

CANID

Volume 2026 | Issue 2

news



An urban golden jackal (*Canis aureus*) leaps across a channel at Yarkon Park, Tel Aviv, Israel.

© Boaz Amidror



FOREWORD

Dear Canid enthusiasts

Welcome to the second issue of 2026 of the newly designed *Canid News*, brought to you by Raimundo and Shlomo.

Continuing our theme of canid adaptability and ecological flexibility from the previous volume, this issue brings fresh examples of how canids adjust to changing environments.

- Jackals in Europe: Two high-impact studies explore the drivers of their range expansion across Europe focusing on different drivers: climate, wolf presence, and human shield from wolves.
- Dholes: Though specialized carnivores, dhole packs have been observed using agroforests—such as tea plantations—as secondary habitats.
- African golden wolves in Ethiopia: These wolves demonstrate resilience by turning to livestock remains during droughts when natural prey is scarce.
- Prehistoric wolves: Evidence suggests they crossed sea ice to reach a small Baltic Sea island.

This volume also features:

- A snippet of an essay on the complex relationship between wolves and humans, exploring why wolves remain controversial.
- A first look at Doug Smith's new book 'Wolf: The Illustrated Biography' book.
- New evidence of wolves attempting to hunt European bison.

Meanwhile, CSG is revising canid taxonomy, with the first version scheduled for online publication in early 2027.

Finally, a reminder: Canid News thrives on your updates. We cannot continue future issues without your contributions. Please share your canid-related content—big or small—through the [Canid News Content Submission Form](#).

We wish you all a good reading!

Nucharin & Geraldine
Co-Chairs



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Edited by [Shlomo Preiss-Bloom](#)



<https://www.canids.org/canidnews/2026-2.pdf>

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Who Do We Study? Us or Them or Maybe Both?

It was 65 years ago on Isle Royale where famed wolf biologist L. David Mech snuck into a fishhouse along the frozen shoreline to get a better look at a wolf pack. Mech and pilot Don Murray had been aerially tracking the pack and knew their route. Murray quietly and expertly landed the plane out of sight of the traveling wolves and Mech crept into the hiding place unseen and unknown. The wolves stayed true to their route and the rest is history. Mech clicked is best photos yet of the wary beasts, a mere fifteen feet away - close looks adding to his groundbreaking study of wolves at a time when little was known about them. This and many other encounters by Mech defined his career. He went on to study wolves, bust myths, and learn about wolves in a way no one had before. Ultimately this helped wolves and humans coexist, leading to conservation action that rippled across the northern hemisphere. This was the start to what would become one of the best studied mammals in the world. Mech dedicated his life to the biological study of wolves. **Could such a thing happen today?**

Read the full essay online

▶ **Who Do We Study? Us or Them or Maybe Both?**

Douglas Smith's new book, *Wolf: The Illustrated Biography*, brings his long-term field perspective to a wider audience, tracing the biology, social lives, and conservation challenges of wolves around the world. See page 9 for more details.



Yellowstone circa 1930s. Predator control was park policy.



Wolf reintroduction receives massive scrutiny, generates controversy, and almost always is preceded by some form of public outreach which today is evolving toward the internet.



Many believe wolf hunting leads to social acceptance of wolves but data are mixed.



The public is fascinated by wolves and social media may be the best way to reach large groups of people otherwise unwilling to engage in outreach efforts.



Submitted by
Taylor L. Rabe and
Douglas W. Smith

Jackals exploit ‘human shield’ to evade wolves

New research has revealed that grey wolves (*Canis lupus*) are the main factor limiting the expansion of golden jackals (*Canis aureus*) in Europe. However, human activity is importantly reducing this suppressive effect of top predators. In combination with human-induced climate warming and land-use changes, this makes future bright for the mesocarnivore. The new study published in journal *Nature Ecology & Evolution* predicts that jackals could colonize up to 75% of the continent, almost six times their currently occupied area.

