ABSTRACTS

Small Cats Symposium

3rd – 6th of March 2026

ORGANISING COMMITTEE

Dr. Axel Moehrenschlager
Dr. Axel Moehrenschlager is Panthera's Director for the Small Cats Program and for Conservation Translocations.

His primary motivation is to work with others around the world to save small cats in harmony with local communities.

Axel is also Chair of the IUCN SSC Conservation Translocation Specialist Group, and Leadership Committee Member of the IUCN's Species Survival Commission. Dr. Moehrenschlager is a Research Associate at Oxford University where he received his Ph.D., multiple Erskine Fellow at New Zealand's University of Christchurch, Adjunct Associate Professor at Clemson University in the U.S.A., and Adjunct Professor at Canada's University of Calgary.

In Canada, he founded the Centre for Conservation Research and the Wilder Institute. In broader capacities, he serves on several funding and award committees such as the UK-based Conservation Collective and the St. Andrews Prize for the Environment

Dr. Wai-Ming Wong
Wai-Ming Wong, PhD, is a conservation biologist and Director of Small Cats Conservation Science at Panthera.

He is working across South and southeast Asia, Africa, and Latin America to advance research and field-based conservation for all 33 small wild cat species. He has authored numerous scientific papers on small cat ecology, population trends, and habitat use, contributing key insights for more than a dozen species.

Wai-Ming is an active member of the IUCN Cat Specialist Group and has participated in multiple wild cat Red and Green List assessments. His work integrates advanced wildlife monitoring with community partnerships to protect some of the world's most elusive felids.

Dr. Constanza Napolitano
Veterinary Doctor and PhD in Sciences from the University of Chile.

She completed a Morris Animal Foundation (US) Postdoctoral fellowship at the Institute of Ecology and Biodiversity (Chile). She was visiting researcher with international scholarships at the University of Sydney (Australia) and the University of British Columbia (Canada).

She has been principal investigator of more than 15 projects funded by Fondecyt-ANID (Chile) or international agencies. She has published more than 50 scientific articles in the fields of

conservation genetics and pathogen ecology, as well as outreach books. She has received 3 national awards (Chile).

Her research focuses on the effects of human landscape disturbance on small carnivores, especially wild felids. She is a member of the Guigna Working Group and the Andean Cat Alliance, where she coordinates the Global Andean Cat Genetics Program. She is currently an associate professor at Universidad de Los Lagos (Osorno, Chile), where she leads the Conservation Genetics Laboratory.

Prof. Colleen T. Downs
Prof Colleen T. Downs (BSc Hons, MEd, PhD, Pr Nat Sci) has been at the University of KwaZulu-Natal (UKZN) since mid-1994.

She is a Professor in the School of Life Sciences, now the Discipline of Biological Sciences, UKZN, Pietermaritzburg campus and is a University Fellow. Downs holds an NRF SARChI Research Chair in Ecosystem Health and Biodiversity in KwaZulu-Natal and the Eastern Cape.

She is a terrestrial vertebrate biologist with broad and interdisciplinary research interests. These include conservation, ecology, physiology and behaviour of terrestrial vertebrates (fish, herps, birds and mammals) in unpredictable environments and with changing land use.

Dr. Shomita Mukherjee
Shomita is currently employed at the Sálim Ali Centre for Ornithology and Natural History, South-India Centre of the Wildlife Institute of India, in the Conservation Biology Division as a Senior Principal Scientist.

Since the 1990's, she has been involved in multiple studies on several species of small cats in India exploring their diets, distributions and genetic aspects.

Her work explores the link between ecology, evolution and genetic variation in small cats and how such information could contribute towards their conservation. She is a member of the IUCN Cat Specialist Group and the Species Survival Commission.

Joleen Broadfield
Panthera's Small Cats Data Scientist. Originally from France, she has spent much of her professional career in South Africa, where she contributed to human–wildlife coexistence initiatives and managed a project examining the impacts of urbanization on caracal behaviour, diet, movement patterns, and genetic health in the Cape Peninsula.

After joining Panthera in 2017 to lead leopard camera trap monitoring surveys, she quickly expanded her role supporting the development of Panthera's in-house data system, strengthening the organization's growing data infrastructure.

In 2020, motivated by a strong interest in small felid conservation, Joleen joined Panthera's Small Cats Program. Collaborating across Panthera initiatives and with various external partners, she works with long-term datasets to better understand small cat distribution and patterns across landscapes more commonly studied through big cat research.

She has played a key supporting role in coordinating the first Virtual Small Cats Symposium, helping to bring the event together for the global small cat conservation community.

FUNDER

This event is made possible thanks to the generous support of The Ayers Wild Cat Conservation Trust.

PROGRAM

DAY 1 | TUESDAY, 03 MARCH 2026

Time Zone: Greenwich Mean Time (UTC +0)

Time	Session	Speaker(s)	Session Title
14:00	Welcome		Welcome
14:10	Panthera Intro	Axel Moehrenschlager	Connecting conservationists globally, to escalate science and action for small cats
14:30	Panthera Chair of Board	Jon Ayers	Welcome
14:40	Plenary	David Macdonald	Felid Landscapes: Shaping conservation policies for (almost invisible) small cats
15:30	Break		Break | 10-Minutes
15:40	Speed Talk	Muntasir Akash	Promoting Human-Fishing Cat Coexistence in the Lower Ganges Floodplains of Bangladesh
15:47	Speed Talk	Vanesa Bejarano Alegre	Small Cats, Big Differences in Habitat Selection and Road Sensitivity Across Brazilian Felids
15:54	Long Talk	Jacqueline Bishop	The Urban Caracal Project: Insights from a Decade of Research
16:11	Long Talk	Michaël Meeus	Genomic diversity and its relevance for the conservation of felids
16:28	Long Talk	Natalia Muñoz Cassolis	Trafficking in silence: The overlooked illegal trade of small felids in Colombia
16:45	Speed Talk	Santiago Turcatti Oviedo	Rock and Pampa - Uruguay Small Wild Cat Program: Advancing Small Wild Cat Conservation in the South American Pampa through Integrated Science and Community Action
16:52	Speed Talk	Ilaria Agostini	New insights and achievements in the conservation of the vulnerable population of guiña (*Leopardus guigna*) in Argentina
16:59	Speed Talk	Ehsan Moqanaki	Using expert knowledge to identify status, threats, research needs, and conservation actions for the Pallas's cat
17:06	Speed Talk	Chiara Correa	Mitigating Human-Small Wild Cat Conflict from the Cloud forest of Northwestern Ecuador: Early Results of the Community Pilot Project Felinos de Monte.
17:13	Speed Talk	Juan Camilo Cepeda Duque	The native and the invader: shared use of space and temporal segregation of clouded tiger-cats (*Leopardus pardinoides*) and domestic dogs (*Canis familiaris*) in an isolated protected area of the Central Andes of Colombia.
17:20	Break		Break | 5-Minutes

17:25	Panel Discussion 1	Moderator: Axel Moehrenschlager, Panthera Panelists: Celina Chien, Overstories Sean Mowbray, Freelance Journalist Sean Southey, Canadian Wildlife Federation	How do we escalate global awareness to help small cat conservation?
17:55	Closing remarks	Fred Launay	Panthera, President and CEO

DAY 2 | WEDNESDAY, 04 MARCH 2026

Time Zone: Greenwich Mean Time (UTC +0)

Time	Session	Speaker(s)	Session Title
15:00	Welcome		Welcome & Introduction
15:10	Keynote Address	Christine Breitenmoser-Würsten	Long-term strategic planning for the conservation of small cats
15:45	Speed Talk	Martina Küsters	Mapping an elusive species: Landscape ecology's role in defining black-footed cat (*Felis nigripes*) distribution in southern Africa
15:52	Speed Talk	Katarzyna Ruta	PICA (Pallas's cat International Conservation Alliance) - support project for Pallas's cat conservation globally and a gateway to protecting other small felids
15:59	Speed Talk	Felipe Bortolotto Peters	Between wildlands and backyards: spatiotemporal dynamics between Geoffroy's cat and domestic cats in fragmented landscapes
16:06	Speed Talk	Karma Choki	Anthropogenic and environmental correlates of spatial patterns of co-occurrence of small felids in a montane landscape
16:13	Speed Talk	José Daniel Ramírez-Fernández	Distribution and habitat use patterns of the endangered Central American clouded oncilla (*Leopardus pardinoides oncilla*) in Costa Rica.
16:20	Speed Talk	Nyasatu Mshangi Mkaka	Caracal (*Caracal caracal*) habitat preferences and interspecific interaction in Ruaha-Rungwa ecosystem Tanzania
16:27	Break		Break | 10-Minutes
16:37	Long Talk	Andrew Hearn	Are protected areas safeguarding the Flat-headed cat and other Bornean Felids? National-scale analysis from Brunei Darussalam.
16:54	Long Talk	Lieth Carrillo	Small Cats, Big Risk: Online Trade and Emerging Threats to Lesser-Known Felids
17:11	Long Talk	Tristan Dickerson	An under explored threat of trade and cultural use to Servals (*Leptailurus serval*) and the potential role of demand reduction initiatives in small cat conservation.
17:28	Long Talk	Rose Piccinini	Restoring Canada Lynx to the Kettle Mountain Range; A Transboundary Population Augmentation.

17:45	Long Talk	Vanessa Tavares Kanaan	From archaeological evidence to social readiness: an integrated One Conservation framework for small wild cat reintroduction on Santa Catarina Island, Brazil
18:02	Break		Break | 10-Minutes
18:12	Speed Talk	Roo Campbell	Assessing anticoagulant rodenticide exposure in the endangered European wildcat (*Felis silvestris*) and sympatric wildcat-domestic cat hybrids in Scotland
18:19	Speed Talk	Hal Brindley	The underground cat: burrow use by female black-footed cats (*Felis nigripes*) in Namibia
18:26	Speed Talk	Amaia Autor-Cortés	Preliminary insights into the movement, road ecology, and monitoring design for the Central American oncilla
18:33	Panel Discussion 2	Moderator: Axel Moehrenschlager, Panthera Panelists: Urs Breitenmoser, IUCN SSC Cat Specialist Group Liz Bennett, Wildlife Conservation Society Ronaldo Morato, Panthera	How should we engage governments to improve policies and actions that help small cats?
19:03	Close		Close

DAY 3 | THURSDAY, 05 MARCH 2026

Time Zone: Greenwich Mean Time (UTC +0)

Time	Session	Speaker(s)	Session Title
13:00	Welcome		Welcome & Introduction
13:10	Keynote Address	Meidina Fitriana	Wildcats at the Edge: Conserving threatened felids in human dominated landscapes in Sumatra
13:45	Speed Talk	Gabriella Leighton	Toxic towns: Drivers of anticoagulant rodenticide exposure in an urban edge carnivore
13:52	Speed Talk	Flávia Tirelli	Interspecific avoidance and fine-scale segregation in Neotropical small wild cat assemblages
13:59	Speed Talk	Cristiar Samosir	New Records of the Flat-headed Cat Distribution across Patchy Habitats in an Unprotected Bornean Corridor Area

14:06	Speed Talk	Sandra Lai	Disease and intraguild killing as mortality factors in black-footed cats across managed and unmanaged landscapes
14:13	Speed Talk	Mohammad Shamsuddoha	The 'Tiger' Myth and the Mob: A Content Analysis of Fear-Driven Persecution of the Fishing Cat (*Prionailurus viverrinus*) in Bangladesh
14:20	Speed Talk	Caroline Sartor	Projecting the future of the marbled cat in a changing landscape
14:27	Break		Break - 10min
14:37	Long Talk	Pablo Cisneros Araujo	Movement ecology reveals the drivers of successful Iberian lynx (*Lynx pardinus*) reintroductions
14:54	Long Talk	Suranjita Roy	Small felids Beyond Protected Area: Insights from the community forest of Seinthuk, Arunachal Pradesh, India
15:11	Long Talk	Ewan Macdonald	Where Protection Maters Most: Rethinking Protected Area Design for Small Cats in Borneo
15:28	Long Talk	Tabea Lanz	Small Cat Report - IUCN Red List Assessment chances and challenges for small cat species
15:45	Break		Break - 10min
15:55	Speed Talk	Mauro Lucherini	Conserving the Andean cat (*Leopardus jacobita*), the most threatened felid in the Americas
16:02	Speed Talk	Ganesh Puri	Transforming fishing cat and fish-farmers conflict into conservation
16:09	Speed Talk	Sujay Singh	A Tale of Two Cats: Temperature Driven Density Gradients of Canada Lynx and Bobcats Reveal Contrasting Responses to Climate Change at a Range Margin
16:16	Speed Talk	Catalina Sánchez-Lalinde	Conservation Actions for the Clouded Tiger-Cat (*Leopardus pardinoides*) in a biodiversity hotspot, in the Eastern Colombian Andes

16:23	Panel Discussion 3	Moderator: Axel Moehrenschlager, Panthera Panelists: Jo Cook, The Rufford Foundation Wai-Ming Wong, Panthera Nicolas Heard, Mohamed bin Zayed Species Conservation Fund	What do funders look for?
16:53	Close		Close

DAY 4 | FRIDAY, 06 MARCH 2026

Time Zone: Greenwich Mean Time (UTC +0)

