signs of recent bottlenecks, and long runs of homozygosity (ROH), indicating severe inbreeding. In contrast, the remaining connected **Core** populations had shorter ROH, suggesting less intense or older inbreeding events. This study highlights the rapid genomic erosion small mammals face due to agricultural intensification. Our findings underscore the urgent need to manage genetically eroded satellite populations as distinct conservation units. Without proactive measures like genetic monitoring and assisted gene flow, these populations are at high risk of rapid extinction, a critical issue for fragmented wildlife populations worldwide.

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Compensation concepts for photovoltaic power plants in the context of the uprise of renewable energy systems and their impact on conservation efforts for the common hamster in Lower Frankonia.

Jonas Stelz[1] and Carola Rein[2]

[1] Regierung von Unterfranken
[2] Umweltbüro FABION GbR

The expansion of photovoltaic capacity is being strongly promoted across Germany, leading to significant additional challenges, especially in hamster regions. The potential solutions vary considerably depending on the type and size of the installation. Conservation requirements differ between the traditional approach along highways and large-scale photovoltaic installations or agrivoltaic systems. Particularly, large installations require special measures to ensure adequate deterrence of common hamsters from the construction site, such as deterrence strips commonly used in Lower Franconia. Approaches to integrate compensation areas within the facilities exist but are still predominantly outside the traditional compensation framework. These experimental approaches have to be accompanied by traditional compensation (wheat, alfalfa, and flower strips) in the surrounding area. Local regulations are in place that allow for the reduction of external compensation areas if the area within the facility is successfully used by the hamster population. The impact of the increasing number of PV installations on the protection of the common hamster remains a topic of ongoing debate.

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Legal species protection: European hamster and grid expansion

Denis Lippok[1]

[1] Federal Agency for Nature Conservation

The talk addresses challenges for the protection of European hamster resulting from the expansion of the power grid. In the first section, the legal basis of species protection is outlined, with references to Habitats Directive and Federal Nature Conservation Act. In the following section, the implementation of species protection in approval procedures by the instrument of the species protection assessments is described. The third section of the talk provides a brief overview of current changes in the legal situation in regard to the Renewable Energy Directive and its national implementation, as well as their impact on species protection assessments.

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Small mammals, big challenges – synergies in Hamster and Bavarian Pine Vole conservation

Nora Weyer[1]

[1] IUCN Center for Species Survival: Small Mammals, Alpenzoo Innsbruck-Tirol

The Bavarian pine vole (*Microtus bavaricus*) is among Europe's rarest and most threatened mammals. Currently known from only two locations in North Tyrol, Austria, and in Bavaria, Germany, this Alpine endemite was long thought extinct in Germany until its rediscovery in 2023. The species faces urgent threats including habitat degradation, low detectability, and unresolved taxonomic uncertainty. Nationally, the species is classified as Critically Endangered (CR) on the Austrian Red List and as Extinct/Lost on the German Red List of Endangered Species, while its IUCN status is under review.

While the European hamster (*Cricetus cricetus*) has become a flagship species for farmland biodiversity across Europe, the Bavarian pine vole represents one of the continent's rarest and most narrowly distributed small mammals, persisting (to our best knowledge) only in few, isolated alpine meadows. Our transnational conservation initiative, led by Alpenzoo Innsbruck-Tirol and the Bavarian State Agency, seeks to secure the species' future through a combination of innovative monitoring, habitat restoration, establishment of a reserve population, and stakeholder engagement. Uniting *in-situ* and *ex-situ* approaches, a range of institutions including zoos, research bodies, monitoring agencies, and forestry authorities are working together to conserve this endemic rodent.

Here, we share experiences from the past years, highlighting both successes and ongoing challenges, as well as outlining priorities for research and conservation. We also seek to exchange insights with colleagues working on hamster conservation to explore synergies, such as strategic, joint fundraising, coordinated communication, and integrated conservation planning. Linking the conservation of the European hamster and the Bavarian pine vole provides opportunities not only to maximize outcomes for both species but also to strengthen biodiversity strategies in Europe more broadly.

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Common hamsters and Norway rats: coexistence or competition?

Carina Siutz[1] and Eva Millesi[1]

[1] Department of Behavioral and Cognitive Biology, University of Vienna, Austria

This study was conducted on behalf of the City of Vienna, Environmental Protection Department (MA 22).

Common hamsters typically inhabit agricultural landscapes but also occur in cities. In urban habitats, hamsters face several threats associated with anthropogenic activities like traffic, habitat loss due to construction, or poisoning. In Vienna, hamsters live in parks and on green areas within apartment complexes. Such inner-city areas, however, are also frequently inhabited by Norway rats. This often leads to conflicts because common hamsters are strictly protected, while rat populations have to be controlled. Therefore, this project aimed to investigate if coexistence between common hamsters and Norway rats is possible. We monitored a local population of common hamsters inhabiting green areas of two apartment complexes adjacent to a park with known rat presence from July to November. All burrows in this area were observed at regular intervals to determine whether they were occupied by hamsters or rats. At the apartment complexes, the number of hamster burrows decreased from 14 in July to 1 in October. Simultaneously, the number of rat burrows increased from 6 in July to 29 in October in this area. In the park, only one hamster burrow was detected which was abandoned from mid August, while the number of rat burrows increased during the study period. In hamsters, the number of observed individuals matched with the number of burrows. Since rats are group-living and were not individually marked in this study, the number of burrows did not reflect the number of individuals. We frequently observed several rats above-ground simultaneously that successively entered the same burrow. Additionally, rats also disappeared in cracks of buildings or drains. However, we calculated the maximum number of rats that were observed simultaneously above-ground on a defined area (approx. 30 x 30 m) during 10 minutes. This number ranged from 0 to 6 at the apartment complexes and from 3 to 6 in the park. In general, we observed rats on average in 53% of our observations. The results showed that the hamster population was declining while the rat population increased at the study site. Although we could not verify, if hamsters were actively displaced by rats, the data indicate rather competition than coexistence between the two species. These findings are of particular importance as they demonstrate that rat populations need to be controlled and solutions are required to achieve this without harming common hamsters.