To better understand mechanisms behind one of the most dramatic range shifts among canids in recent history, researchers from 13 European countries studied the ongoing expansion of the golden jackal. The study is based on standardized jackal howling survey data collected from 2001 to 2017 at 8,991 locations distributed across Central and Southeastern Europe. Results show that shorter snow-cover duration, intermediate forest cover and proximity to water bodies are all associated with jackal presence. But wolf presence has the strongest impact: jackals are most likely to be present where wolves are absent or occur sporadically and least likely in the core areas of stable wolf packs. This lends support to the mesopredator release hypothesis indicating that the historic decline of wolves in Europe was the main trigger for jackal spreading on this continent.

But the story does not end here. Results further show that human presence can modulate jackal-wolf interactions through a process known as ‘human shield’. Researchers observed that jackals generally avoid human settlements in regions where wolves are absent. But where wolves are present, jackal behaviour changes as they select areas near people.

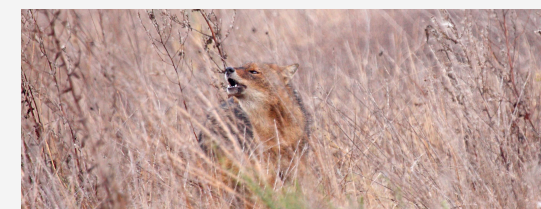
Based on these insights, the authors also developed a model that predicts the extent of future jackal expansion. They found that 75% of the total area of the continent is environmentally suitable for this species. This is 6-times larger than the area jackals currently occupy, with large areas of Western Europe, where jackals were first detected in recent years, predicted to be very suitable for this species, especially in France and in the Iberian Peninsula. Further jackal expansion will also depend on the future of wolf dynamics in Europe. Following decades of persecution and a historical bottleneck around the 1970s, wolves are now recolonizing large parts of their historic distribution in Europe. This has already reduced the potential for jackal expansion in a considerable part of Europe (ca. 320,000 km²).

The study provides evidence that the recovery of apex predators can act as a nature-based solution to regulate expanding mesocarnivore populations. However, to retain such ecological effects, apex predators must reach ecologically-effective densities and sufficient social stability. This can be a considerable challenge in human-dominated landscapes like Europe and often requires proactive management and effective conflict-prevention measures to facilitate their coexistence and reduce social conflicts.

Ranc, N. et al. 2026. [Human shielding from wolves facilitates jackal expansion across Europe](#). – *Nature Ecology & Evolution*. doi: 10.1038/s41559-026-03060-y



After being confined to the fringes of Southeastern Europe for millennia, jackals have recently expanded across large part of the continent, reaching as far west as Spain and as far north as the Arctic. Photo: Martin Steenhaut.



Researchers from 13 countries used playback recordings of howling jackals and recorded their responses at nearly 9000 locations to uncover the factors that influence their distribution in the Continental Europe. Photo: Miha Krofel.

Submitted by Nathan Ranc & Miha Krofel

Climate drives jackal expansion across Eurasia

The golden jackal (*Canis aureus*) is undergoing one of the fastest natural range expansions ever documented in a European mammal. Once largely confined to southeastern Europe, the species has spread rapidly over the last few decades and is now established as far north as Estonia, with recent records from Fennoscandia and the Iberian Peninsula.

What is enabling this remarkable expansion?

An international team of researchers addressed this question using one of the largest genomic datasets ever assembled for the species. By analysing nearly 20,000 genome-wide genetic markers (SNPs) from over 360 golden jackals sampled across Eurasia, the researchers investigated how climate, landscape, and human-related factors influence gene flow, local adaptation, and future expansion.