Time	Session	Speaker(s)	Session Title
15:00	Welcome		Welcome & Introduction
15:10	Keynote Address	Tadeu De Oliveira	Integrating conservation-action and conservation-science for small cats' protection: the Tiger Cats Conservation Initiative model
15:45	Speed Talk	Aknabat Potaeva	Status and Conservation of Small Wild Cats in the Cold Winter Deserts of Turkmenistan
15:52	Speed Talk	Badri Baral	Known western range of Asiatic golden cat extended to Jajarkot, Nepal
15:59	Speed Talk	Bello Adamu Danmallam	Protected areas, forest structure and rainfall seasonality shape the continental distribution of the African golden cat
16:06	Speed Talk	Tyler Murray-Ramcharan	Ecological Baselines and Conservation Priorities for Trinidad's Isolated Ocelot Population
16:13	Speed Talk	Nicolás Gálvez	Zenith placement of camera traps to identify small wild cats: an empirical study with the Güiña (*Leopardus guigna*)
16:20	Break		Break - 10min
16:30	Long Talk	Michelle Schroeder	From Scent to Sequence: Harnessing Canine-Assisted Genetic Sampling to Bridge Knowledge Gaps in Black-Footed Cats (*Felis nigripes*)

16:47	Long Talk	Marina Ochoa Favarini	Wild cats of the Pampa Project: From Conflict to Coexistence
17:04	Long Talk	Laurie Bedouet & Anaïs Beaumariage	Through the lynx's lens: Genetic insights from the Eurasian lynx (*Lynx lynx*) in the Jura and Northern Alps of France.
17:21	Long Talk	Jason Holmberg	Whiskerbook: AI and Collaborative Data Management for Small Wild Cat Mark-Recapture
17:38	Break		Break - 10min
17:48	Speed Talk	Emily Madsen	Small cats in the 21st century: a review of the first quarter of a century in wild small felid research.
17:55	Speed Talk	Claudio Sillero	Servals on the Roof of Africa: Naturalistic observations of a high-altitude population
18:02	Speed Talk	Hugh Robinson	Use of dynamic N-occupancy models to track population trends of nontarget or unmarked species.
18:09	Panel Discussion 4	Moderator: Wai-Ming Wong, Panthera Panelists: Byron Weckworth, Mountain Lion Foundation Sara Williams, Panthera Andrew Hearn, WildCRU	From Detections to Density: Rethinking how we measure small cat recovery
18:44	Close		Close

CONTENTS

Abstracts are organised in alphabetical order according to the surname of the main author.

PLENARY SHORT BIBLIOGRAPHIES

Prof David Macdonald

David Macdonald CBE is Professor of Wildlife Conservation and the Founding Director of WildCRU

His Fellowship, held at Oxford University's Lady Margaret Hall since 1986, was the first in any university dedicated to research in Biological Conservation. David is both an accomplished leader in conservation science and research and one of the most prominent international figures in raising public awareness of the importance of biodiversity, populating biology through his films and books.

He is well known for his work on cats, including lions, tigers, leopards and especially clouded leopards, although his research has spanned published studies on moths to penguins. Within the WildCRU, his teams have built bridges with some of the most remote communities in Africa, Asia and South America, and have formed conservation partnerships which benefit both the people and the wildlife with which they coexist. David has supervised more than 160 successful Oxford doctoral students and he created the Recanati-Kaplan Centre's Postgraduate Diploma in International Wildlife Conservation Practice to train aspiring conservationists from less developed countries, receiving the Queen's Award for Higher Education in 2011.

David has a strong record of public service, having been on the Board of almost every major UK conservation body – WWF, FFI, ZSL (Vice President), WWT, RSPB, RSPCA (Vice President), the Wildlife Trusts (Vice President) and Chairman of Earthwatch.

David has published approximately 2000 peer-reviewed papers and book chapters. His research has become increasingly inter-disciplinary as the whole field of conservation has evolved. More recently his biological writings are enmeshed in issues of environmental policy, economics, ethics and research strategy.

Dr Christine Breitenmoser-Würsten

Christine is a wildlife biologist with long-term experience in carnivore ecology and conservation and specialised in conservation genetics

She is involved in long-term ecological field studies of Eurasian lynx in across Europe. She was a co-founder of the Swiss based non-profit foundation KORA – Carnivore Ecology and Wildlife Management that is commissioned by the Federal Government to monitor large carnivore populations.

In 2001, she has been appointed co-chair of the IUCN/SSC Cat Specialist Group, a world-wide network of cat experts surveying the conservation status of all felid species following the Assess-Plan-Act conservation cycle.

To improve efficiency and sustainability of conservation activities, Christine has been involved in strategic conservation planning on regional and national levels and has helped facilitating workshops in different cultures and languages. As lack of capacity is often identified as a constraint, capacity development has become an important part of her work.

She has been the editor of Cat News over the past 20 years and has helped many field biologists publish their first papers.

Meidina Fitriana

Meidina Fitriana is a young conservationist from Indonesia.

While working with SINTAS Indonesia Foundation, she led the monitoring project for wild cats in the Leuser Ecosystem in Sumatra, Indonesia. Because of her work, in 2024, she was featured in the National Geographic Arabia magazine as a young conservationist leader.

Currently, she is pursuing a master's degree at Washington State University in Pullman, Washington.

Her research focuses on analyzing the density of the Sumatran tiger and the Sunda clouded leopard, as well as the occupancy of the Asian golden cat.

Prof Tadeu G. de Oliveira

Tadeu G. de Oliveira is a Professor of the Wildlife Conservation and Ecology Lab. (LabCEVS), Maranhão State University (UEMA), researcher for Instituto Pró-Carnívoros, Pró-Vida Brasil, and member of the IUCN/SSC/Cat Specialist Group and Canid Specialist Group.

He is the founder and chair of the Tiger Cats Conservation Initiative (TCCI), which focuses on the conservation of nine small felids in the Americas. His interests include the ecology, conservation, and natural history of neotropical felids, carnivores, and endangered species.

He leads a long-term, multidisciplinary, continent-wide conservation program focusing on ecology, biogeography, natural history, and conservation of nine small felids of the tropical Americas ("Projeto Gatos do Mato – Brasil-Américas"/Project Wild Cats Brazil-Americas), which contributes to their conservation, status assessment, population monitoring, and understanding of their ecology.

PLENARY PRESENTATIONS

Integrating conservation-action and conservation-science for small cats' protection: the Tiger Cats Conservation Initiative model

Tadeu G de Oliveira[1,2]*, Leonardo Alcântara[1,2], Moisés Barp[1,2], Juan C. Cepeda-Duque[1,2], Raimundo V. Coelho[1,2], Reginaldo A. Cruz[1], Jorge L. S. Dantas[1], Douglas Dias[1], Lester A. Fox-Rosales[1,2], Micheli Luiz[1], Paulo H. D. Marinho[1], Rosane V. Marques[1], Fábio D. Mazim[1,2], Vitor E. C. Moura[1,2], Anna Luiza M. Oliveira[1,2], Anna Maria M. Oliveira[1,2], Emanuelle Pasa[1], Elienê Pontes-Araújo[1,3], Ana Carolina C. Ribeiro[1,2], Yan Rodrigues[1,2], Catalina Sanchez-Lalinde[1,2], Karen E. C. Santos[1,2], Mauricio C. Santos[1,2], Roberto Veloso[4], Paulo Wagner[1,4].

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[3]*Nucleo de Geoprocessamento, Universidade Estadual do Maranhão, Avenida Lourenço Vieira da Silva 1000, São Luis/MA, 65035-310, Brazil*

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As the human footprint grows, native habitats disappear, species populations decrease, and disease spread increases. Achieving species conservation has become increasingly difficult, as few isolated protected areas can sustain viable long-term populations. Minimizing the risk of extinction is a challenge, as is the simultaneous implementation of conservation science and conservation action. We present the Action & Vigilance strategy adopted by the Tiger Cats Conservation Initiative (TCCI) to protect nine species of small Neotropical felids. Our actions are built upon "Action" (conservation action to reduce threats) and "Vigilance" (monitoring population trends in key areas), grouped into eight targets, with the goal of minimizing disease transmission by domestic animals and monitoring trends of key populations of threatened tiger cats and small cat species continentally. We target local threats at each site (e.g., traffic, conflict mitigation, road-kills) and work on rehabilitating apprehended small cats for reintroduction. Conservation activities include environmental education, community work, training students, and human perceptions. The goal is to guarantee long-term (1,000 years) population-safe havens for all tiger-cat species. Our science for conservation approach has generated information that has helped set conservation strategies, status assessments nationally and globally, detection of critical diseases, and established movement patterns, habitat use, density estimates, and occupancy patterns previously unknown. Our joint effort helped present a new felid species, the clouded tiger-cat (*Leopardus pardinoides*), and showed that the multicolored jaguarundi (*Herpailurus yagouaroundi*) status is now Near Threatened, not Least Concern. The savanna tiger-cat (*Leopardus tigrinus*) does not use open savanna formations, restricting its area of occupancy with enormous home range sizes. We monitored the only known breeding population of the critically endangered Pampa-cat (*Leopardus munoai*), which is highly selective of habitat type. We believe that conservation programs must implement two components: actions to reduce threats and science to guide effective actions.

Long-term strategic planning for the conservation of small cats

Christine Breitenmoser-Würsten
IUCN SSC Cat Specialist Group, c/o KORA, Talgut Zentrum, 3063 Ittigen, Switzerland

Species conservation is a continuous struggle to improve understanding, identify conservation needs, mitigate threats, and monitor effectiveness of interventions. The IUCN SSC is proposing to do this based on the "APA Cycle": Assess – Plan – Act. The conservation status of species is reviewed through the IUCN Red List of Threatened Species™ assessments, supplemented by the Green Status of Species and Climate Change Vulnerability assessments. The combined assessments are used to develop range-wide conservation strategies according to the IUCN Guidelines for Species Conservation Planning, which are then implemented through National Action Plans and conservation projects in cooperation with governments and a wide array of partners. Monitoring associated with the implementation of the projects then contributes to improving the assessment and updating the strategies… The APA Cycle provides an easy-to-understand concept for species conservation and facilitates the communication between different partners across the distribution range of cats, e.g. Conventions, governments, scientific institutions, NGOs, and local communities. The APA approach is well established for large cats, but less so for the smaller species. Besides the fact that small cats receive less attention than the larger species from governments and the conservation community, there is a number of shortcomings with the assessment and planning for small cats: (1) small cat projects are often short-term and small-scale, hampering large-scale monitoring and continuous assessment; (2) although there is an increasing number of scientific publications on small cats, these spotlight views are rarely part of an over-arching programme, and sharing knowledge and integrating it into a holistic approach remains a challenge; (3) cat conservation, also for small species, requires international cooperation, but governments and international NGOs are hardly interested in transboundary conservation plans for small cat species. We make a number of recommendations on how to improve the strategic cooperation in small cat conservation.

Wildcats at the edge: Conserving threatened felids in human dominated landscapes in Sumatra

Meidina Fitriana[1,2], Haryo Tabah Wibisono[2]
[1] *School of the Environment, Washington State University, Pullman, Washington 99164, USA*
[2]*SINTAS Indonesia Foundation, Jalan Arimbi 1, No 7, Perumahan Indraprasta, Bantarjati, Bogor Utara 16151, Indonesia*

Sumatra has one of the largest rainforests in Indonesia and has an extensive network of protected areas for wild felids. Within this landscape, the Leuser Ecosystem stands out as the only place on Earth where four endemic and endangered species coexist, including the tiger, elephant, orangutan, and rhino. Across both protected and human-dominated landscapes, this habitat also supports a remarkable diversity of wild cats. Through the implementation of camera trapping surveys and forest patrol in two protected forest areas, the project successfully documented five sympatric felid species: the Sumatran tiger (*Panthera tigris sumatrae*), Sunda clouded leopard (*Neofelis diardi*), Asian golden cat (*Catopuma temminckii*), marbled cat (*Pardofelis marmorata*), and leopard cat (*Prionailurus bengalensis*). A total of 300

paired Panthera camera traps were deployed across approximately 400,000 hectares of protected forests, generating baseline data on wildcat density, occupancy, and habitat use for these elusive species. This project represents the first integrated, multi-species wild cat assessment conducted in the protection forest surrounding the Gunung Leuser National Park. In addition to data collection, this work involved close collaboration with local rangers, forest management units, and conservation partners to coordinate field logistics, strengthen SMART patrols, and document threats such as encroachment, poaching, prey depletion, and habitat loss.

Felid landscapes: Shaping conservation policies for (almost invisible) small cats

David Macdonald
Wildlife Conservation Research Unit, Department of Biology, University of Oxford, Oxford, UK

Studies of diverse small cats, and frameworks developed from research on wildcats and their domestic cousins, suggest a paradigm for tackling both the biology and conservation of small cats. This prompts the question of which species to study, and leads to an account of twenty years of work on clouded leopards and the felid guilds of which they are a part: a journey from roundedness to geopolitics.

ORAL PRESENTATIONS

Known western range of Asiatic golden cat extended to Jajarkot, Nepal

Badri Baral[1,2]*, Gobinda Bahadur Singh[3], Dipak Raj Basnet[1], Jeevan Rai[1], Ramesh Kathariya[4]
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The Asiatic golden cat, *Catopuma temminckii,* has never been recorded west of the Gaurishanker Conservation Area. Here, we present novel camera trap evidence of an Asiatic golden cat in the Barekot Rural Municipality of Jajarkot, Nepal, in a temperate mixed deciduous forest with bamboo understory. Out of 59,228 photographs taken over 1,027 trap days between 29 May 2024 and 13 October 2024, a single photograph of the cat was obtained in the national forest. This record indicates that its known westernmost global range occurs in Nepal and provides a distribution update for the species, opening up a new avenue for felid conservation and research in Nepal.