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Habitat-use of the common Buzzard in areas with hamster-friendly management

Lune Moonen[1]

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The common buzzard (Buteo buteo) is the most common bird of prey in the Netherlands. Its diet is opportunistic and consist of mainly small rodents. In some areas in the province of Zuid-Limburg, Netherlands, it includes the endangered common hamster (*Cricetus cricetus*). This rodent lives in agricultural areas but went extinct in the wild in the Netherlands in 2002. In the same year, a reintroduction program started and areas with hamster-friendly management were created. However, modern agricultural practices often fail to create a landscape with enough shelter for the hamster. Therefore, predation can be an important limiting factor for the survival of populations of the hamster. From 2021 on, tracking data was collected from up to 13 common buzzards that lived in or near hamster-friendly management areas in Zuid-Limburg, Netherlands. With this information, the spatial use of the landscape of hunting buzzards could be recorded and can be used to improve hamster-friendly management areas. A generalised linear mixed model (GLMM) was conducted to calculate the effect of crop type, field size and time period of the year on the distribution of the tracking points. Other possible effects were discussed.

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Top crop associations can yield up to four litters and 15 young per female common hamster

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Monoculture corn farming in Alsace since 1970 provides little or no vegetation cover until June (Backbier et al., 1998), leaving animals particularly vulnerable to predation during the breeding season. In addition, it poses a problem in terms of food availability and diversity, leading to significant weight loss in hamsters in the wild at the end of hibernation since the 1990s compared to previous decades when crops were more diverse (Tissier et al., 2016).
We have shown under controlled laboratory and enclosure conditions that monoculture of corn but also wheat do not meet the nutritional needs of hamsters during reproduction. Protein deficiencies in wheat lead to low reproductive success, resulting in small litters with slow-growing young despite high investment by females (Tissier et al., 2017 and 2018). Corn monoculture is deficient in vitamin B3 and its precursor amino acid tryptophan, which results in cannibalism of young by 90% of mothers (Tissier et al. 2017). In order to improve these disastrous farming practices for hamsters and wildlife in general, we have worked with farmers to identify protein- and vitamin B3-rich crops to combine with these cereals. We first tested several seed combinations in the laboratory, on hamster hibernation and reproduction (Gérard et al., 2024). We identified lipid-rich combinations (sunflower-wheat-soybean crops) as more favorable during hibernation, *i.e.*, inducing less specific mass loss or even mass gain. Next, as previously observed in our studies (Weitten et al., 2018, Tissier et al., 2021) and in other species, females that consumed more protein during reproduction had greater reproductive success. They increased their protein intake by selecting the most protein-rich seeds or by increasing the total amount of food ingested.
We continued these tests under semi-natural conditions in large outdoor enclosures in order to assess the overall effect of crop combinations on the hamster's environment and to test new associations of interest to farmers. We tested these on the reproduction and winter survival of the European hamster from 2022 to 2024 in five enclosures of approximately 20 acres. The first

results show that in the absence of predation, the species can produce up to four litters and up to 15 young per female for the combinations richest in protein and lipids (wheat+soybean, rapeseed+faba bean) (Gérard et al., 2025).

This reproductive success far exceeds that obtained under controlled laboratory conditions, including for the conventional wheat modality, demonstrating the importance of the cultivation environment and auxiliary food sources for hamsters (weeds, invertebrates, small mammals).

Backbier LAM, Gubbels EJ, Seluga K, Weidling A, Weinhold U, Zimmer-Mann W. (1998). Internationale Arbeitsgruppe Feldhamster. Der Feldhamster, *Cricetus cricetus* (L., 1758): ein stark gefährdete Tierart. In: Stubbe M, Stubbe A (Hrsg.): Ökologie und Schutz des Feldhamsters. Wiss. Beitr. Martin-Luther-Univ. Halle-Wittenberg, 457-480.

Gérard, T., Robin, J.P., Kletty, F.*, Habold, C*. The endangered common hamster needs proteins: identifying diversified crop-based diets improving hibernation and reproductive success. Conservation Physiology, Volume 12, Issue 1, 2024, coae082, https://doi.org/10.1093/conphys/coae082, (*Co-senior authorship).

Gérard, T., Chignec, H., Saussais, A., Poteaux, C., Long, E., Robin, J.P., Zahn, S., Habold, C. Preserving a farmland wild hamster for a more sustainable agriculture; Identifying how agroecological crop associations benefit the hibernation and reproductive success of the common hamster *Cricetus cricetus* in outdoor conditions. Royal Society Open Science, 2025, https://doi.org/10.1098/rsos.250499.