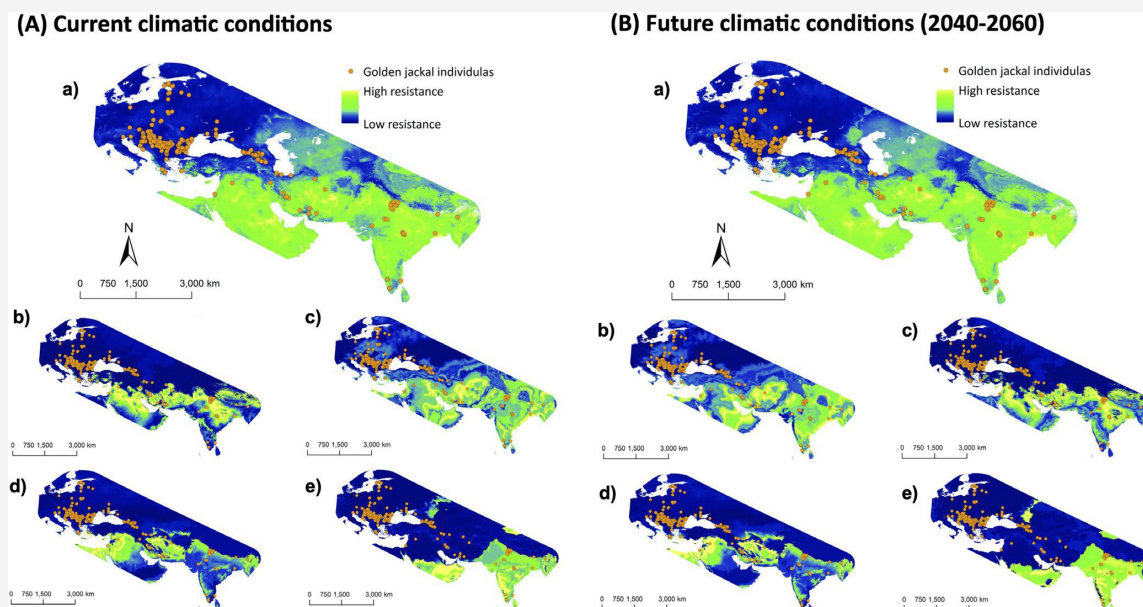
Key findings

Climate shapes genetic connectivity. While geographic distance remains the primary factor influencing genetic patterns across the entire range, climate is the strongest environmental driver of gene flow and local adaptation. Variation in temperature and precipitation explains how populations remain genetically connected across the landscape.

Europe offers few climatic barriers. Connectivity models reveal remarkably low resistance to dispersal throughout most of Europe. This suggests that golden jackals are likely to continue expanding northward and westward as climatic conditions become increasingly favourable.

Evidence of adaptation to colder environments. The study detected strong genomic signatures associated with winter temperature and precipitation, indicating ongoing local adaptation that may facilitate the species' successful colonisation of northern Europe.

Hybridisation with dogs is not driving the expansion. Although some jackals carry traces of domestic dog ancestry, admixed and non-admixed individuals occupy similar habitats. The findings indicate that hybridisation has played little role in shaping the species' rapid range expansion.



Predicted current and future connectivity across Eurasia

Why does it matter?

The study provides one of the clearest examples of how climate change can influence the distribution of a highly adaptable mammal. Rising temperatures and changing precipitation patterns are creating increasingly favourable conditions for the golden jackal across much of Europe, while some populations in southern parts of the range in Asia may face declining habitat suitability in the future.

The authors emphasize that conservation and management should account for functional connectivity across the species' expanding range and recommend continued genomic monitoring, particularly in regions linking Europe and Asia, where future changes in connectivity may be especially important.

Flores-Manzanero, A., W. Bogdanowicz, M. Stefanović, ..., M. Pilot . 2026. Climate as the Main Driver of Large-Scale Genetic Patterns and Connectivity in the Expanding Golden Jackal. *Global Change Biology* 32 (4): e70879. <https://doi.org/10.1111/gcb.70879>.