Through the lynx's lens: Genetic insights from the Eurasian lynx (*Lynx lynx*) in the Jura and Northern Alps of France

Anaïs Beaumariage[1], Laurie Bedouet[2], Jonathan Drugmand[1], Edeline Beine[1], Adrien André[1], Rebecca Burlaud[3], Juliette Caillé[2], Michael Coeurdassier[2], Marine Drouilly[3,4], Eve Afonso[2], Johan Michaux[1]
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After its extinction in France in the early 20th century, the Eurasian lynx (*Lynx lynx*) was reintroduced in the Swiss Jura in the 1970s from a small number of Carpathian founders and later recolonised the French Jura and the Northern Alps through natural dispersal. Despite this recovery, this population remains small, isolated and threatened, making updated genetic information essential for conservation. Here, we present an up-to-date and fine-scale assessment of its genetic diversity, structure and gene flow, using 227 non-invasive lynx scat samples collected between 2019 and 2025 through a citizen science network. Our analyses combined samples previously used within a PhD framework with newly genotyped scats, providing an expanded dataset for robust interpretation. Based on mitochondrial DNA and two sets of microsatellite markers, our results revealed a complex genetic pattern. While genetic structuring suggests ongoing gene flow across the study area, and genetic diversity (allelic richness = 3.18, Ho = 0.38, He = 0.42) aligns with levels observed in other reintroduced

Eurasian lynx populations, the absence of mitochondrial diversity, a positive inbreeding coefficient (FIS = 0.19, 95% CI: 0.14-0.26), and the population's geographic isolation, collectively point to a persistent founder effect. These findings support recent scientific recommendations, informed by extensive modelling, that call for genetic reinforcement. Such an intervention should be combined with efforts to improve habitat connectivity, reduce human-induced mortality, strengthen transboundary cooperation, and enhance social acceptance, to prevent further genetic erosion and ensure the species' long-term conservation.

The Urban Caracal Project: Insights from a decade of research

Jacqueline M. Bishop[1], Gabriella R. M. Leighton[1], Laurel E. K. Serieys[1,2]
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As natural habitat is increasingly transformed, effective wildlife conservation relies on understanding the traits that allow species to persist outside of protected areas. Urbanization critically alters wildlife habitat and resource distribution, shifting species diets, altering predator-prey dynamics, disrupting ecological connectivity, and ultimately driving biodiversity loss in ecosystems where only some species can thrive. As highly adaptable mesocarnivores, caracals (*Caracal caracal*) provide a valuable opportunity to examine the development of successful ecological strategies in human-modified habitats. Through the Urban Caracal Project, a decade-long research initiative in the Cape Peninsula, South Africa, our research reveals that while caracals exhibit notable adaptability to urban environments, they face significant threats. Using a multi-disciplinary approach, the project has informed biodiversity management strategies and policy recommendations, while highlighting the importance of public engagement in urban wildlife research. Key findings from our research include the remarkable behavioural flexibility of caracal, habituating to human presence and hunting in urban-adjacent areas for abundant prey, resultant ecological shifts in their trophic footprint, the substantial risk of exposure they experience to common household rat poisons, pollutant chemicals and metal compounds, and the significant barrier to movement that Cape Town's urban expansion presents, leading to reduced genome-wide diversity and higher levels of inbreeding relative to surrounding regions. Citizen science and outreach have been vital to the project's success, enabling essential data collection on vehicle mortalities and disease exposure, while fostering community awareness that enables the project to operate on a scale not possible with professional scientists alone. As the last remaining large predator on the Cape Peninsula, a global biodiversity hotspot, the population serves as a vital indicator of overall ecosystem health. By successfully creating a network of scientists, communities, welfare organizations and conservation agencies, the project fosters collaboration and a shared sense of responsibility for broader urban biodiversity.

The underground cat: burrow use by female black-footed cats (*Felis nigripes*) in Namibia

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The black-footed cat (*Felis nigripes*) is Africa's smallest and rarest cat. Classified as Vulnerable and endemic to the semi-arid regions of Southern Africa, this nocturnal carnivore seeks refuge from extreme temperatures and predators by sheltering inside burrows by day. However, black-footed cats do not dig their own burrows. Instead, they rely upon the digging efforts of other mammal species. The black-footed cat is more dependent upon burrows than any other felid, yet their den usage has never been described. Our goal was to determine which burrowing species the black-footed cat depends on for its survival in southern Namibia and to describe temporal and spatial den usage patterns. Using LiDAR, we scanned the entrances of 50 dens used by five radio-collared female black-footed cats over four weeks to measure tunnel width (M = 15.2 ± 3.9 cm) and height (M = 13.9 ± 3.6 cm). Of these, 98% fell within the size range of springhare (*Pedetes capensis*) burrows. The cats each used a mean 11.6 unique dens and spent a mean 2.2 consecutive days in a den before selecting a new one. Days-per-den shifted dramatically for mothers when their kittens reached 44 – 50 days, switching from a mean of six days-per-den, to changing dens every day. Our results show that black-footed cats are highly reliant upon springhares to provide daytime refugia and maternity dens in southern Namibia. Localized persecution and eradication of springhares on commercial livestock farms may severely limit the reproductive capacity of black-footed cats when suitable replacement burrows are unavailable.

Small cats, big risk: Online trade and emerging threats to lesser-known felids

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Small wild cats are present in the online wildlife trade, yet they remain systematically under-detected and under-prioritized compared to larger felids due to conservation prioritizations, trade regulations, and domestic protections in range states. Drawing on global open-source intelligence collected through the ECOSOLVE Global Monitoring System, this presentation provides an overview of how small wild cat trade manifests online, where it is most frequently observed, and why it presents a growing conservation and enforcement concern. Our monitoring data indicate that the online small wild cat trade is concentrated primarily on mainstream social media and messaging platforms, with most detections involving parts and derivative products and a smaller but persistent share of live animals offered for the pet trade. Records are dominated by repeat advertisements, indicating sustained seller activity rather than isolated incidents. Sellers commonly rely on minimal text, imagery, and claims of legality or captive origin, complicating detection through keyword-based approaches. From a conservation perspective, this pattern suggests cumulative pressure on small wild cat populations with low densities and fragmented ranges, while pet trade listings contribute to the normalization of ownership and ongoing demand. From an enforcement perspective,

repeated online detections provide early insight into seller behavior and potential trade networks, which may support physical seizures.

Movement ecology reveals the drivers of successful Iberian lynx (*Lynx pardinus*) reintroductions

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Once considered the most endangered felid, the Iberian lynx (*Lynx pardinus*) has undergone a remarkable recovery driven by coordinated conservation and management actions, including an extensive captive breeding and reintroduction programme. This long-term effort has generated an unprecedented amount of movement data, providing a unique opportunity to assess reintroduction success and to identify the behavioral and environmental factors that shape post-release adaptation, thereby improving future reintroductions, habitat management, and landscape connectivity for the species' long-term persistence. We analyzed movement data from >170 lynxes monitored across several native and reintroduced populations. By examining individual space-use patterns, we evaluated how origin, release strategy, and movement phases influenced settlement and habitat selection. Additionally, we used high-resolution LiDAR and global positioning systems (GPS) data from a recently reintroduced population to explore habitat preferences at an unprecedented spatial and temporal scale. Overall, reintroduction efforts proved highly successful, with most translocated individuals establishing stable home ranges. Captive-born lynxes rapidly converged towards space-use patterns similar to those of wild individuals once they gained free-ranging experience, although their initial movements tended to be more cautious. Longer acclimation periods in soft-release enclosures were consistently associated with higher settlement success, highlighting the importance of pre-release management. Habitat selection was strongly context-dependent: while natural vegetation mosaics were generally preferred, responses to human infrastructure varied according to the movement phase,

revealing substantial behavioral flexibility. At finer scales, lynxes selected structurally complex habitats, favoring denser vegetation for resting while preferring more open habitats during movement. These analyses also enabled habitat suitability and resistance mapping across the Iberian Peninsula, supporting connectivity planning and future reintroductions. Our results demonstrate how post-release monitoring not only allows assessment of short-term adaptation to the new area, but, more importantly, provides critical knowledge to refine reintroduction strategies and improve the long-term success of recovery programmes for the Iberian lynx and other threatened small felids.

An underexplored threat of trade and cultural use to servals (*Leptailurus serval*) and the potential role of demand reduction initiatives in small cat conservation

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The use of felid products, including skins and other derivatives, has long been intertwined with diverse culturo-religious practices throughout Africa. As these practices expand, they risk undermining the persistence of vulnerable populations through sustained and often unregulated offtake. Evidence of illegal hunting and wildlife trafficking underscores the need to better understand the drivers, extent, and impacts of consumptive use, including for traditional healing and ceremonial attire. Here, we present evidence of cultural use as a largely under-reported anthropogenic threat to serval (*Leptailurus serval*) populations across Africa. Additionally, we review the application of culturally sensitive, demand-reduction approaches as a conservation tool. Data were compiled from peer-reviewed literature, questionnaire surveys with product users and traders in southern and West Africa, and direct observations of skin use during selected cultural and religious ceremonies in South Africa and Zambia. Results demonstrate that serval skins are widely used in ceremonial regalia, 68% of Ngoni dancers wear serval skins, and in umuthi/traditional medicine (zootherapy), with demand occurring across at least 34 of the 35 range African countries and cultural contexts. In addition to having their own cultural significance, serval products are also used as substitutes for larger spotted felids, including where those species are reserved for leadership, have declined, become less accessible or are unaffordable. This analysis highlights the scale and potential significance of impacts on smaller spotted species such as serval, and the need for further research. Finally, it underscores the potential value of collaborative initiatives incorporating synthetic substitutes and behaviour-change campaigns as viable tools that can help address the complex intersection of culturo-religious traditions, livelihoods, and species conservation.

Are protected areas safeguarding the flat-headed cat and other Bornean felids? National-scale analysis from Brunei Darussalam

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Understanding the ecology and distribution of small felids is critical for effective conservation planning, particularly where protected area networks may not adequately capture species-specific habitat requirements. We present results from the first nationwide, multi-species assessment of wild cat distributions in Brunei Darussalam, based on 31,700 camera-trap nights across 321 stations in 12 forest areas, designed in part to evaluate how well existing protected areas align with predicted distributions of threatened Bornean felids. All five Borneo's wild cats were detected, but flat-headed cats (*Prionailurus planiceps*) exhibited relatively high detection and naïve occupancy rates compared with most previous field studies, suggesting Brunei may represent an important stronghold for this Endangered species. Ensemble habitat suitability modelling revealed strong ecological partitioning among sympatric felids. Flat-headed cats were closely associated with low-lying peat swamp and freshwater swamp forests, with large areas of suitable habitat predicted across Brunei's swampy lowlands. In contrast, marbled cats (*Pardofelis marmorata*) and Sunda clouded leopards (*Neofelis diardi*) were linked to interior and upland forests, while Sunda leopard cats showed higher suitability in fragmented lowland and peri-urban landscapes. Despite extensive national forest cover, only a small proportion of high-suitability flat-headed cat habitat (approximately 2%) was predicted to fall within protected areas, indicating that nationally important habitat for this species is poorly represented by existing conservation zoning. Other sympatric felids showed substantially higher representation within protected forests, highlighting a systematic bias toward upland and interior habitats in conservation planning. Building on these findings, we describe ongoing targeted field surveys in model-identified priority areas lacking prior survey effort, including the peri-urban Muara landscape, where lowland wetlands intersect with infrastructure development. Collectively, this work provides a spatially explicit evidence base to guide protected area refinement, prioritisation of lowland wetlands, and mitigation planning in development-affected landscapes.

Whiskerbook: AI and collaborative data management for small wild cat mark-recapture

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Small wild cat species are understudied globally. The corresponding dearth of data also translates into limited representation in AI training data and limited potential impact of AI to accelerate population research. To address these challenges, we developed a multi-stage, multi-species computer vision pipeline within the Wildbook platform (Whiskerbook.org) to support scalable mark–recapture analyses for small felids. The pipeline integrates three core AI components: (1) the Megadetector model for automated detection of small wild cats in camera trap images (e.g., drawing bounding boxes), (2) a multi-species viewpoint classifier that predicts animal orientation (left, right, front, back, top, bottom) to improve downstream

filtering and re-identification performance, and (3) MiewID v4, a deep learning–based individual re-identification (re-ID) model trained on data from 90 marine and terrestrial species, including multiple Felidae and representations of flank and facial patterning. Because each AI model in the pipeline was trained across many species, the system demonstrates strong cross-species generalization, enabling "zero-shot" application to species with limited or no prior training data. This capability has enabled rapid expansion of AI support to 25 small wild cat species within Whiskerbook. For many species, individuals are likely distinguishable using MiewID v4 and/or HotSpotter (two algorithms offering distinct yet complementary re-ID predictions), while for others individual identifiability remains uncertain yet could be distinctly evaluated with these tools. The community-driven, multi-species AI framework of Whiskerbook.org, combined with its strong data and collaborative security models, lowers technical barriers to small wild cat research and enables standardized, reproducible population analyses across geographically and taxonomically diverse datasets. As data contributions grow, AI model performance is expected to improve, creating an ever-improving and scalable pathway for long-term monitoring and conservation of small wild felids.