Tissier ML, Handrich Y, Robin JP, Weitten M, Pevet P, Kourkgy C, Habold C. (2016). How maize monoculture and increasing winter rainfall have brought the hibernating European hamster to the verge of extinction. Scientific Reports, 2016 May 6;6:25531. doi: 10.1038/srep25531.

Tissier ML, Handrich Y, Dallongeville O, Robin JP, Habold C. (2017). Diets derived from maize monoculture cause maternal infanticides in the endangered European hamster owing to a vitamin B3 deficiency. Proc. R. Soc. B 20162168. 25;284(1847). pii: 20162168. doi: http://dx.doi.org/10.1098/rspb.2016.2168.

Tissier, M. L., Kletty, F., Handrich, Y., Habold, C. (2018). Monocultural sowing in mesocosms decreases the species richness of weeds and invertebrates and critically reduces the fitness of the endangered European hamster. Oecologia 186(2), DOI: 10.1007/s00442-017-4025-y.

Tissier, M.L., Kletty, F., Robin, J.P., Habold, C. (2021). Sustainable Agriculture: Nutritional Benefits of Wheat–Soybean and Maize–Sunflower Associations for Hibernation and Reproduction of Endangered CommonHamsters. Sustainability, 13 (24), pp.13521. ⟨10.3390/su132413521⟩. ⟨hal-03470288⟩.

Weitten, M., Tissier, M. L., Robin JP, Habold C. (2018). Dietary proteins improve hibernation and subsequent reproduction in the European hamster, *Cricetus cricetus*. American Journal of Physiology, Regulatory, Integrative and Comparative Physiology 1;315(4):R848-R855. doi: 10.1152/ajpregu.00146.2018.

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Hamster protection in modern agriculture – Measures, demonstration units with suggestions for optimization and color variation of common hamster

Gabriel Leicht[1]

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The decision about the “Praxiszentrum Feldhamsterschutz” was made in a cabinet resolution by the former thuriangian ministries TMUEN and TMIL. The cooperation between TLUBN and TLLLR combines approaches from both nature conservation and agriculture.
On the land managed by TLLLR, various common hamster conservation measures are being implemented across approximately 400 hectares. Some of these areas lie within one of the largest known field hamster populations, with around 3000 burrows recorded on 250 hectares of arable land.
The “Praxiszentrum Feldhamsterschutz” at TLLLR provides background information on the occurrence of common hamsters on these areas. It presents modern agricultural practices and shows various demonstration units aimed at optimizing common hamster protection. Among these are demonstrations for the use of straw harrows, undersown crops, novel plant species for seed mixtures, optimal sowing densities, and a newly developed autumn seed mix.
Since 2024, additional color variants of the hamster have been observed in the area and are presented during the event. The claim that the common hamster is an agricultural pest is also refuted based on current knowledge and the importance of establishing the center on a long-term basis is justified.

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The Situation of the Common Hamster at the Western Edge of Its Polish Range

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The continuous distribution range of the European hamster (*Cricetus cricetus*) in Poland is restricted to the Polish Uplands. Two regions, markedly isolated from this core range, with single European hamster sites, are located in the south-west (Opole region) and in the west of the country (Lower Silesia). These represent the least studied areas of the species' occurrence in Poland. Importantly, they are inhabited by populations belonging to two distinct phylogeographic lineages: Pannonia (Opole region) and North (Lower Silesia). The objectives of this study were to verify the presence of the species in both regions and to assess the status of the populations representing the North lineage.

A three-year survey in the Opole region confirmed the occurrence of the species at six sites located on the Głubczyce Plateau (Kietrz, Grobniki, Debrzyca, Wielkie Oracze, Kazimierz, Góreczno), whereas no presence was recorded at other historical sites.

In Lower Silesia, five sites inhabited by the North lineage were confirmed (Jawor, Małuszów, Piotrowice, Paszowice, Bolkowice). However, monitoring repeated since 2017 revealed a rapid decline of these populations. To safeguard the genetic pool, a conservation breeding program was established at Wrocław Zoo, in collaboration with Polish Society for Nature Conservation "Salamandra". Between 2023 and 2025, twelve individuals were captured in the Jawor area, and in 2025 the first offspring of the North lineage were obtained. In the future, individuals from this ex-situ population will be used to reinforce declining wild populations in Lower Silesia.

This work was financially supported by the Department of Environmental Protection of the Opole Voivodeship (Opole region), Wrocław Zoo, and the DODO Foundation (Lower Silesia).

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Hamsterpopulation in district Euskirchen NRW Germany

Ute Köhler[1]

[1] Biologische Station im Kreis Euskirchen

After the reinforcement of 98 hamster in spring 2024 near Zülpich Geich in district Euskirchen NRW and the first monitoring in August, the development in 2025 is positive. In spring we found 68 burrows and in summer 246 burrows. In April/Mai we release 35 hamsters at the same place.

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Survival and Reproductive Success of reintroduced European Hamsters Langgöns, Hessen, Germany

Hannah Zerbe[1]

[1] Arbeitsgemeinschaft Feldhamsterschutz der HGON

The extinction of species and ecosystems has accelerated dramatically worldwide. One particularly endangered habitat affected by this development is the agricultural landscape. Land-use changes and habitat fragmentation are continuously reducing the living space of many farmland species. The European hamster (*Cricetus cricetus*) is also critically endangered, with its populations declining globally. In Hessen, conservation efforts such as harvest abandonment measures and reintroduction projects are being implemented to prevent the species' extinction.