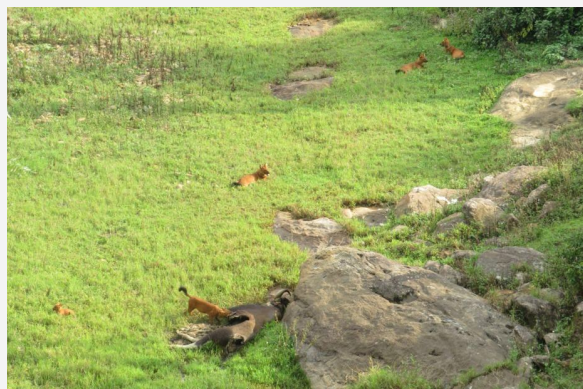
Dholes in your hot brew

Dholes are among the top predators in South and Southeast Asia's forest systems. The highly social canids typically prefer dense forested habitats and avoid areas with human activity. Since dhole packs and populations are largely confined to relatively undisturbed forest habitats in the tropics, most of our understanding of the species comes from research within Protected Areas. Over the last decade or so, anecdotal observations and exploratory research began hinting at dhole presence even in human-dominated multi-use landscapes.

To understand how this elusive carnivore shares space with people, we focused on the human-altered agroforest landscape of Valparai in India's biodiverse Western Ghats. The Valparai plateau is a spectacular mosaic of tea, coffee, and cardamom plantations dotted with rainforest fragments. Surrounded by Protected Areas on three sides, the plateau is home to over 70,000 people, their livestock, and a rich diversity of wild animals, including leopards, elephants, and primates.

Tracking the packs

We used a multi-pronged approach to assess dhole ecology at both, the population and pack levels in Valparai. Overlaying a grid across the landscape, we conducted systematic camera-trapping and indirect sign surveys. And marking perhaps the first effort to characterize carnivore microhabitat features in India, we used a local informant network to locate packs and measure fine-scale features like vegetation cover, refuge structure and field of vision. Finally, we collected fecal samples from latrine sites to evaluate their diet.



A pack of dholes feeding on the carcass of a gaur in a marshy swamp amidst the tea plantations of Valparai, India. © The Dhole Project



A pair of dholes resting at the edge of a tea plantation in Valparai, India. © The Dhole Project

Pious, A., Das, A., Thasmai, H.S., Ganguly, D., Sharma, A.D., Sheikh, S., Srivathsa, A. 2026. Tea for two: India's commodity agroforests as coexistence landscapes for the endangered Asiatic wild dogs and people. *Ambio* 55, 1026–1038. <https://doi.org/10.1007/s13280-025-02260-3>

A unique blend

Contrary to expectations based on protected area-centered past research, dholes in the agroforests of Valparai did not strictly track the distribution of their primary prey. Instead, our spatial analysis showed that they had a higher probability of using flatter areas away from human settlements while preferring fragmented tree cover, such as rainforest patches and eucalyptus plantations. There were also non-negligible overlaps between high dhole use areas and livestock activity. At a finer scale, dhole packs chose microhabitats offering a strategic trade-off: dense vegetation for refuge combined with clear sightlines that enabled vigilance and hunting.

Coexistence in shared spaces

Despite high overlap in dhole use sites and high abundance of livestock in the landscape, fecal analysis showed that wild prey (sambar deer, gaur, wild pigs, muntjac deer) dominated dhole diet. However, we also detected poultry remains in their diet; follow-up camera trapping confirmed that dholes were scavenging chicken from local waste-dumping sites. Our work shows that agroforests like tea and serve as ideal 'secondary habitats' and need to be viewed as future conservation landscapes for dhole metapopulations across Asia.

Submitted by Arjun Srivathsa and Abraham Pious

Wolves attempt to hunt European bison

The European bison (*Bison bonasus*) is often described as a non-prey species and therefore occasionally serves as a baseline in comparative ecological studies. However, historical data and our recent documented observation of wolves (*Canis lupus*) attacking a European bison herd challenges this. To our knowledge, this is the first video-recorded evidence of wolves attacking a herd, focusing their attack on a small calf.

The event was observed in the Białowieża Primeval Forest in north-eastern Poland. The recording shows a pack of seven wolves attacking a herd of 11 European bison, focusing on a small calf. The wolves managed to grab the small calf twice, biting it in the neck and attempting to drag it away, but were repeatedly chased away by the other bison. The herd then surrounded the calf and moved out of the camera's view. It appears that the calf escaped its fate, but it is not certain. Although the video did not capture a direct kill, it suggests that other predation attempts might be successful.