Small Cat Report – IUCN Red List Assessment chances and challenges for small cat species

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The IUCN Red List of Threatened Species™ represents a globally recognized, scientifically rigorous tool for assessing extinction risk by applying five quantitative criteria. The IUCN SSC Cat Specialist Group is mandated to continuously monitor and assess all wild felids. The IUCN Red List assessments (RLA) for cats face significant challenges, especially the ones for small cat species. Small wild cats receive substantially less scientific and conservation attention than large felids, despite comprising a major proportion of global felid diversity. We reviewed the conservation assessments of 27 non-Pantherinae cat species in the Small Cat Report to evaluate the robustness, consistency, and evidentiary basis of their RLAs. Results demonstrate substantial variation in knowledge among species. While some species benefit from relatively robust data on distribution, population, and threats, many lack global population estimates and/or range-wide density data. The report identifies information gaps on population size, trends, habitat use, and threats, limiting the reliability and comparability of RLAs. Assessments often rely heavily on expert knowledge and assumptions rather than empirical evidence, with species frequently classified under criteria allowing greater data uncertainty. Additional challenges include scale mismatches between global and regional/national conservation needs, inconsistent application of assessment guidelines, IUCN Criteria and data uncertainty, misinterpretation of categories influencing funding allocation, and the "conservation success paradox" where downlisting may trigger reduced

attention despite ongoing conservation dependence. Despite these limitations, the Red List remains one of the most influential tools for conservation, informing policy, legislation, and international conventions. The strengthening of species-specific networks and stronger integration between assessment processes and conservation planning are critical for effective small cat conservation, as well as improving data sharing, maintaining long-term support for conservation-dependent species, ensuring adequate funding and capacity, and prioritising targeted research to support future reassessments and conservation planning for small cat species worldwide.

Where protection matters most: Rethinking Protected Area design for small cats in Borneo

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Protected areas remain central to the conservation of small cat species, yet their placement and spatial configuration are often shaped by political and economic expediency rather than ecological need. As a result, existing networks frequently underperform in landscapes experiencing rapid development. Using the Sunda clouded leopard (*Neofelis diardi*) on Borneo as a focal species, we present two conceptually linked simulation-based thought experiments that evaluate how alternative conservation planning paradigms influence population viability and genetic integrity. Our first objective was to compare the conservation effectiveness of "expedient" protected area design—prioritizing low-threat, remote regions—with "proactive" design that targets high priority areas at high risk of conversion. We then assessed how different spatial configurations of protected land influence outcomes by contrasting core-area–focused designs with corridor-based approaches across a range of dispersal abilities. We modelled multiple counterfactual landscapes for Borneo using spatially explicit population and genetic simulations, benchmarking outcomes against published projections of habitat loss. Across scenarios, expedient reserve placement offered little improvement over business-as-usual outcomes. In contrast, proactive protection of high-risk areas consistently delivered substantially larger populations and higher genetic diversity. Further, habitat area emerged as the dominant driver of conservation success: landscapes protecting larger, contiguous core areas outperformed corridor-heavy designs, with corridors providing measurable benefits only under high dispersal assumptions. Together, these results underscore that where and how protected areas are established matter as much as how much is protected. Although theoretical, our findings have tangible conservation implications: they support prioritizing the expansion and safeguarding of large core habitats in threatened lowland forests, guiding limited conservation resources toward strategies most likely to secure long-term persistence of small cats and the broader biodiversity they represent.

Connecting conservationists globally, to escalate science and action for small cats

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Around the world 33 species of Small Cats, and maybe more depending on classification, range across five continents from oceans to mountains, wetlands to grasslands, and deserts to jungles. Each species is unique in its own way, with characteristics and behaviours that are well adapted to flourish in, and are essential for the health of, crucial ecosystems. They are also an integral part of cultural or spiritual connections for many societies around the world. While some small cat species have adapted to modified landscapes, others are faced with cumulative impacts from threats such as habitat loss, retaliation, poaching, illegal trade, disease, and hybridization. Small cats not only make up over 80% of all wild cat species; they also make up over two thirds of those wild cats that are threatened with extinction. Despite the conservation need, many species are declining further, and conservation interventions in policy and practice are insufficient. Fundamental questions to help tackle these challenges are: 1) What do we need to understand in terms of population status and threats?; How do we tackle such threats effectively?; and How can threat-mitigation actions best be scaled to benefit range-wide species protection or recovery? Many dedicated, innovative, and courageous conservationists around the world are making progress on these fronts. Panthera seeks to enable, empower, and partner with others to make an even greater difference. The time has come to share lessons, encourage each other, build new partnerships, and support each other to make even greater gains for small cats that need our help. With presentations on global issues as well as project sites on 29 small cat species in 27 countries, co-authors from 31 countries, and registrants from 53 countries, the first virtual Small Cat Symposium will do exactly that.

Caracal (*Caracal caracal*) habitat preferences and interspecific interaction in Ruaha-Rungwa ecosystem, Tanzania

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Caracals (*Caracal caracal*) remain poorly studied across much of sub-saharan Africa, particularly regarding their habitat preferences and interactions with larger carnivores. We used occupancy modelling of camera trap data from four sites within the Ruaha-Rungwa ecosystem of south-central Tanzania to evaluate patterns of caracal site use and detection, with particular emphasis on the influence of larger carnivores and habitat structures. Our findings revealed that caracal detection was higher if cameras were placed on roads rather than trails, suggesting that caracals may preferentially use roads as travel routes or that roads increase detectability in camera-trap surveys. Detection was negatively associated with spotted hyaena (*Crocuta crocuta*) presence, indicating potential behavioural avoidance of

dominant carnivores. Caracals were somewhat more likely to use sites closer to villages and those with more open vegetation, but these relationships were not significant, suggesting tolerance to moderate human influence and a possible preference for habitats that facilitate hunting. These relationships may be clarified by conducting further studies with a larger sample or with more precise environmental factors. Overall, our findings emphasise the importance of considering roads when designing camera trap studies for both large and small-medium-sized carnivores habitat use in savanna and miombo woodland ecosystems.

Genomic diversity and its relevance for the conservation of felids

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In an era where anthropogenic activity is rapidly inducing a decline of many taxa, it is paramount to understand what species are most at risk so that conservation strategies may be effectively developed and deployed. Traditional assessments tend to focus on the species' extent of occurrence and census sizes, while a standardized approach to integrate the genetic component is lacking. Felidae are no exception to this rule, as most studies that investigate genetic diversity in this taxon are limited in the number of species included or rely on the data of several different studies to make large-scale comparisons across the family. We used pre-existing whole-genome sequencing data of nearly all extant felids and a single bioinformatic pipeline to obtain a family-level assessment of heterozygosity within Felidae, allowing for accurate and direct comparisons of genomic diversity. We further explored the relationship between this genetic diversity and key ecological traits of the various species, as well as their most recent Red List status. We found that genetic diversity was significantly correlated with population density and geographic range size, as well as IUCN status, with threatened species exhibiting significantly lower levels of genetic diversity. Overall, our study underlines the importance of genetic diversity in conservation, not just as a criterion in its own right, but a potential tool to identify threatened populations. It further touches upon a long-standing bias towards researching larger species, while our understanding of their smaller and lesser-known relatives lags behind.

Trafficking in silence: The overlooked illegal trade of small felids in Colombia

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Illegal wildlife trade is a significant driver of global biodiversity loss, supplying national and international markets with animals and their derivatives for food, medicine, luxury items, and pets. Studies on felid trade have predominantly focused on big cat species (Pantherinae), particularly their demand in traditional medicine and luxury markets in Asia. In contrast, the trade in smaller felid species, especially for the pet market, has been largely overlooked. Colombia, home to six of the 17 felid species in Latin America, is particularly affected by limited research on felid populations and their threats. This study addresses this gap by exploring data on felid seizures, confiscations, and voluntary surrenders (individuals relinquishing wildlife possession) in Colombia from 2015 to 2021. Data were obtained through public information requests and analysed using descriptive, spatial, and temporal statistical methods. We recorded 643 law enforcement events involving 708 felid individuals from native and exotic species. Law enforcement events increased significantly over time, with an average annual growth rate of 6.93% ($\beta = 0.067$). Most events involved live felids, accounting for 80.1% of the cases (n = 643), with a particular predominance of small felids. Ocelots (*Leopardus pardalis*) represented 56.7% (n = 708) of individuals, followed by oncillas (*Leopardus tigrinus*) (12.6%). Voluntary surrenders were the predominant law enforcement type, accounting for 391 cases (60.1 %, n = 643) and significantly exceeding seizures and confiscations. These findings raise concerns about the legal standing of voluntary surrenders and their potential as a loophole for small felid trafficking. They also highlight a critical underestimation of small felid use and trade in Colombia, and possibly the region, emphasizing the urgent need for increased small felid trade research.

Wild cats of the Pampa Project: From conflict to coexistence

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The Pampa biome has experienced increasing anthropogenic pressure associated with agricultural intensification and the expansion of road/industrial infrastructure. Misinformation contributes to the invisibility of wild felids in the face of threats such as habitat fragmentation, roadkill, hunting, and pathogen transmission. Created in 2021, the Wild Cats of the Pampa Project aims to mitigate these threats by promoting harmonious coexistence between humans and the seven felid species occurring in the region: Geoffroy's

cat, margay, jaguarundi, Muñoa's pampas cat, southern tiger cat, ocelot, and puma. In this study, we present results obtained between 2023 and 2025, during which institutional partnerships (e.g., Panthera Brazil) provided support for the implementation of concrete conservation practices. We addressed misinformation by conducting 72 educational actions, reaching 7,861 people across 26 communities, in addition to 29 appearances on television programs and the production of 22 educational/promotional materials. To mitigate roadkill, we installed 12 road signs, built one wildlife crossing with 1 km of fencing, implemented five speed reducers, mapped 150 km of federal highways to assess the feasibility of new wildlife crossings, and established a collaborative database with 178 roadkill records derived from citizen science. To reduce conflicts with poultry farmers, we intervened in 36 chicken coops, discouraging retaliatory killing and certifying producers as members of the "Felid–Human Coexistence Network". Under a One Health approach, we vaccinated, neutered, or facilitated the adoption of 1,051 dogs and cats. Finally, the project addressed habitat fragmentation by using wild felid monitoring as ecological indicators in six energy-generation projects and 12 rural properties certified by the Alianza del Pastizal initiative. These results demonstrate that the Wild Cats of the Pampa Project constitutes an effective applied conservation strategy, generating measurable impacts on threat mitigation, social engagement, and the conservation of wild felids in the Pampa biome.

Restoring Canada lynx to the Kettle Mountain Range: A transboundary population augmentation

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The Confederated Tribes of the Colville Reservation (CTCR), along with international partners in Canada, have implemented a five-year project to return Canada lynx (*Lynx canadensis*) to the Kettle Mountain Range of Northeast Washington State, USA. Lynx are currently listed as Threatened under the Federal Endangered Species Act, and Endangered across Washington State. Lynx also represent a culturally important species to the CTCR but were regionally extirpated in the 1980's due to likely over-harvest by fur trappers, thus contributing to a disruption of ecological dynamics in this high mountain ecosystem. Tribal biologists working with trappers and the local Canadian government live trapped and collared 46 Canada lynx between 2021 and 2025 and released them onto tribal lands in Washington State. Upon release, an extensive ongoing monitoring effort was initiated using data collected from global positioning system (GPS) collars to record habitat use, daily and seasonal movement, home range establishment, breeding success and mortality. Monitoring breeding success was of particular importance, and in June 2025, the CTCR successfully documented the first litters of live lynx kittens in over forty years in the Kettle Mountains of Washington, suggesting preliminary signs of translocation success. It is the hope that by continuing to monitor the lynx and their offspring we will be able to determine if and when a self-sustaining population of lynx has returned to the Kettle Mountain Range. It is our goal that information from the CTCR's efforts will enable decision makers to plan for future conservation of Washington and other transboundary lynx populations, thus facilitating eventual increases in both distribution

and occurrence of this iconic small-cat species from the North Cascades to the Rockies and British Columbia, Canada.

Distribution and habitat use patterns of the endangered Central American clouded oncilla (*Leopardus pardinoides oncilla*) in Costa Rica

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Montane cloud forests are highly threatened ecosystems that are vulnerable to climate change. These complex habitats harbor many species that suffer the negative consequences of this global phenomenon, such as shifts in their distribution and habitat use. The Central American clouded oncilla (*Leopardus pardinoides oncilla*) is the smallest and most endangered wild cat in Mesoamerica and is primarily reported in cloud forests throughout its distribution. The species is poorly understood, with no studies conducted in Central America assessing its habitat preferences. To bridge this knowledge gap, we sampled two mountain ranges in Costa Rica with camera traps and conducted an occupancy analysis to understand the anthropogenic and environmental features that influence oncilla habitat use within them. Additionally, we conducted spatial predictions of habitat use across its northern and southern range in Costa Rica to identify priority conservation areas for the species. We found that Central American clouded oncilla habitat use is driven primarily by environmental factors. Our results showed that oncillas select habitats with denser tree cover at high elevations, closer to permanent water sources, which may provide them with high prey density and a favorable habitat structure for their survival. Spatial predictions identified two main regions as conservation priority areas where threat mitigation efforts and monitoring should be implemented: the Caribbean slope of the Talamanca mountains, and the Arenal-Monteverde forest complex. The occupancy modeling approach turned out to be very useful to assess the spatial associations of the species with the environment and mapping the conservation

priority areas. Future research and mitigation actions should focus on potential threats that could negatively impact Central American clouded oncilla populations and habitat use, including the role of mesopredators and feral species.