This bachelor thesis examines the hibernation and reproductive success of the European hamster as part of a reintroduction project in Langgöns Nord. The objective is to evaluate the success of the reintroduction based on survival rates, population growth, and timing of reproduction. Various methods were applied, including capture-mark-recapture studies, vaginal cytology for analysis of the reproductive cycle, camera monitoring, and population estimates. Additionally, the birth weeks of juveniles born on the resettlement site were determined and statistically compared with birth weeks of juveniles from the breeding station of the European Hamster Conservation Association as well as wild-caught individuals from previous years.

The methodology of back-calculating birth weeks based on weight proved to be imprecise but sufficient within the scope of this study. The vaginal cytology method was found to be unsuitable for field studies but can be used effectively for breeding purposes. The results indicate that the reintroduction of European hamsters in Langgöns Nord is progressing successfully. The onset of reproduction in spring 2024 occurred in the last week of April. The hibernation success exceeded one-third, population growth was over 50%, and the nutritional condition of the hamsters after hibernation was excellent. These findings support a well-functioning reintroduction strategy. However, long-term conservation measures, such as habitat optimizations and monitoring programs, are essential to ensure the sustainable preservation of the population.

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Core Areas as a chance for the conservation of the Common Hamster in Saxony-Anhalt

Kerstin Mammen[1] and Ubbo Mammen[1]

[1] ÖKOTOP GbR

In Germany priority areas for hamster conservation are particularly important in the federal states with extensive and widely dispersed populations of the species. Common hamster priority areas are „core areas“ that, due to their population, their proven suitability as hamster habitats and their habitat structures, are particularly suitable for the long-term conservation of the Common hamster in its range.
On behalf of the State Office for Environmental Protection (Landesamt für Umweltschutz) Saxony-Anhalt we identified Common hamster priority areas for Saxony-Anhalt. This was based on the current populations of the species or those recorded over the past 15 years, as well as the habitat suitability and fragmentation.
Overall 35 priority areas (Schwerpunktgebiete, SPG) and 5 additional areas that need to be checked for suitability (Prüfgebiete, PG) were determined. Regionally, there are eight focal areas: the Magdeburg Börde, the northern, eastern, and southern Harz foreland, the Eisleben and Querfurt Plateau areas, the Köthen farmland, the eastern Saalekreis district, and areas in the Burgenland district. The total area of all priority areas (including areas to be checked) is 134,730 hectares, or 6.6% of Saxony-Anhalt's total area.
The goal is to establish a self-sustaining (sub)population in each priority area. To ensure population connectivity within the range, habitat connectivity between the areas should be established or improved.
To achieve this goal, a package of measures has been defined:
• Conservation measures: Acquisition of areas for the measures and participating farmers, ensuring the minimum area of hamster conservation measures required per SPG, directing specific hamster conservation measures to the priority areas
• Improvement of habitat connectivity: Connection to other priority areas, possibly also within areas
• Limiting habitat loss: Any further development of arable land in the priority areas may only take place in conjunction with the establishment of compensation areas, regardless if animals are present on the developed area or not
• Population support, restocking: Release of Common hamsters from conservation breeding
• In case of insufficient data: Clarification of current hamster populations in the SPG and ongoing updating

Online presentation:

Extinction is (not) legal: lessons from the 2025 Wild hamster ruling of the Brussels court of first instance.

Hendrik Schoukens[1]

[1] Ghent University

Holding a government liable in court for the extinction of the wild hamster? Until recently, it seemed impossible. Yet this is exactly what happened in April 2025, when the Brussels Court of First Instance ruled that the Flemish government had done too little to prevent the disappearance of this iconic species. Although it qualified the protection duties not as an obligation of results – but rather as efforts-based – the court found that the voluntary measures undertaken during the past decades were largely ineffective. The government was ordered to take additional measures to bring the species back to a favorable conservation status. The ruling is nuanced and provides insight into how the law deals with the extinction of a strictly protected species. In this contribution, I analyze the judgment in more detail and examine the key wins and losses for biodiversity litigation going forward.

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Conservation of the common hamster in Germany – a federal perspective

Frauke Krüger[1]

[1] Bundesamt für Naturschutz

The Common Hamster (*Cricetus cricetus*) has faced severe population declines in Germany as well as in its whole distribution area due to habitat loss, intensive agriculture and fragmentation. From a federal perspective, conservation efforts need to evolve from isolated regional actions to a coordinated nationwide programme. Earlier projects have tried to establish such nationwide approaches. Now the National Species Recovery Programme, installed to improve conservation status of species threatened particularly by the expansion of renewable energies, tries to facilitate further efforts in habitat restoration, sustainable agricultural practices, as well as reintroduction to stabilise and expand populations. Effective conservation relies on strong cooperation among federal and state administrations and other players, like NGOs, foundations and zoos. Future success depends on continued collaboration, adaptive management, and integrating conservation into broader land-use planning. This aim unifies all involved in protection of the Common Hamster as well as other endangered species in Germany.