The observation raises questions about why predation attempts are so rare in European ecosystems, whether the European bison can still be described as a non-prey species, and what this could mean for conservation and management of the species. The lack of reported predation attempts and kills does not necessarily mean that they do not occur, it is highly likely that such events go undetected. Although the video-recording provides new insights into European bison-wolf interactions, it remains unknown how often bison are targeted by predators and how often such attempts are actually successful. If wolf predation on bison occurs more often than previously thought, it could potentially have ecological consequences.

Wijnands, R.R. & Borowik, T. (2026). "The King in the Crosshairs: Evidence of a Predation Attempt on European Bison by Wolves." *Ecology and Evolution* 16(6): e73752. <https://doi.org/10.1002/ece3.73752>



Wolves attack a herd of European bison in the Białowieża Primeval Forest. (a) Wolves grab a newborn calf while two adult cows charge towards the wolves to defend the calf. (b) Wolves grab the calf for the second time. The rest of the bison herd comes running in aid of the juvenile. (c) European bison circle around the newborn calf which was previously targeted twice during the wolf attack. After this event, the bison move away, and the wolf pack appears to give up. Click [here](#) to view the video sequence. © Mammal Research Institute, Polish Academy of Sciences.

Submitted by Robin Wijnands

By ice, not boat? Rethinking prehistoric wolves on a Baltic island

How did grey wolves (*Canis lupus*) reach Stora Karlsö, a small Baltic Sea island near Gotland? A recent archaeological study proposed that two prehistoric wolves found on the island, one Neolithic and one Bronze Age, had been transported there by people. In a new letter in *Proceedings of the National Academy of Sciences*, Luc A. Janssens and L. David Mech argue that natural dispersal over winter sea ice is the more plausible explanation.

The original interpretation pointed to the island setting, a marine-rich diet, apparently small body size, and a possible limb pathology as evidence of human control. Janssens and Mech revisit each of these claims.

Although Stora Karlsö lies about 80 km from mainland Sweden, Baltic ice has historically linked the region in winter, and wolves have been documented travelling more than 150 km across frozen Baltic waters.

Wolves reaching the island could also have hunted its abundant maritime fauna. Modern wolves are known to prey on marine mammals, including seals, while isotope values from one specimen do not closely resemble a human-associated diet.

The Bronze Age wolf may not have been unusually small either. Estimated at about 32 kg from its humerus, it falls within the normal wolf size range. Likewise, the minor bone lesion previously interpreted as evidence of disability would not necessarily cause lameness, weakening the case that the animal required human care.

The authors further note that the two wolves lived roughly 1,600 years apart, during very different cultural periods. Interpreting both as human-transported animals would require two independent episodes of wolf management or taming, despite no comparable evidence from prehistoric Scandinavia.

Rather than demonstrating human transport, the authors conclude that the available evidence better supports wolves naturally crossing sea ice and exploiting the island’s coastal resources.

Reference: Janssens, L. A., & Mech, L. D. (2026). Did Stora Karlsö wolves reach the island naturally or by boat? *Proceedings of the National Academy of Sciences*, 123, e2607054123. <https://doi.org/10.1073/pnas.2607054123>

PIRA 1926 (11)				PNAS 2025 (1)			
	SQUARE	ANATOMICAL PARTS	LAYERS	ANATOMICAL PARTS	SQUARE		DATING (BPe)
DOG	G	Humerus Left	4				
WOLF	G	Maxilla Left					
DOG	I	Humerus Right	5	Humerus Right	I	DOG	±4000 Neolithic
WOLF	G	Maxilla Right					
WOLF	G	Metacarpus II & V Metacarsus V Tuber Calcaneus	7	Metacarpus II & V Metacarsus V Tuber Calcaneus	G	WOLF	±4700 Pitted Ware
DOG	G	Maxilla					
			11	Humerus Right	G	WOLF	±3100 Bronze Age
			13				±9000
ROCK BOTTOM							

Excavation records for prehistoric canid remains from Stora Karlsö, including the two wolf specimens central to the debate.