From archaeological evidence to social readiness: an integrated One Conservation framework for small wild cat reintroduction on Santa Catarina Island, Brazil

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Reintroduction of small wild cats in human-dominated landscapes requires ecological feasibility, historical validation, and social acceptance. On Santa Catarina Island, southern Brazil, Instituto Fauna Brasil and partners developed an integrated planning framework to assess the potential reintroduction of the southern tiger cat (*Leopardus guttulus*) and the margay (*L. wiedii*), combining archaeological investigation, ecological assessments, expert consultation, and public perception analyses within a One Conservation perspective. To clarify the historical presence of *Leopardus* species on the island, osteological material previously identified as *Felis* spp. from the Praia da Tapera shell mound (sambaqui), curated at the Museu do Homem do Sambaqui, was re-examined. Morphological comparison with reference specimens from the Federal University of Santa Catarina confirmed the material as *L. guttulus*. This represents the first archaeological record of *L. guttulus* on Santa Catarina Island and strengthens the evidentiary basis for species selection in reintroduction planning. Ecological and institutional feasibility were assessed through habitat suitability analyses in two candidate release areas, prey availability assessments, and structured consultation with 11 small cat specialists. These components were integrated into a participatory decision-making process that resulted in the prioritization of *L. guttulus over L.wiedii* and the selection of a primary release area for the species, while strengthening local capacity for small cat monitoring and management. Social readiness was evaluated through an ethics-approved perception survey conducted with 70 residents and visitors near the Meiembipe Municipal Wildlife Refuge (REVIS Meiembipe), a potential release site. Support for reintroduction was high (66% fully supportive; 30% conditionally supportive). Perceived benefits included ecosystem recovery and environmental education, while concerns focused on animal safety and interactions with domestic pets. Knowledge gaps were also identified, including a lack of awareness of local extinctions and misidentification of species. By integrating historical evidence, ecological assessments, expert knowledge, and community perspectives into a single framework, this case demonstrates how reintroduction planning can align scientific feasibility with participatory processes to mitigate implementation risks, strengthen conservation governance, providing a clear roadmap for future translocation efforts and a

replicable model for small felid reintroduction in human-dominated Atlantic Forest landscapes.

Small felids beyond Protected Area: Insights from the community forest of Seinthuk, Arunachal Pradesh, India

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Small felids are among the least studied yet ecologically important carnivores in tropical forest ecosystems. Situated within the Indo-Burma and Eastern Himalaya biodiversity hotspot complex, North-Eastern India supports a diverse assemblage of small felids and here, community-managed forests constitute a critical habitat that facilitates small felid conservation outside formally protected areas. Despite increasing anthropogenic pressures, these forests continue to persist due to long-standing community stewardship, customary laws, and conservation-oriented cultural practices. This study was carried out in the community forests of Shergaon, which lies near key protected areas like Eaglenest WLS, Sessa WLS, and Pakke TR, and together, they form one of the largest continuous forest tracts in Arunachal Pradesh. The study was carried out in partnership with the Sherdukpen community, who are the stewards of these forests. The aim is to develop a practical and science-based Conservation Action Plan for these elusive felids, which will also incorporate local community participation, policy linkages, and alternative livelihoods. Based on an exploratory camera trap survey, we report the presence of four wild felids - clouded leopard *Neofelis nebulosa*, marbled cat *Pardofelis marmorata*, Asian golden cat *Catopuma temminckii*, and leopard cat *Prionailurus bengalensis* from the Seinthuk community forests. These findings extend the known range distribution of all four felids but also reiterate the conservation potential of community forests as an important refuge for small felid diversity in north-eastern India. Following these findings, the local community collectively agreed to designate sections of the community forest exclusively for wild felid conservation. The findings also emphasize the role of community-led conservation initiatives in sustaining small cat populations. Local institutions actively regulate and manage forest use, and maintain habitat connectivity through traditional governance systems. Community awareness programs, informal monitoring by the community, and increasing interest in conservation-linked livelihoods such as eco-tourism further strengthen conservation outcomes.

From scent to sequence: Harnessing canine-assisted genetic sampling to bridge knowledge gaps in black-footed cats, *Felis nigripes*

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Rarity, size, and elusive behaviour make small cats particularly challenging to survey, resulting in limited population-level data to assess their status and conservation needs. Non-invasive genetic sampling has become a key tool for monitoring low-density carnivores, with detection dogs enhancing coverage and recovery of obscure scats. Using this integrated approach, we conducted the first population genetic study of the Vulnerable black- footed cat (*Felis nigripes*), Africa's smallest and most range-restricted wild felid. We trained a local detection dog and conducted systematic searches across our southern Namibia and central South Africa, collecting 186 scats, of which 69% (n = 128) were successfully genotyped, revealing 65 individuals. Analysis of genetic diversity indicates moderately high heterozygosity (H_{obs}/H_{exp}= 0.68/0.63), relatively low allelic diversity (AR = 4.5), and minor but significant genetic differentiation between populations, consistent with ongoing or recent regional gene flow. We further examined dispersal and mating system signatures using sex-specific spatial-genetic analyses. We found that females were more closely related than males, especially within the 0-2 km distance class, suggesting female philopatry and male-biased dispersal. Although most individuals were unrelated, kinship analysis identified parent-offspring pairs, indicating skewed reproductive success, with nearly all sibships being half-siblings (96%), consistent with polygyny. Given known influences on effective population size (N*e*), this dispersal regime and mating structure are unlikely to maintain genetic diversity in small, isolated populations. Thus, ensuring connectivity is crucial for the long-term viability of black-footed cat populations. Our scat samples also yield data on diet, disease risk, density, and occupancy, enabling relatively comprehensive ecological insights from survey efforts. Our study highlights the potential of integrating detection dogs with molecular tools to address critical knowledge gaps and support the conservation of vulnerable small cat populations.

SPEED TALKS AND POSTER PRESENTATIONS

New insights and achievements in the conservation of the vulnerable population of guiña (*Leopardus guigna*) in Argentina

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The guiña (*Leopardus guigna*), the smallest felid in the Americas, is restricted to a relatively narrow strip of Patagonian temperate and Mediterranean forest ecosystems in Chile and Argentina. The species was recently downlisted to Least Concern in the Red List Assessment due to improved information, particularly from southern Chile, where relatively large populations persist. However, of the six geographical groups identified, the one inhabiting the northern Patagonian forests of Argentina remains threatened. In 2022, we started a project to improve our knowledge of this subpopulation and develop an evidence-based conservation program. To evaluate the impact of environmental and anthropogenic factors on guiña presence, we conducted the most extensive camera-trap survey ever undertaken in the Patagonian temperate forests of Argentina. Between 2022 and 2025, we deployed 208 camera-trap sites across the Nahuel Huapi National Park, which is the oldest and second-largest protected area of Argentina, making it a potential stronghold for the conservation of this felid. To evaluate human tolerance and conflict risk, we interviewed 36 park residents, evaluating their perceptions and attitudes towards the species. Our results revealed that guiña is relatively rare and restricted to the humid forests in the west. Local perceptions are largely positive, although negative perceptions arise from the guiña's impact on poultry, and evidence of retaliatory killing has been documented in the study area. In collaboration with national park professionals and the Guiña Working Group, we are conducting joint conservation actions. Since July 2025, we have installed the first four guiña-focused road signs in Argentina at hotspots identified based on our camera-trap survey and national park roadkill records. We also engaged local communities and schools through educational activities aimed at improving perceptions and attitudes toward the species. Despite being in its early stages, this project has already obtained the largest database for the species in Argentina.

Promoting human–fishing cat coexistence in the Lower Ganges Floodplains of Bangladesh

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Human–fishing cat (*Prionailurus viverrinus*) conflict is a growing conservation challenge in Bangladesh's floodplain landscapes, where wetlands, aquaculture, and dense human settlements overlap. The Lower Ganges floodplains, particularly Chuadanga and Meherpur districts are among the most conflict-prone hotspots in the country, yet remain largely outside targeted conservation focus. Recent studies highlight the urgent need for hotspot-based conservation efforts for fishing cats. The project combines social surveys, field monitoring, and outreach interventions. A systematic interview-based survey targeting 500

respondents from diverse stakeholder groups (farmers, fishers, students, and community leaders) was designed to assess local perceptions, conflict drivers, and potential mitigation pathways. Concurrently, camera trapping at conflict-prone fish farms (≈250 trap-nights to date) documented fishing cat presence and activity patterns. In parallel, extensive awareness and media outreach programs were implemented, including school sessions, street processions, miking, wall art, billboards, and popular press engagement. Preliminary outcomes indicate strong community engagement, with over 7,000 people reached through in-person activities and approximately 80,000 individuals engaged via social media. Field engagement directly facilitated conflict response, including the rescue of a fishing cat from a local zoo, followed by on-site release into a suitable habitat, as well as the identification of recurring conflict sites. A local youth-based rapid response network (n = 50) has been established, and practical support for conflict mitigation has begun through the construction and deployment of rescue carrier cages in collaboration with the Forest Department. Camera-trap monitoring revealed at least three different individuals visiting a single fish farm. This ongoing initiative demonstrates that integrating empirical research with targeted education, media outreach, and institutional support can reduce conflict risks and foster local stewardship for small wild cat conservation. The project offers a scalable framework for human–fishing cat coexistence applicable to floodplain landscapes across South and Southeast Asia.

Protected areas, forest structure and rainfall seasonality shape the continental distribution of the African golden cat

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African tropical forests support high biodiversity but are being rapidly transformed by fragmentation, expanding human access and activities, with disproportionate impacts on low-density, cryptic forest-dependent species such as the African golden cat (*Caracal aurata*). We modelled AGC habitat suitability across its range to assess the roles of protected areas (PAs), landscape structure, climate, and anthropogenic pressure. We compiled African golden cat occurrence records from the Global Biodiversity Information Facility (GBIF), camera-trap surveys, and georeferenced literature. Habitat suitability was modelled using a biogeographically constrained ensemble of statistical and machine-learning algorithms implemented in the R package biomod2. Model calibration was restricted to the Guineo–Congolian forest block and the disjunct Afromontane forests of the Albertine Rift and East Africa, reflecting forest dependence and excluding the Dahomey Gap. Urban pixels were excluded, and environmental predictors were cropped to this area prior to continental-scale projection. Distance to formal protected areas (36.6%), precipitation seasonality (25.4%), and forest cover (19.9%) structured African golden cat habitat suitability across its range. Suitability declined with distance from PAs and increased with forest cover, peaking at ~85%

cover before declining, likely reflecting reduced detectability and lack of surveys in the dense forests rather than true ecological avoidance. Precipitation seasonality showed a unimodal response with optimal conditions at intermediate levels (BIO15 ~60-90). Spatial projections revealed extensive but discontinuous suitability across the Congo Basin, a fragmented distribution in West Africa Upper Guinean forests, and isolated refugia in East Africa. We estimated 654,318 km² of suitable habitat, of which 53% overlaps PAs. Protected areas act as key refugia for *C. aurata,* but nearly half of the suitable habitat lies outside formal protection. Conservation strategies must therefore prioritise landscape-level forest protection, connectivity, and effective management of human pressures beyond protected-area boundaries to ensure long-term persistence of this threatened forest species, Africa's least-known felid.

Preliminary insights into the movement, road ecology, and monitoring design for the Central American oncilla

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The Central American oncilla (*Leopardus tigrinus oncilla*, or recently proposed *Leopardus pardinoides oncilla*) has an extremely restricted distribution, occurring in only three mountain ranges in Costa Rica and Panama. Beyond residing in highly threatened montane cloud forest ecosystems, little is known about their ecology, limiting the development of effective conservation strategies. In the Talamanca Mountains of Costa Rica, oncilla habitat is bisected by the Pan-American Highway, extensive cattle pastures, and expanding human development, raising concerns about population connectivity and road mortality. Between 2021 and September 2025, twelve oncilla roadkills were reported in the region. We are using short interval GPS-collar data and camera-trap data to investigate oncilla movement ecology, road ecology, and population density in this fragmented landscape. From 2023 to 2025, we fit four oncillas with GPS collars, providing movement data over ~two-month periods per individual. Preliminary results indicate home-range sizes ranging from 10.29 to 15.29 km² (Minimum Convex Polygon) and 12.19 to 20 km² (Kernel Density Estimation). Individuals crossed the Pan-American Highway between 0 and 25 times, with crossings mainly concentrated in four ~500 m highway sections. Preliminary data suggest that oncillas avoid open pastures and instead use forest patches to move through human-modified areas. We used movement data from GPS collared individuals, combined with detection rates from a pilot camera-trap survey ($p \approx 0.015$ detections per day), to conduct a power analysis to optimize the design of a large-scale camera trap survey for density estimation. Results indicate that, across the evaluated scenarios, increasing the sampled area provides greater gains in estimator performance than reducing camera spacing. These findings provide critical guidance for designing camera-trap studies for rare species that typically occur at low densities. This study contributes to mitigating road mortality, improving landscape connectivity, and designing efficient monitoring strategies for rare felids in tropical regions.

Assessing anticoagulant rodenticide exposure in the endangered European wildcat (*Felis silvestris*) and sympatric wildcat-domestic cat hybrids in Scotland

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The European wildcat (*Felis silvestris*) was assessed as functionally extinct in Scotland in 2019, with current population reinforcement through captive breeding and release now essential for conservation. Although exposure rate and health impacts of Anticoagulant Rodenticides (ARs) are well documented in some species, there is a lack of data for small cat species, limiting our ability to risk assess and conduct appropriate threat mitigation. This study assessed the exposure of wild-living cats in Scotland to ARs by measuring AR liver residues of wildcat-domestic cat hybrids and feral domestic cats, and assessing the effects of age, sex and degree of hybridization on exposure level. Samples were obtained through opportunistic carcass collection between 2014 and 2019. Residues of seven commercially available ARs were measured in 47 liver samples. ARs were detected in 60% (n = 28). The maximum detected concentration of AR was 1.73 mg/kg liver, nine-times the toxicity threshold established in mammals. Number of ARs found in each cat ranged from 0-5 with a mean of 1.25. All seven assayed ARs were detected, the most prevalent being bromadiolone and difenacoum, in 93% (n=26) and 61% (n=17) of AR positive samples. Adult cats were significantly more likely to have detectible AR concentrations (66% of adults and 29% of juveniles) and had a greater number of different ARs (adults mean 1.39±1.31 ARs vs juveniles 0.43±0.79 ARs). Male cats had a greater number of different ARs (males 1.31±1.25 vs females 0.86±0.94 ARs), but the likelihood of exposure was not significantly greater. The level of wildcat hybridization had no effect on AR presence, or on AR residue concentrations. These findings demonstrate a high level of AR exposure in Scottish wild-living cats and highlight the need for continuing population health surveillance and threat mitigation for the critically endangered reintroduced wildcat population.