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LIFE4HamsterSaxony: a second chance for the common hamster in Saxony

Henning Stahl[1] and Thomas Liebenstein[2]

[1] Saxon State Office for Environment, Agriculture and Geology
[2] Zoo Leipzig

Since 2020, monitoring for common hamster (*Cricetus cricetus*) in northwest Saxony has not revealed any more evidence for the species in the area. Fragmentation of populations, large-scale agriculture and climate change are among the main causes of the collapse. To counter the approaching extinction of the common hamster in Saxony, the "Saxon State Office for Environment, Agriculture and Geology" together with its partners "Zoo Leipzig" and the "Administrative District North Saxony" drafted and submitted an EU-LIFE project proposal in 2024 – which was granted the following year. The project "LIFE4HamsterSaxony" represents a holistic approach for this critically endangered species and is the first operational building block for the implementation of the "Strategy for the Conservation of the Common Hamster in Saxony" by the working group "Cooperative Common Hamster Conservation in the Free State of Saxony". This talk aims to introduce the project and highlight its key goals, which are:

1. Establishment of a self-sustaining, continuously growing, healthy and genetically diverse common hamster population in the northwest Saxony region.
2. Restoration of sustainable common hamster habitats through innovative, climate change-adapted agriculture to create suitable habitat conditions for a self-sustaining common hamster population.
3. Establishment of conservation breeding efforts to build up a reserve population for population reinforcement measures.
4. Expansion of regional-specific expertise and knowledge transfer on common hamster ecology, on hamster-friendly farming, and on the impact of climate change on the common hamster, as well as findings on how to optimize conservation, development, and protection measures.
5. Acceptance of conservation measures and motivation for involvement in protecting the common hamster.

LIFE *Cricetus*

LIFE24-NAT-BE-LIFE *Cricetus*: Catalysing the Conservation of the Critically Endangered Common hamster through an Innovative Species and Agricultural Management Approach

Sarah Descamps[1] and Michael Stevens[2]

[1] PXL BIO-Research Hasselt
[2] Biologische Station im Rhein-Kreis Neuss

Project Description and Background

This demonstrative project aims to reach a more favourable conservation status for the Common hamster (*Cricetus cricetus*) in the project area through an integrated management approach in which farmers, scientists and policymakers closely cooperate and implement innovations in management. Following the EU Biodiversity Strategy 2030, this project will make an important contribution to improve the conservation status of a species that depends on and is affected by agriculture. Therefore, the project wants to demonstrate that it is possible to bridge productive farming and rural biodiversity through innovation while having an impact on policy. In this project, the region of the BNN genetic lineage of the Common hamster is used to demonstrate this integrated approach. The BNN-region comprehends the South of Limburg (Belgium), Limburg (The Netherlands) and the state of North-Rhine-Westphalia (Germany). LIFE *Cricetus* builts upon the following objectives: 1 - Prevent the extinction of *Cricetus cricetus* in the project area of Belgium, The Netherlands and Germany/North-Rhine-Westphalia 2 - Ensure long term survival and fitness of the Common hamster 3 - Establishment of experimental and demonstration farms where the feasibility and effectiveness of new agricultural management measures for the Common hamster will be tested and deployed 4 - Establishment of agricultural hamster cooperatives that support the protection of the hamster as well as other farmland biodiversity 5 - Increase the area of land managed with hamster & wildlife-friendly measures in intensive farmland 6 - Provide recommendations for the CAP and implement new measures for the Common hamster 7 - Raise awareness and enhance the support for the hamster and biodiversity-friendly agricultural management 8 - Dissemination of the findings, actions, and management structure, to other areas where other European genetic lineages of the Common hamster are present and declining. (Modified from EU Project Homepage: https://webgate.ec.europa.eu/life/publicWebsite/project/LIFE24-NAT-BE-LIFE-Cricetus-101215431/catalysing-the-conservation-of-the-critically-endangered-common-hamster-through-an-innovative-species-and-agricultural-management-approach)

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Operational Framework for *Cricetus cricetus* Breeding Facilities in Alsace

Aymeric Hoyois[1], Marie Bruppacher[2] and Manon Brunstein[2]

[1]NaturOparC (ex. Centre de Réintroduction)
[2] Sauvegarde Faune Sauvage

The European hamster (*Cricetus cricetus*), or Grand Hamster d'Alsace, is critically endangered and subject to a strict set of technical guidelines governing its conservation breeding in Alsace. These specifications define enclosure conditions, diet, veterinary care, and biosecurity, while ensuring genetic management through coordinated breeding to maintain diversity. They also highlight ethical responsibility, staff training, and institutional collaboration. This framework secures animal welfare, optimizes reproduction, and supports reintroduction programs, making it a cornerstone of regional biodiversity conservation.

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Abstracts poster

Challenges in Breeding the "North" Lineage of Common Hamsters at Zoo Wrocław

Monika Górska[1]

[1] Zoo Wrocław

Three genetic lineages of the critically endangered European hamster (*Cricetus cricetus*) occur in Poland: Pannonia, E1, and North. The last known North lineage individuals survive near Jawor, without a secured reintroduction site. To prevent extinction, Zoo Wrocław began a conservation breeding program using hamsters captured in this area. The effort faces challenges from a small founder population and high relatedness, but initial breeding success has been achieved. These results provide hope for establishing a future reintroduction population and ensuring the survival of this unique genetic lineage.