Submitted by Dave Mech

The African golden wolf: a highly adaptable canid

The African Golden Wolf (*Canis lupaster*), once considered an African variant of the Golden Jackal, is a highly mobile canid native to North Africa, West Africa, northern East Africa and the Horn of Africa. These wolves thrive in diverse habitats ranging from grasslands and mountainous regions to desert landscapes and hyper arid dunes. Primarily predators of invertebrates and small mammals, they also play a crucial ecological role as scavengers, feeding on carcasses and even human garbage.

Remarkably, research in northern Ethiopia has shown that golden wolves exhibit unusual adaptability: unlike many other canids, their population density increases in areas with high human activity. This is likely due to the depletion of natural prey by humans, forcing the wolves to rely on alternative food sources such as livestock remains and human waste, especially during droughts. Golden wolves are territorial, but they have been observed crossing territorial boundaries to scavenge from carcasses when opportunities arise.

This spectacular behavior was documented in June 2025. Wildlife biologist Liomba-Junior Mathe, while on a camera trap field trip in the remote desert of western Somaliland (Somalia), sighted two African golden wolves feeding on a camel carcass – a testament to their opportunistic behavior and nature’s resilience! The images (Figure 1, 2 & 3) capture a raw moment of desert adaptability and survival of one of the most prominent meso-carnivores in Africa. The carcass represents a source of life in a land of scarcity and sun-baked terrain.

Date stamp: June 2025

Photos: © Liomba-Junior Mathe

Role: PhD Researcher & Ecologist, Cheetah Conservation Fund

Location: near Caasha Caddo, Awdal Region, Western Somaliland

Submitted by Liomba-Junior Mathe



An African golden wolf seen relaxed along a river in western Somaliland



An African golden wolf feeds on a camel carcass in the remote arid deserts in Awdal region, Somaliland



Two African golden wolves fight over a camel carcass in the remote arid deserts in Awdal region, Somaliland

Wolf: The Illustrated Biography

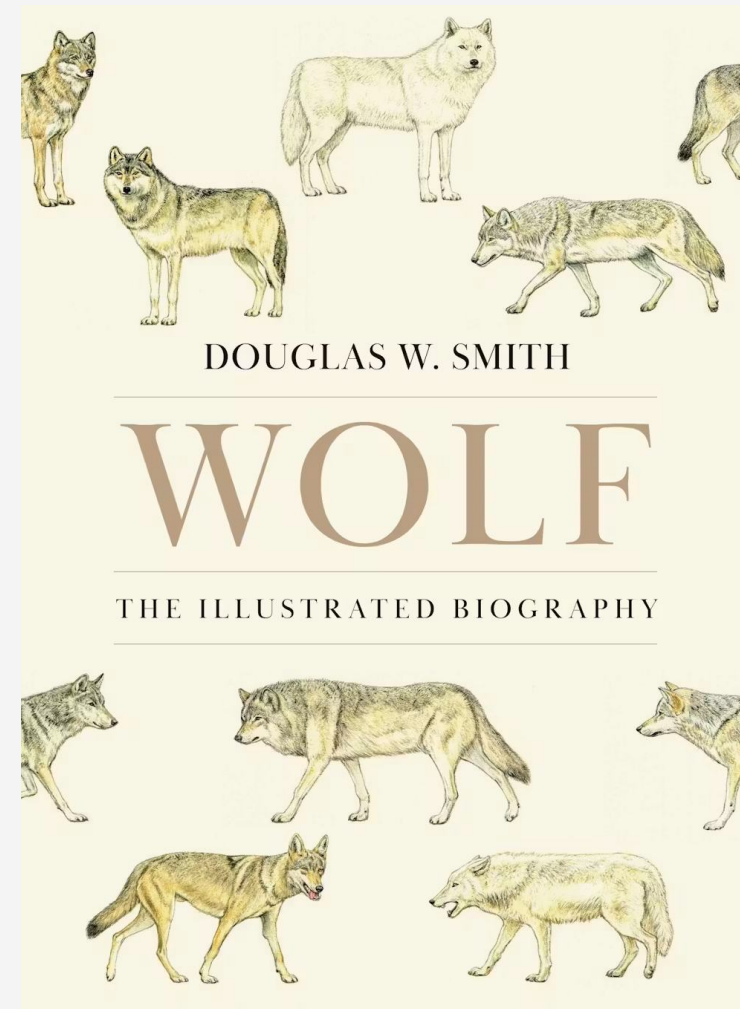
A new book by wolf biologist Douglas W. Smith offers an accessible, richly illustrated introduction to the lives of wolves around the world.