Small cats, big differences in habitat selection and road sensitivity across Brazilian felids

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Small wild cats face escalating threats from habitat loss and infrastructure expansion across the Neotropics, yet their ecological responses to landscape change remain poorly understood. Designing effective conservation strategies requires knowing which species can coexist with humans and which cannot. We assessed habitat selection and road sensitivity of seven small felid species in Brazil using an integrative open-data framework that compiled thousands of occurrence records and modeled habitat associations across multiple spatial scales. Species were grouped by ecological plasticity as generalists, flexible specialists, or strict forest specialists. Our findings revealed striking interspecific variation that challenges simple conservation assumptions. Among generalists, *Herpailurus yagouaroundi* tolerated agricultural landscapes and roads, while *Leopardus geoffroyi* unexpectedly avoided modified habitats entirely, suggesting underestimated vulnerability. Flexible specialists like *L. pardalis* avoided degraded pastures but persisted near agricultural edges, whereas the poorly known Colocola complex showed conservative responses to anthropogenic environments. Strict specialists consistently selected forests and avoided open areas, yet all occurred near agricultural lands, revealing complex edge dynamics that may reflect habitat constraints rather than true tolerance. Road responses proved highly species-specific and unpredictable when based on functional groups alone. *Leopardus geoffroyi* showed the highest road detectability despite avoiding modified habitats, while *L. guttulus* exhibited near-complete road avoidance. The Colocola complex and *L. wiedii* consistently avoided roads, whereas *H. yagouaroundi* and *L. tigrinus* occurred more frequently near infrastructure. These patterns demand tailored conservation approaches: protecting large forest blocks for strict specialists, maintaining landscape heterogeneity for flexible species, implementing strategic road mitigation, and urgently addressing knowledge gaps for understudied taxa like the Colocola complex. This work demonstrates how open biodiversity data can transform conservation planning for cryptic Neotropical carnivores, particularly when field monitoring is logistically constrained, and offers actionable insights for Brazil's National Action Plans for small felid conservation.

Between wildlands and backyards: spatiotemporal dynamics between Geoffroy's cat and domestic cats in fragmented landscapes

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The fragmentation of natural habitats has facilitated contact between wild and domestic felid species, resulting in ecological and sanitary risks that remain poorly understood. In this study, we investigated patterns of spatial and temporal coexistence between Geoffroy's cat (*Leopardus geoffroyi*) and free-ranging domestic cats (*Felis catus*) in a fragmented landscape of southern Brazil. Our objective was to evaluate differences in space use, activity patterns, spatial overlap, encounter frequency, and habitat use between the two species. We used global positioning systems (GPS) telemetry data from 24 individuals, including 10 Geoffroy's cats and 14 domestic cats, monitored between 2022 and 2023. Home ranges were estimated using continuous-time movement models and autocorrelated kernel density estimators. Diel activity patterns were assessed using step length as a proxy for movement, while spatial overlap was quantified using overlap-based analyses and distance thresholds. Habitat use was evaluated using resource selection functions contrasting natural and anthropogenic habitats. Geoffroy's cats exhibited large home ranges (mean 11.3 km²) and strong selection for natural habitats. In contrast, domestic cats occupied spatially restricted home ranges (mean 0.24 km²) associated with anthropogenic areas. Both species were predominantly nocturnal and showed high temporal overlap in activity; however, spatial overlap was low (mean 1.2%), and direct encounters were rare (only three records within distances up to 50 m). Limited spatial sharing occurred mainly in transitional zones between natural remnants and human infrastructure, suggesting greater potential for indirect interactions. Our results reveal distinct ecological strategies that reduce direct coexistence even in environments that tend to facilitate spatial proximity. These findings highlight the importance of responsible domestic cat stewardship and the conservation of natural habitat remnants to reduce ecological and sanitary risks in human-dominated ecosystems.

The native and the invader: shared use of space and temporal segregation of clouded tiger-cats (*Leopardus pardinoides*) and domestic dogs (*Canis familiaris*) in an isolated protected area of the Central Andes of Colombia

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Habitat loss reduces the effectiveness of protected areas in safeguarding wildlife across degraded landscapes, especially when invasive predators make incursions from the surrounding matrix. We investigated how the habitat use and activity of an ecologically sensitive mesopredator, the clouded tiger-cat (*Leopardus pardinoides*), is affected by landscape features and domestic dogs (*Canis familiaris*) in an isolated protected area of the Central Andes, Colombia. We systematically collected data on the occurrence and activity from 23 single-camera traps placed in the cloud forest of the Alto del Nudo Soil Conservation District between September 2022 and September 2023. We estimated the encounter rates and occupancy of dogs and assessed their effects on clouded tiger-cat habitat use via occupancy modeling. We used kernel density estimates and diel niche models to assess the activity of both species. We found that clouded tiger-cat detectability was positively affected by the topographic slope, but no covariate was supported in our models that affected their habitat use. The dog encounter rate did not affect occupancy by clouded tiger-cats, but there was a low temporal overlap between both species, with dogs being mainly diurnal and clouded tiger-cats being nocturnal. Threatened species, such as clouded tiger-cats, are highly vulnerable to contact with dogs, and they cope with this pressure over time rather than space partitioning. We advise taking urgent actions to reduce the spatial contact between clouded tiger-cats and dogs, either by implementing continued neutering and adoption campaigns or by adopting a public policy that bans their unsupervised incursion into the protected area.

Anthropogenic and environmental correlates of spatial patterns of co-occurrence of small felids in a montane landscape

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Understanding how sympatric small felids respond to their environmental surroundings in a human matrix landscape is important to determine their habitat use, distribution and conservation. However, structured survey design and large sample size studies are often rare for cryptic small-and medium-sized felids, hindering their reliable and meaningful inferences for conservation management. We employed a multi-species occupancy model on a large-scale camera trap dataset to investigate the effects of environmental and anthropogenic variables on the occupancy, as well as the mechanisms facilitating sympatry among three small felids in Bhutan: the threatened Asiatic golden cat (*Catopuma temminckii*), marbled cat (*Pardofelis marmorata*), and the least concern leopard cat (*Prionailurus bengalensis*). Through their co-occurrence patterns at local and landscape scales, we could identify their potential interactions and the factors influencing them. We found that one species pair (marbled cat: leopard cat) had low co-occurrence at higher elevations. The interactions among the other felid pairs (Asiatic golden cat: marbled cat and Asiatic golden cat: leopard cat) were not directly mediated by human disturbances and were constant across the elevational gradient. We identified important predictors of marginal occupancy for two species: forest cover, river

density, and slope for the marbled cat; and housing density, forest cover, and slope for the leopard cat. However, none of the predictor variables significantly influenced Asiatic golden cat occupancy. Our findings suggest that environmental factors, such as forest cover and slope, may influence individual felid occupancy and consequently shape their interactions. We recommend that small felid conservation in heterogeneous montane landscapes should consider the impacts of human land use, limit forest conversion, and protect rugged habitats. Through this study, we provide the first nationwide insights into small felid sympatry in Bhutan's montane landscapes, expanding our understanding of their complex coexistence patterns.

Mitigating human–small wild cat conflict from the cloud forest of Northwestern Ecuador: Early results of the community pilot project Felinos de Monte

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Human–small wild cat conflict is an increasing conservation challenge in the cloud forests of northwestern Pichincha Province in Ecuador, where subsistence poultry farming overlaps with the habitat of several small felid species, including oncilla (*Leopardus pardinoides*), margay (*L. wiedii*), ocelot (*L. pardalis*), and jaguarundi (*Herpailurus yagouaroundi*). Retaliatory killings following poultry depredation pose a direct threat to these species and undermine local livelihoods. This study presents the initial actions and findings of the Felinos de Monte pilot community-based project, which aimed to reduce conflict while promoting felid conservation. The objectives were to document the extent of poultry losses, identify the felid species involved, assess husbandry practices, and initiate non-lethal mitigation and environmental education measures. Methods included household surveys and interviews with affected families in the communities of Santa Rosa, Guayabillas, Pachijal, and Mashpi, direct inspection of poultry enclosures, and deployment of camera traps in adjacent forest patches to confirm the presence of felids. All surveyed households reported at least one depredation event within the year, with some losing more than 20 chickens. Poorly protected coops were common, as well as the complete lack of them, and community members showed limited awareness of the diversity of felid species inhabiting the region. Camera traps confirmed the regular presence of wild cats near farms. Based on these findings, the pilot project has identified 10 beneficiary families to date and has begun constructing reinforced chicken coops, along with outreach activities at local spaces, as festival and meetings, to improve knowledge and tolerance, as well as the cooperation of farm owners in installing and monitoring camera traps. These initial results highlight the importance of integrated approaches that combine conflict mitigation, community engagement, and education to conserve small wild cats while simultaneously safeguarding rural livelihoods in the Andean cloud forests.

Zenith placement of camera traps to identify small wild cats: An empirical study with the Güiña *Leopardus guigna*

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Population estimates of abundance and density are key metrics that can inform wild felid conservation status evaluation and actions. Individual identification of wild felids with camera traps has been carried out mostly on large and conspicuous species. Small, subtly marked species have received significantly less research attention. One such species is the güiña (*Leopardus guigna*), which is the smallest wildcat of the Neotropics and is considered Least Concern by the IUCN Red List, but with some critical populations. Currently, there are no studies that estimate density or abundance from individual identification of the species. In fact, the recent assessment shows that trusted density estimates from critical populations is urgently needed. Commonly, camera traps are set facing laterally (i.e., horizontally) with one or more cameras per site for individual identification. However, the güiña has a dorsal zone with considerable and higher individual variation in spotted markings than the flanks. We carried out camera traps survey with zenith orientation (i.e., vertical) to identify güiña individuals of a population in the temperate rainforest of Chilean Patagonia based on their dorsal markings. We surveyed 12,784 trap days capturing 1,386 photographs of güiñas belonging to 586 independent events. We successfully identified 12 individuals. Our results show that zenith camera trap placement can facilitate individual identification of a subtly marked species, such as the güiña. We provide recommendations for camera trap zenith installation and the identification process. We discuss the potential application of this method for population-density estimates of güiñas and other small wild cat species with similar dorsal markings, such as those from the *Neofelis, Leopardus* and *Prionailurus* genus.

Mapping an elusive species: Landscape ecology's role in defining black-footed cat *Felis nigripes* distribution in southern Africa

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Species distribution is one of the most basic and relevant ecological information needed for conservation status assessments. The lack of distributional information for species, also known as the Wallacean shortfall, is more critical for small-bodied felids, such as the black-footed cat (*Felis nigripes*), with fewer distributional data available than for larger, more well-known wild felids. The black-footed cat is the smallest and rarest wild felid in Africa, endemic to southern Africa. Considered a habitat specialist, occurring in the arid open, low dwarf-

shrub and grassland habitats, within the Grassland, open Savannah and Nama Karoo biomes. Listed as Vulnerable (criteria C2a(i)) in the IUCN Red List of Threatened Species, accurate distribution mapping is hampered by the low number of occurrence records. Due to their shy nature, nocturnal habits, and small size, black-footed cats are rarely seen and, consequently, are less reported than larger wild felines. A priority for the latest IUCN Red List assessment (period 2023-2025) was to update and delineate the species' extant distribution range using occurrence records, in relation to landscape and habitat characteristics. A total of verified occurrence records from the main range countries, South Africa (n = 667), Namibia (n = 73), and Botswana (n = 6), were used for the distribution mapping. Records were overlain onto landscape and habitat geographic information systems (GIS) data, illustrating that most records were within the expected suitable habitats. All mapping was computed in QGIS using the vector geometry function tool, encompassing all records and buffer areas. The updated extant distribution range reduced from 2,214,276 km² to 1,936,409 km², a 12.5 % decrease in range area. The updated range excludes areas of unsuitable habitat, illustrates the non-continuous range, and defines the extent and location of subpopulations. The updated range map is a crucial step towards developing research priorities for the conservation of the elusive black-footed cat.

Disease and intraguild killing as mortality factors in black-footed cats across managed and unmanaged landscapes

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The black-footed cat (*Felis nigripes*), the smallest felid in Africa and endemic to the arid regions of southern Africa, is currently listed as *Vulnerable* on the IUCN Red List, with a suspected population decline across its range. Since 2005, the Black-footed Cat Working Group has conducted long-term monitoring in two study areas in central South Africa, providing extensive data from radio-collared individuals. Using these data, we examined the relative importance of major mortality sources and evaluated how predator management practices influence black-footed cat survival. We compared adult annual survival between a nature reserve with minimal predator management and a game farm where jackals and caracals were lethally controlled. Contrary to our expectations, survival rates were similarly low at both sites, suggesting that intraguild predation did not have an additive effect on overall mortality. These findings underscore the need for conservation strategies that address

both direct threats and underlying health challenges to improve the long-term viability of this threatened species.