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Successful reintroduction of common hamsters via assisted migration in "Langgöns Nord"

Julia Heinze[1], Valentina Baumtrog[1], Anna-Lena Zachert[1], Melanie Albert[1], Maie Kool[1], Marie Wittekind[1], Hannah Zerbe[1], Martin Wenisch[1] and Tobias Erik Reiners[1]

[1] AG Feldhamsterschutz - Hessische Gesellschaft für Ornithologie und Naturschutz e.V

As part of the "2. Hessian species protection plan" for the common hamster in Hesse (Germany), conservation authorities asked to develop an "reconnection concept", to restore the genetic exchange of the two hamster populations "Langgöns Süd" and "Pohlheim". As there are no short-term possibilities to reconnect both sites by preparing a corridor for expansion, we suggested to use the method of "assisted migration". The method contains breeding of wild hamsters of both sites ex-situ followed by a subsequent reinforcement in both populations with genetically refreshed descendants for at least 5 years. In 2021 the AG Feldhamsterschutz started the reconnection of these two hamster populations using "assisted migration". Therefore 12 hamsters, six from each population, were caught every year for breeding, first ones in spring 2021. Afterwards hamsters wild hamsters for breeding where caught each year in autumn. To maximize genetic mixture, only hamsters from different origins were mated in the breeding station. Hamsters, caught in September habituate before winter and have a much better body condition after hibernation in captivity than in the wild. Successfully mated hamsters get released into their origin population after breeding. Offspring hibernate in the breeding station and get released on specific reintroduction sites which are situated neighboring the donor populations.

First reintroduction started in June 2022, while releasing the first 12 hamsters in "Langgöns Nord" (3 males, 9 females). Until 2025 58 hamsters (23 males, 35 females) were released at all (mostly in may) and the population developed into the best hessian population with a burrow density of 3.16 burrows/hectar in summer 2025 after harvest. The hamsters crossed several streets and expanded in the whole population area of "Langgöns Nord".

In every year we used the following monitoring methods after releasing: telemetry, life-trapping, camera-traps, genetic monitoring and burrow mapping. As part of life-trapping on the reintroduction site, we individualized every new caught hamster with an RFID-transponder and determined the nutritional state of the individuals as well as the reproductive state, especially of the females. We detected females with three litters per year and also females which reproduced in the year of birth.

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Common Hamster in Rhineland-Palatinate, Germany – current status of distribution, conservation breeding and protective measures

Sylvia Idelberger[1], Janina Langner[1], Antonia Schraml[1] and Silvia Waldinger[1]

[1] Stiftung Natur und Umwelt Rheinland-Pfalz

Following the global trend, wild populations of the Common hamster in Rhineland-Palatinate have declined dramatically over the past decades. Once widespread across the Rhine-Hesse region, today only one significant population remains south of Mainz, the state capital of Rhineland-Palatinate. The decline of the Common hamster in Rhineland-Palatinate is well documented through monitoring efforts of different actors. Though several programs and projects addressing hamster-friendly habitat management have been in place for over 20 years, the overall negative trend could not be halted. Only by intensified habitat measures around the core population in Mainz, the population dynamics there seem to be stabilized for the moment. However, further actions are urgently needed to support the population, which is – besides a still low number of animals – suffering from a loss of genetic diversity.

To agree on future steps in hamster protection, a broadly coordinated strategy was developed in 2022/2023, outlining measures beyond habitat conservation. One of these measures is the capturing of wild hamsters from remaining relict populations to preserve the genetic diversity in a conservation breeding line. However, a Rhineland-Palatinate breeding station for reintroductions is necessary to support the last population by Mainz and allow restoration of populations, e.g. in other parts of the Rhine-Hesse region. For this, the implementation of the metapopulation concept for the Upper Rhine region is required, including southern Hesse and Baden-Württemberg, to account for regional diversity while preventing inbreeding within a future Rhineland-Palatinate breeding station.

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Conservation breeding of the Syrian hamster (*Mesocricetus auratus*) by the Federal Association for Small Mammals (Bundesarbeitsgruppe Kleinsäuger e. V.)

Björn Jordan[1]

[1] Federal Association for Small Mammals (Bundesarbeitsgruppe Kleinsäuger e.V.)

The Syrian golden hamster (*Mesocricetus auratus*) is widespread worldwide as a pet and laboratory animal, but the critically endangered wild form, which only occurs in a very small distribution area, is almost unknown. No conservation measures exist for the species within its range, and its threat status was upgraded to endangered in 2019. Syrian golden hamsters are currently not bred in any zoological institution worldwide. Reproduction in captivity takes place exclusively at the Federal Office for Small Mammals (BAG) with offspring of animals imported from Syria by the University of Halle in the 1990s. After initial failures in breeding management, breeding is now successful. 65-110 young are born annually. A challenge for conservation breeding is that not all hamster pairs harmonize and breed with each other; at least three pairs per breeder should be kept; golden hamsters only breed for two years; new pairs must be formed annually; and there are too few keepers.

Support in establishing an ex-situ population for the Romanian hamster (*Mesocricetus newtoni*) by the Federal Association for Small Mammals (Bundesarbeitsgruppe Kleinsäuger e.V.)

Björn Jordan[1]

[1] Federal Association for Small Mammals (Bundesarbeitsgruppe Kleinsäuger e.V.)