Toxic towns: Drivers of anticoagulant rodenticide exposure in an urban edge carnivore

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Anticoagulant rodenticides (ARs) are used globally to control rodent populations; however, exposure of non-target wildlife is a growing conservation concern. Generalist predators are particularly vulnerable to both lethal and sublethal effects of ARs via bioaccumulation. Highly adaptable caracals (*Caracal caracal*) in Cape Town are attracted to forage on the urban edge, where they face AR exposure risk. We use generalized linear models to investigate the liver concentration and diversity of ARs in 102 caracals within this global biodiversity hotspot. We assess sex and age relationships, as well as their association with habitat types and urban features in a rapidly expanding city to understand exposure routes and identify landscape features that increase risk of exposure. Exposure patterns follow global trends in carnivores, with high exposure in this peri-urban population (78%) and a median of three compounds detected per individual, suggesting repeated, long-term exposure. Highly toxic second-generation compounds dominated the exposure profile, with AR burdens varying across the population and peaking in older individuals, likely due to bioaccumulation and multiple exposure events. Caracals using more vegetated, greener urban areas with urban amenities such as food service outlets were more likely to be exposed and have higher AR diversity and concentrations. The sublethal effects of ARs are currently unknown for caracals; however, subadult caracals in poorer condition exhibited higher total rodenticide loads. ARs present a cryptic threat to urban wildlife populations already vulnerable to increasing habitat loss and anthropogenic sources of mortality. This study supports global trends suggesting targeted mitigation should include policies that reduce AR use, particularly for rodent control and food waste management near wildlife habitat.

Conserving the Andean cat (*Leopardus jacobita*), the most threatened felid in the Americas

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The Andean cat (*Leopardus jacobita*), categorized as Endangered by the IUCN, is the most threatened felid in the Americas. Under the IUCN Green Status of Species framework, it is assessed as Largely Depleted, reflecting its small population size and ongoing declines. Past conservation actions appear to have slowed population declines but have not led to substantial recovery. Although the species' life history and ecological traits limit rapid population growth, sustained conservation offers potential for longer-term recovery and conservation efforts remain essential to prevent further declines and reduce extinction risk. Nevertheless, emerging threats, including climate change, human population growth, and expanding mineral extraction, may increasingly undermine conservation effectiveness. Population declines are driven by multiple anthropogenic pressures, notably habitat loss and degradation associated with extractive industries, farming, retaliatory killing, road mortality, dog attacks, and irresponsible pet ownership that can lead to direct killing and transmission of diseases from domestic animals. Persistent knowledge gaps—particularly the lack of robust estimates of population density and trends across much of the species' range—add uncertainty to assessments of current status and future recovery trajectories. The Andean cat Alliance is the only organization fully dedicated to the conservation of this species across its entire distribution. Our work integrates threat-specific interventions, including the promotion of non-lethal livestock predation mitigation to reduce retaliatory killing, installation of road signage to decrease vehicle collisions, and neutering and vaccination campaigns to limit disease transmission from domestic animals. These actions are complemented by outreach programs that raise awareness among school students and the general public, and are transforming the Andean cat into a flagship species, while actively engaging local communities in sustainable development initiatives linked to Andean cat conservation. In parallel, research (based on camera trapping and non-invasive DNA sampling) is building knowledge of the species' distribution and population status to guide conservation planning.

Using expert knowledge to identify status, threats, research needs, and conservation actions for the Pallas's cat

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We conducted an online survey of 66 national and international experts to assess the current state of knowledge and conservation priorities for the Pallas's cat (also known as the manul) *Otocolobus manul*. Using a structured questionnaire, we gathered insights from practitioners working at different capacities and spatial scales across 15 range countries. We summarized key threats, research needs, and conservation recommendations based on the experiential knowledge and judgments of the respondents and examined how differences in expertise and geography shaped their responses. Our results suggest considerable variation in the perceived status, population trends, and public knowledge of the manul across range countries. We also detected effects of respondents' experience-related characteristics on

how they evaluated the importance of different conservation and research topics. Most experts identified free-ranging dogs, livestock-associated disturbances, prey decline, and climate change impacts as the main threats to the conservation of the manul. Population monitoring and public engagement were the top conservation measures proposed by survey respondents. Experts believed that research should focus on identifying threats and estimating population size and occupancy. Camera trapping was widely regarded as the most effective method for obtaining the required ecological data. Based on the information provided by the experts, we identified priority areas for research and conservation across the manuls' global range. The study highlights the benefits of obtaining conservation information from a diverse group of practitioners and underscores both the barriers that have constrained progress and the opportunities to promote manul conservation. We discuss our findings and make recommendations to advance research and conservation action for the species.

Status and conservation of small wild cats in the cold winter deserts of Turkmenistan

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The cold winter deserts of Turkmenistan represent a globally unique and poorly studied ecosystem located at the intersection of temperate, continental, and arid biogeographic zones. Drawing on more than a decade of systematic camera trapping, sign surveys, and field observations conducted across protected areas and adjacent unprotected landscapes, we synthesize current knowledge on the status, distribution, threats, and conservation needs of small and medium-sized wild cats inhabiting Turkmenistan's cold winter deserts. Our objectives were to document species occurrence and relative persistence across different desert and semi-desert landscapes, identify key population strongholds and habitat features important for small cats, and assess anthropogenic pressures affecting these species both within and beyond the existing protected area network We confirmed the presence of six species of small and medium-sized wild cats within Turkmenistan's cold desert ecosystems: Eurasian lynx (*Lynx lynx*), caracal (*Caracal caracal*), Pallas's cat (*Otocolobus manul*), jungle cat (*Felis chaus*), Asiatic wild cat (*Felis lybica ornata*), and sand cat (*Felis margarita*). Among these, Pallas's cat and sand cat emerge as species of particular conservation concern due to their low detectability, apparent rarity, and high vulnerability to anthropogenic pressures. Both species are strongly associated with open desert and semi-desert habitats, making them especially exposed to threats operating outside strictly protected areas. Our findings highlight that small cats in Turkmenistan's cold deserts face a distinct suite of threats compared to large felids. Predation by guard dogs and hunting dogs (including traditional sighthounds) represents one of the most significant and underappreciated sources of mortality, particularly for Pallas's cat and sand cat. In addition, Asiatic wild cats face risks from hybridization with domestic cats and road mortality, especially in landscapes where human settlement and

transport corridors intersect desert habitats. These threats operate largely beyond the boundaries of protected areas, underscoring the limitations of site-based conservation alone. While existing protected areas remain critical refuges for small wild cats, our results indicate that they are insufficient to ensure long-term population viability. Many key habitats used by small cats lie in buffer zones, ecological corridors, or entirely unprotected landscapes, where enforcement is weak and human pressures are high. The persistence of small cats in these environments depends on maintaining landscape connectivity, regulating dog presence, and reducing direct persecution. Based on our findings, we recommend a conservation strategy that explicitly integrates small cats into national and regional biodiversity planning for cold desert ecosystems. Priority actions include expanding protection to key unprotected desert landscapes, formalizing ecological corridors, and implementing targeted measures to reduce dog-related mortality, particularly for Pallas's cat and sand cat. Strengthening community engagement, improving awareness of the ecological role of small cats, and enhancing monitoring beyond reserve boundaries will be essential to safeguarding this important component of Turkmenistan's desert biodiversity.

Community-led, market-based solutions to mitigate human–fishing cat conflict in Western Terai, Nepal

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Fishing cats (*Prionailurus viverrinus*) are globally vulnerable wetland carnivores, and their survival in Nepal's Western Terai is increasingly threatened by human–wildlife conflict. Local fish farmers experience significant fish loss due to fishing cat raids and often respond with retaliatory killing, while Indigenous Tharu communities rely heavily on natural wetlands for fishing and forest resources, leading to overfishing, habitat disturbance, and prey depletion. This project applies community-led, market-based solutions to address these intertwined ecological and livelihood challenges. The Fish Bank Program provides fish farmers with fish hatchlings as an in-kind compensation mechanism, reducing economic loss and incentivizing non-retaliation agreements, whereby farmers commit to not harming fishing cats and contribute 5% of profits to a conservation fund, which the project matches. The Handicraft Promotion Program supports Tharu women with skills training and market linkage to shift reliance away from overfishing, with women similarly allocating 5% of handicraft income to conservation. During implementation, Three Fish Bank was established (supporting six farmers with 15,000 hatchlings each), one 15-member Tharu women's handicraft group was formed, and five Fishing Cat Guardian Clubs were created to engage local youth. Dozens of camera traps were installed in collaboration with farmers to monitor fishing cats and build stewardship. Early outcomes show reduced conflict, increased tolerance, decreased pressure on wetland resources, and strengthened community-led conservation leadership. The conservation fund mechanism demonstrates strong potential for long-term sustainability, enabling reinvestment into restocking ponds, habitat monitoring, and guardian club activities. This integrated and culturally grounded model offers a scalable pathway for strengthening human–fishing cat coexistence across Nepal and similar South Asian wetlands.

Ecological baselines and conversation priorities for Trinidad's isolated ocelot population

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Ocelots (*Leopardus pardalis*) in Trinidad represent a unique and geographically isolated island population in which the species functions as the apex terrestrial predator. Isolated from mainland South America for approximately 11,000 years and exhibiting subtle morphological differences, this population may be genetically distinct yet remains substantially understudied. Although listed as an Environmentally Sensitive Species under national law, ecological data remain limited, and there is no long-term monitoring programme to guide conservation action. Our work establishes ecological baselines for ocelots in northwest Trinidad by estimating density, occupancy and activity patterns using spatially explicit capture recapture modelling. We estimated a density of 0.24 ocelots per km² (95 percent CI 0.09 to 0.61). Occupancy modelling indicated that ocelots likely use the entire survey landscape, with very high estimated occupancy (approximately 0.99) despite low nightly detection probability (approximately 0.04). Ocelots were predominantly nocturnal, with the strongest temporal overlap observed with red brocket deer. Habitat type had little influence on ocelot occurrence, although brocket deer were detected less often in areas dominated by invasive bamboo, which may have implications for local prey availability. We are now analysing new camera trap data from an additional site in northern Trinidad to explore seasonal and elevational influences on detections and to begin collecting field measurements for future habitat suitability modelling. Building on these baselines, upcoming work will expand survey coverage and launch a community-based monitoring programme with field training, incentivised wildlife reporting and an AI assisted identification workflow using TrapTagger and Whiskerbook. This approach is intended to address data gaps, support habitat protection efforts and involve communities directly to tackle threats such as hunting and conflict. Together, these initiatives aim to clarify population trends, support island wide status assessments and provide the foundation for a national management plan to conserve this unique island lineage.

Small cats in the 21st century: a review of the first quarter of a century in wild small felid research

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Research on the world's small felids has expanded rapidly in the first quarter of the 21st century, yet no global synthesis has evaluated how this literature has developed or what drives uneven research attention across species and regions. We conducted a comprehensive review of more than 10,000 publications (2000 to 2024) in seven languages to quantify temporal, geographic, and taxonomic patterns in small felid research. Using descriptive analyses and generalised linear models (GLMs), we identified predictors of research allocation at species, country, and regional scales. We found pronounced biases towards a subset of species and regions: the Eurasian lynx (*Lynx lynx*) was the most studied species, whereas the Chinese mountain cat (*Felis bieti*) received the least attention. Research effort was highest in Europe and Central Asia, and the United States had the greatest country level effort. At the species level, research effort was strongly associated with IUCN status and co-occurrence with other small felids, with Least Concern species and those with lower overlap receiving the highest effort. At the country level, GDP and small felid richness were the strongest predictors, with higher GDP and richness linked to greater effort. Regions with greater ecoregion diversity, a larger proportion of land area within small felid ranges, and higher species richness also showed higher overall research effort. By revealing where and why research gaps persist, our synthesis provides a foundation for more equitable and effective future research and conservation investment across the world's small felids.

Use of dynamic N-occupancy models to track population trends of nontarget or unmarked species

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Researchers around the globe conduct numerous camera-based wildlife surveys each year. Most often, these surveys are conducted with the goal of collecting data on a specific target species, yet the cameras are non-selective and so capture images of any animal that passes in front of the camera. These surplus images are often referred to as bycatch data. There remain many understudied or data deficient species that could benefit from the use of these surplus or bycatch data and there exists a need to understand the utility of bycatch data in monitoring nontarget species. Dynamic N-occupancy models are an extension of N-mixture and multi-season or dynamic occupancy models and may prove useful in the analysis

of bycatch data, particularly for unmarked, or not individually-identifiable, species. Welgevonden Game Reserve in South Africa has been surveyed annually for several years to monitor the leopard population; however, the park also contains populations of smaller cats, including African wildcat (*Felis lybica*) and serval (*Leptailurus serval*). We wished to test the efficacy of using N-occupancy to model data from an array of cameras originally deployed to estimate leopard density for monitoring population trends of these non-target species of small cat. Through simulation we show that the model is robust to data gaps (i.e., missing survey years) and mismatched survey grid and home range size. Through comparison to annual spatial capture recapture data (SECR) we show that the model can track population trend but does not provide accurate density estimates when specific model assumptions are not met. Dynamic N-occupancy models may provide an index to track population changes of nontarget and/or unmarked species, including small cats and their prey.