The Romanian hamster (*Mesocricetus newtoni*), found along the Romanian Black Sea coast and in Bulgaria, is virtually unknown. Current population figures are not available; in 1995, the population in Romania was estimated at 3,000 individuals, while in Bulgaria, the population has declined by up to 50%. No conservation measures exist in its range, and its threat status was upgraded to endangered in 2024. No animals are kept in zoos or private owners worldwide. A husbandry and breeding project began in 2022 at the Institute of Biodiversity and Ecosystem Research of the Bulgarian Academy of Sciences in Sofia. Initial breeding took place there in 2024. 24 young animals were raised, and some of them were released into the wild in 2025. The Federal Association for Small Mammals (BAG) supported the establishment of an ex-situ population by developing husbandry guidelines. In 2023, an excursion to Sofia took place, providing an intensive exchange of experiences on husbandry, breeding, and management, as well as an excursion to former habitats and the search for hamster burrows. The project is receiving financial and material support. A challenge for conservation breeding is that there are very few founder animals; only one male reproduced in 2024, and some of these offspring had to be released into the wild in 2025. The government-funded project ends in 2026, making it a challenge to maintain hamster breeding.

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**Environmental Impact Avoidance Measures for the Common Hamster:
The SuedLink-project as showcase for the integration of mitigation translocation, hamster-friendly cropping and conservation breeding**

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The Common hamster in the state of Lower Saxony, Germany, experienced a steady decline since the second half of the last century. One of the last continuous populations, and currently the westernmost within Lower Saxony, can be found in the region "Calenberger Börde" southwest of the city of Hannover. At its western margin, the range of this population is intersected along ca. 34 km by the SuedLink project. This project –realised by the two transmission grid operators TenneT TSO and TransnetBW – is a high voltage underground power transmission line that represents with ca. 700 km length a major backbone of the green energy transition in Germany, connecting areas of energy production in the North (mainly offshore wind parks) with the industrial and urban centres in the south. During construction, the temporary opening of the cable trench and accompanying construction work poses a severe threat for hamsters, both concerning loss of individuals as well as temporary loss of habitat.
To mitigate these potential impacts, and to comply with national and EU-law, adequate measures have to be implemented. The conventional practice as demanded by the pertinent guidelines would include capturing of individuals within future construction areas and translocation to adjacent hamster-friendly managed farmland not further away than 500 m from the original habitat. The latter is to ensure the continued ecological functionality ('CEF-measure') for the translocated individuals. From a conservational point of view, this approach is twofold disadvantageous: (1) it puts a high predatorial risk on individuals when these try to move back to their original habitat, and (2) leads to further isolation of individuals from the main population that are subsequently especially prone to predation due to long dispersal distances. Thus, although CEF-areas of common spatial design are in line with convention and legal requirements, these are unlikely to mitigate environmental impact but rather represent a detrimental population sink, fostering local extinction. Additionally, from the economic perspective, the enormous costs for the building of a hamster proof fence to prevent remigration of translocated individuals into the construction site would hardly be in any relation to the expected low effectiveness. Therefore, TenneT TSO and TransnetBW decided, in agreement with the relevant licencing authorities and local farmers, to translocate captured individuals to a central CEF-area in the vicinity of the village of Linderte. In fact, the recommended distance of

500 m between original habitat and CEF-area are based on assumed minimum dispersal distances and can be regarded only as sufficient to ensure spatial functionality, but not as strictly necessary. Compensatory areas must in fact be established within the area of the affected population as defined by genetic connectivity/existing gene flow This is the case within the „Calenberger Börde“ population, in absence of any dispersal barriers.

The CEF-area Linderte comprises a release area fenced against predators (ca. 3 ha) as well as several areas with alternating hamster-friendly cropping (‘spike cropping’) and protective strips (20–50 ha), and can build on an existing conservation program of ca. 6 ha for the local hamster subpopulation in the area. To further improve the functionality of the mitigation measure, the two transmission grid operators voluntarily set up a conservation breeding program in cooperation with the Zoo Hannover where the condition of captured individuals is improved before their release and breeding is attempted. Currently, the CEF-area in Linderte is already effective. So far, seven individuals have been captured on the future SuedLink-construction site in spring 2025 and have been transferred to the Zoo Hannover. Successful breeding resulted in an F1 generation of 16 individuals. The first batch of hamsters have been released to the CEF-area mid-August 2025.

This unconventional approach, driven by all stakeholders involved, not only complies with the legal requirements for environmental impact mitigation. By integrating translocation to a central conservation area within the population’s range and an associated conservation breeding program, it opens a singular opportunity for the sustainable conservation of Lower Saxony’s westernmost population of the Common hamster. It is envisioned as a nucleus for a projected wider conservational focus area of ca. 400 ha around Linderte, beyond the current operational period of 5 years related to the SuedLink-project.

32nd Meeting
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Abnormalities and curiosities of juvenile common hamsters in a breeding stock (2022–2025)

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In captive breeding programs of the common hamster (*Cricetus cricetus*), unusual physical traits in juveniles can occasionally be observed. Such findings are of interest for animal welfare, breeding management, and the evaluation of individuals for reintroduction. Juveniles born at the *Artenschutzzentrum Feldhamster Heidelberg* are briefly anesthetized for transponder-chipping and carefully inspected at the age of 7.5 weeks as part of routine breeding procedures. Abnormalities are noted in the breeding records and representative cases are documented with photographs. Between spring 2022 and summer 2025, 222 – 266 juveniles were born annually. The proportion of affected animals ranged between 0.40 and 1.80 % per year. Documented cases included malocclusion of the incisors, missing toes, limbs or feet, one case of limb bone deformity, and facial asymmetry which later resulted in malocclusion. Although the overall number of affected juveniles remained low compared to the total offspring, the presence of such anomalies highlights the importance of thorough inspection to support welfare, breeding quality, and reintroduction suitability.

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Reproductive success, mortality and activity of released male European hamsters

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Because of the steady decline of Common hamsters in Hessen, Common hamsters are being bred and reintroduced by the AG Feldhamsterschutz association in Langgöns. Since the mortality rate of male animals after reintroduction is significantly higher than that of femalses, this study focuses on recording the reproductive success, mortality and activity of male Common hamsters. For this purpose, ten male Hamsters were fitted with telemetry collars and released in two introduction sites in Langgöns and Pohlheim. Fife hamsters were released into each area. The Hamsters were tracked over a period of 17 weeks. Their activity patterns were recorded and information above their survival rates was collected. In addition, the hamsters were caught during four trapping periods, and their reproductive success was examined. The results showed that released Common hamsters use a habitat of similar size to that of wild hamsters. Furthermore, a high mortality rate was documented. After four months, no male hamsters could be detected. It was assumed that most of the Hamsters had died because of predation. However, cardiovascular failure and death by conspecifics were also identified as causes of death. On the other hand, no negative effect of the transmitter collars, or the weight of reintroduced hamsters on survival was observed. Despite of the high mortality rate, the hamsters were able to reproduce successfully. The results shows the importance of specific conditions for the survival of reintroduces Common hamsters and allow an evaluation of the efficiency of reintroduction projects.

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Establishment of a near-exhaustive bibliographic database on the Common Hamster (*Cricetus cricetus*)

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Since the early 19th century, the common hamster has been widely studied – first because of its status as an agricultural pest, and later in response to the marked decline of its populations across Europe. In the context of the French National Action Plan (2018-2028) for the common hamster, we compiled and organized all available information on this species throughout its distribution range and over time. This covers scientific literature as well as reports, press articles, posters, and other relevant materials, totaling 4135 references and 273 abstracts from previous Hamster Meetings. From these, 1080 references directly related to the common hamster were retained and categorized into major themes, such as species biology, habitat use, population dynamics, among others. All of this information is made accessible via the RESANA website, which serves as a central platform for the compiled documents. Access to the database requires a login account, which can be created and provided by the DREAL Grand Est.
To provide a synthetic and visual overview of these research themes, a mind map was made. It offers both a comprehensive perspective on existing knowledge and an opportunity to identify gaps for future studies. This mind map will be presented as a poster, allowing direct interaction with interested colleagues. The database is currently being developed in French but is intended to be translated into English, with the prospect of fostering broader accessibility and potential international collaboration.

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Diversity in the composition of staphylococci in the skin microbiota of the European hamster (*Cricetus cricetus*)

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Cricetus cricetus is classified by the International Union for Conservation of Nature (IUCN) as a species at critical risk (CR) both globally and in Europe. If current trends continue, the species may become extinct across Eurasia by 2038. The main threats are thought to be climate change and light pollution, which reduce the reproductive potential of the species, exacerbated by changes in crop structure towards cereal monocultures, limiting dietary diversity. The concept of "One Health" clearly highlights the link between the environment and animal health. It should be emphasized that skin-associated bacteria can be readily transferred between animals and their environment. Staphylococci represent a major component of the normal skin and mucosal microbiota in animals. Nevertheless, significant gaps remain in our knowledge of the skin microbiota of small mammals, particularly the European hamster.

Materials and methods

Samples were collected from the skin of European hamsters. In total, 22 individuals from Jaworzno were sampled. None of the hamsters showed clinical signs of any disease. The samples were taken by vigorously swabbing skin from auricle with a sterile cotton swab moistened with sterile physiological saline. Each skin swab sample was placed in brain-heart infusion broth (BHI) (Oxoid, United Kingdom) and incubated at 37 °C in ambient air for 24 hours. Then, 10µl of this culture was inoculated onto Mannitol Salt Agar (Oxoid, United Kingdom) and the plates were incubated for 24 hours. Morphologically distinguishable staphylococcal colonies were picked and transferred to BHI agar to obtain pure cultures. The preliminary identification of staphylococci was based on Gram staining and detection of catalase and coagulase production. Next, the bacteria were identified at the species level using matrix-assisted laser desorption ionization time-of-flight mass spectrometry (MALDI-TOF MS) (Bruker, USA).

Results

Staphylococci were detected on the skin of each hamster. In total, 41 strains were isolated and identified at the species level via MALDI-TOF MS. The diversity of *Staphylococcus* species in the hamster skin microbiota was relatively high. Ten different staphylococcal species were identified: *S. xylosus* (15/41), *S. equorum* (11/41), *S. sciuri* (3/41), *S. succinus* (3/41), *S. pettenkoferi* (2/41), *S. lentus* (2/41), *S. lutrae* (2/41), *S. warneri* (1/41), *S. chromogenes* (1/41) and *S. vitulinus* (1/41).

Conclusion

This study presents comprehensive information on staphylococcal species that inhabit the skin and form part of the normal microbiota in hamsters. The skin of healthy hamsters is predominantly colonized by *Staphylococcus xylosus* and *Staphylococcus equorum*.