PICA (Pallas's cat International Conservation Alliance)- support project for Pallas's cat conservation globally, and a gateway to protecting other small felids

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The Pallas's cat (*Otocolobus manul*), or manul, is a small and elusive cat that inhabits the steppes and mountain grasslands across much of Eurasia. Despite its wide distribution, the Pallas's cat is rarely seen, poorly known and historically has received little conservation attention. The Pallas's Cat International Conservation Alliance (PICA) aims to advance Pallas's cat conservation globally through research, strategic planning, awareness raising and capacity building. Active for a decade and working closely with a range of partners, the project has achieved many significant milestones- a key output was development of the Pallas's cat Status Review and Conservation Strategy alongside the IUCN SSC Cat Specialist Group and the Manul Working Group. Other key achievements include supporting 18 field projects in 9 range countries through the PICA Small Grant Programme, development of a Manul Monitoring Guideline enabling practitioners to more effectively monitor wild populations, or delivery of educational materials in 20 languages. Built on a multi-functional approach to conservation and fostering collaborative approaches, the project's scope also encompasses influencing global policy. Working alongside international partners including Governments of Kazakhstan and Uzbekistan, IUCN Cat SG and MWG, the partnership was successful in listing the Pallas's cat under Appendix II of the Convention on Migratory Species (CMS), and the CMS Central Asian Mammals Initiative (CAMI). The project also strives to connect *ex-situ* and *in-situ* Pallas's cat conservation, and has formed a network of zoological institutions worldwide that provide financial and other support. Most notably, it facilitates the PICA Small Grant Programme, one of our most impactful and far-reaching initiatives. PICA represents a comprehensive and lasting approach to conservation of small cat species, and Pallas's cats provide a gateway to other, similarly overlooked small felines found across shared landscapes in Central Asia that

can also, and have, benefitted from this model- e.g., caracal (*Caracal caracal*) or sand cat (*Felis margarita*).

New records of the flat-headed cat distribution across patchy habitats in an unprotected Bornean Corridor area

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The flat-headed cat (*Prionailurus planiceps*), a wetland-specialist felid, is among the most threatened and rarely documented small cats in Southeast Asia. In Borneo, its distribution and adaptability outside of protected peat swamp forests remain critically understudied. This study aims to determine the occurrence and habitat associations of the flat-headed cat within Bentarum landscape, a multi-use and unprotected forest corridor in Indonesian Borneo. We conducted a systematic camera trap survey from September 2024 to October 2025. We designed three blocks, each comprising a 3 x 10 grid with cameras spaced 2 km apart, deployed in a rotational design during the dry season. To assess wildlife presence in adjacent disturbed habitats, we also deployed additional camera traps within 200 m of the corridor's main road. From a total of 121 stations, flat-headed cats were detected in three stations across the survey area. All detections occurred in locations characterized by the presence of small water pools. Two detections were within a station located 200 m of a major provincial road, representing a novel observation of this species in close proximity to a significant anthropogenic feature. These findings confirm the species' extreme rarity while demonstrating its tentative use of unprotected corridors. The detections proximate to a major road constitute novel evidence necessitating the integration of road ecology into conservation planning for this species. Protecting such corridors and mitigating road impacts are therefore critical to conserve flat-headed cats.

Conservation actions for the clouded tiger-cat (*Leopardus pardinoides*) in a biodiversity hotspot, in the Eastern Colombian Andes

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The clouded tiger-cat (*Leopardus pardinoides*) is a small felid restricted to high-elevation Andean ecosystems and currently classified as Vulnerable due to habitat loss, fragmentation, and increasing human pressures. In the Eastern Cordillera of Colombia, information on population status, threats, and effective conservation actions for this species remains limited.

We implemented an integrated conservation program in and around Chingaza National Natural Park, a key biodiversity hotspot within the Chingaza–Sumapaz–Guerrero conservation corridor. The objectives were to: (1) reduce disease transmission risk from domestic carnivores to wild felids through vaccination campaigns; (2) assess health status of domestic dogs; (3) promote conservation awareness through environmental education; and (4) monitor populations of *L. pardinoides* and other felids using camera traps. Between 2021 and 2023, six vaccination campaigns were conducted in communities surrounding the park, vaccinating 120 dogs against rabies and major viral diseases and assessing the health status of 140 individuals. Concurrently, 33 camera traps were deployed inside the park and in buffer areas, accumulating 4,684 trap-nights. Felid detections were analyzed in relation to prey richness, hunting presence, and feral dog occurrence using generalized linear models. Three wild felid species were recorded: *Leopardus pardinoides, Leopardus pardalis*, and *Puma concolor*. Human-related variables, particularly feral dog presence and hunting activity, had a stronger influence on felid abundance patterns than prey availability. *Leopardus pardinoides* showed higher relative abundance in buffer zones, while ocelots were more abundant inside protected areas. No evidence of disease was detected in wild felids during the study period. These results provide the first baseline information on clouded tiger-cat populations and threats in the Eastern Andes and highlight the importance of integrated strategies combining wildlife monitoring, disease risk mitigation, and community-based conservation to ensure the long-term persistence of small felids in Andean clouded forest ecosystems.

Projecting the future of the marbled cat in a changing landscape

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Southeast Asia, a highly biodiverse region, is undergoing rapid human population growth and landscape change, leading to population declines and local extinctions of several species. The marbled cat, *Pardofelis marmorata*, is an understudied small felid native to the forests of Southeast Asia. Although classified as Near Threatened (IUCN, 2015), its populations are in decline. Using the Connecting Landscapes software, we identified and prioritized core areas and corridors for connectivity, and projected changes in population size and genetic diversity over the next 75 years under alternative future landscape scenarios. Results indicate populations are highly fragmented with weak connectivity. Several areas are unlikely to sustain viable populations in the future, increasing the risk of local extinctions. Remaining populations are expected to become smaller and more isolated, highlighting the urgent need for targeted conservation actions. Our findings provide spatially explicit priorities to guide efforts for maintaining connectivity and ensuring the species' long-term persistence.

The 'tiger' myth and the mob: A content analysis of fear-driven persecution of the fishing cat (*Prionailurus viverrinus*) in Bangladesh

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The fishing cat (*Prionailurus viverrinus*), locally known as '*Mecho Bagh*', faces an escalating threat of mob violence in Bangladesh. This conflict is uniquely worsened by a linguistic association with tigers, which frequently triggers 'kill-on-sight' panic and collective 'tiger-hysteria' rather than being solely rooted in economic loss or livestock damage. This study aimed to identify the primary drivers behind these lynchings, map conflict hotspots, and evaluate the efficacy of the Wildlife (Conservation and Security) Act, 2012. We have conducted a systematic analysis of media-reported fishing cat killings occurring between 2020 and 2025. Data were categorized by locations, perceived threat level, and the legal repercussions faced by the perpetrators. Preliminary findings indicate that the majority of negative interactions occur upon mere sighting, fueled by the misconception that these small cats are dangerous and even seen as human or livestock eaters. However, while the Wildlife Act 2012 provides a legal framework for protection, there remains a significant gap between reported killings and legal enforcement or community prosecution. The study recommends that fishing cat conservation in Bangladesh requires targeted public awareness campaigns to separate the 'tiger' identity from the species. Legal interventions alone are insufficient without addressing the underlying collective fear through local education and hotspot-specific awareness and management.

A tale of two cats: Temperature driven density gradients of Canada lynx and bobcats reveal contrasting responses to climate change at a range margin

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Climate change causes divergent range shifts in cold versus warm-tolerant species, potentially reshuffling biotic interactions at range margins. In the United States, the warm adapted bobcat (*Lynx rufus*) and the cold adapted, federally threatened Canada lynx (*Lynx canadensis*) represent two such species that are generally exhibiting differential responses to climatic changes, particularly along their range margins. Limited research has predicted southern peripheral populations of lynx to contract and northern peripheral populations of bobcats to expand, yet outside of coarse distributional metrics, little information exists regarding the ecology of these felids along range peripheries. Here, we use camera traps and spatially explicit capture-recapture (secr) modeling to examine how climatic gradients in a montane system influence current and future patterns of density and abundance of the two congeneric felids at a range margin in Washington, United States. We identified individual lynx and bobcats using pelt markings along the inner front legs, and used secr to model density, abundance, and spatial variation of density as a function of temperature and environmental gradients. We also predicted future density and abundance using three different Shared Socioeconomic Pathway (SSP) climate scenarios. Temperature drove density patterns along the range margin, with lynx densities declining and bobcat densities increasing as a function of temperature. Future densities and abundances, obtained via projection of current-day models onto future climate scenarios, declined for lynx but were stable for bobcats under all SSPs, with both species experiencing upward elevational shifts. Our results paint a concerning

picture of lynx population persistence, yet simultaneously reveal high elevation burn-scarred areas that, in the absence of disturbance, may provide refugia for lynx in Washington. Our approach also reveals how temperature gradients shape density patterns of cold and warm-tolerant felids and could be applied to different systems to better understand population trajectories of other small cat species.

Interspecific avoidance and fine-scale segregation in Neotropical small wild cat assemblages

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Six small wild felid species occur in southern Brazil and Uruguay, primarily within the Atlantic Forest–Pampa ecotone, a region increasingly shaped by human land use. In such modified landscapes, understanding interspecific interactions within felid guilds is essential, as competitive processes can strongly influence habitat use, activity patterns, and population dynamics. Dominant competitors may restrict subordinate species from accessing resource-rich areas, leading to spatial or temporal avoidance. This study assessed felid diversity and spatio-temporal interactions across the Atlantic Forest, Pampa, and Uruguayan Savanna using standardized camera-trap surveys. Data were collected from 27 study areas in southern Brazil and Uruguay, integrating information from previous projects and complementary datasets. A total of 440 camera-trap sites were used to evaluate species diversity and ecological responses to habitat modification. Across all study areas, 1,000 independent records of wild felids were obtained, representing six species. Detection frequencies were highest for margays/*Leopardus wiedii* (n = 425), followed by Geoffroy's cats/*Leopardus geoffroyi* (n = 293), ocelots/*Leopardus pardalis* (n = 154), southern tiger cats/*Leopardus guttulus* (n = 91), jaguarundis/*Herpailurus yagouaroundi* (n = 20), and Muñoa's Pampas/*Leopardus colocola* cats (n = 17). In addition, 117 records of the domestic cat/*Felis catus*, an exotic species, were documented and excluded from estimates of wild felid richness and diversity but retained due to its potential ecological interactions. Spatio-temporal analyses are ongoing and, to date, have focused on pairwise interactions involving Geoffroy's cats, including comparisons with margays and jaguarundis in both interaction directions. Preliminary results indicate significant consistent spatio-temporal avoidance between Geoffroy's cats and margays across most study areas, supported by non-random time-to-encounter patterns. One comparison showed no significant avoidance of margays by Geoffroy's cats, whereas the reciprocal interaction remained significant. Avoidance between Geoffroy's cats and jaguarundis was also detected in the Candiota study area. These preliminary findings suggest that interspecific competition contributes to structuring felid assemblages at fine spatial and temporal scales in human-modified landscapes.

Rock and Pampa – Uruguay Small Wild Cat Program: Advancing small wild cat conservation in the South American Pampa through integrated science and community action

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Small wild cats of the South American Pampa biome are among the least studied felids in the region, despite facing accelerating threats from habitat transformation, landscape fragmentation, road mortality, and increasing human–wildlife conflict. In Uruguay, the scarcity of long-term ecological data and applied conservation frameworks has historically limited effective protection for these species. Rock and Pampa – Uruguay Small Wild Cat Program was established to address these gaps by integrating rigorous field research, community-based conservation, and science-driven communication. The program is a member of the Small Wild Cat Conservation Foundation. Since 2021, Rock and Pampa implemented systematic camera-trap monitoring across protected areas and private lands in northern Uruguay, deploying over 35 camera-trap stations and accumulating more than 1,800 camera-trap nights. This effort produced the most comprehensive contemporary dataset on small wild cats in the Uruguayan Pampa, confirming the presence of *Leopardus munoai*, *Leopardus wiedii*, and *Leopardus geoffroyi*. Notably, the program documented the first live photographic records of the endemic and nationally threatened Pampas cat (*Leopardus munoai*) in Uruguay in over a decade, providing critical evidence for its continued persistence and informing national conservation priorities. Activity pattern analyses revealed temporal niche partitioning that supports coexistence within heterogeneous Pampa landscapes. Beyond data generation, Rock and Pampa translated research findings into tangible conservation outcomes. The program established a Human–Wildlife Coexistence Network with rural landowners, facilitated voluntary conservation actions on private lands, implemented roadkill monitoring and mitigation awareness campaigns, and delivered environmental education initiatives in rural schools. Through targeted outreach and international visibility, the program has strengthened institutional collaboration and public support for small wild cat conservation. Rock and Pampa represents a scalable, interdisciplinary conservation model that bridges research and action, demonstrating how locally led initiatives can deliver measurable conservation impacts for small wild cats across underrepresented grassland ecosystems of South America.

Conference Code of Conduct

We, as a local organizing committee, have at best tried to make the conference as inclusive as possible. To achieve this, we expect a certain level of conduct to be upheld at all times. In addition, the Small Cats Symposium has a code of conduct embedded in its mandates. Therefore, the Small Cat Symposium is committed to providing a safe, hospitable, and productive conference environment for everyone present, regardless of ability, ethnicity, religion, physical appearance, sexual orientation, or gender. We strongly advocate mutual respect at all symposium events. It is important to remember that an environment where people feel uncomfortable or threatened is not productive. This code of conduct outlines our expectations for participant behavior and the consequences for unacceptable behavior. We expect all event participants to abide by this code of conduct during the symposium.
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- Be considerate and respectful to each other.
- Communicate openly and thoughtfully and encourage others to do the same.
- Refrain from harassing, discriminatory or demeaning conduct.
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- Slandering
- Advocating for, or encouraging, any of the above behaviors.

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We value your participation in the Small Cat Symposium activities as we want to make the experience for everyone as educational, productive, and positive as possible.