In *Wolf: The Illustrated Biography*, Smith draws on more than four decades of wolf research to explore the biology, behavior, social lives, and conservation of one of the world's most iconic carnivores. Written for a broad audience, the book follows wolves through the major stages of their lives, from denning and pup-rearing to dispersal, hunting, communication, territoriality, and pack relationships.

The book also places wolves in a wider ecological and social context, examining their evolutionary history, global diversity, relationships with prey, and often complicated coexistence with people. Alongside profiles of wolves from North America, Europe, and Asia, it considers what their future may hold in a rapidly changing world.

Smith is best known for his long-standing work on wolves in Yellowstone National Park and earlier contributions to the Isle Royale wolf study. Here, he combines that experience with more than 100 colour illustrations to create a science-based portrait of wolves for readers ranging from students and wildlife enthusiasts to conservation practitioners.

Douglas W. Smith is also among the invited speakers at the 2026 International Wolf Symposium, to be held in Minnesota from 22–25 October. Registration remains open.



Wolf: The Illustrated Biography is published by Princeton University Press.

THE ONGOING CANID TAXONOMY REVISION

New research with improved methods is challenging the conventional taxonomies in many mammalian groups, including the canids. The number of wolf species in North America is debated, and once considered as a single species, the Holarctic red fox seems to represent different evolutionary lineages in the Nearctic and Palearctic. Now accepted as a wolf species, the African wolf *Canis lupaster* was previously considered conspecific with the Eurasian golden jackal *Canis aureus*.

As the species and subspecies are the units for the IUCN Red List assessment, the correct taxonomy is utmost important for best possible assessments and conservation actions.

Accordingly, many specialist groups are taking measures to review the taxonomy of their group. In a recent article in Conservation Biology, Garnett et al. (2026) investigated the IUCN expert groups' taxonomic decision making. Very few mammal groups considered their taxonomy settled. Many had a collective decision making but some had formed a dedicated committee to make the decisions.

The IUCN SSC Canid Specialist Group (CSG) is doing the latter. The work was initiated in 2023 in Edinburgh, when a taskforce was formed after a workshop facilitated by the Royal Zoological Society of Scotland (RZSS). We have now 14 dedicated members in the Canid Taxonomy Revision Taskforce assessing all the canid species and subspecies. Similar to many other mammal groups, we have adopted the 'traffic light system' (Kitchner et al. 2022) with canid specific modifications to evaluate validity of the proposed taxa. The traffic light system assesses three lines of evidence (genotype, phenotype, and biogeography) to support or refute proposed species and subspecies. Taxa without enough evidence are left open, and more research is requested.

We are aiming to finish the first version to be published online in early 2027 and then continue to update as our understanding of canid species increases in the future.



Taskforce members at the 2023 Edinburgh Taxonomy workshop



Reference:

Garnett, S.T., Johnston, C.E., Bowles, P., Christidis, L., Conix, S., Duckworth, J.W., Lien A., Zachos, F.E. & Witteveen, J. 2026 Evaluating the use of taxonomy in the IUCN Red List. Conservation Biology DOI: 10.1111/cobi.70306

Kitchener, A. C., Hoffmann, M., Yamaguchi, N., Breitenmoser-Würsten, C., & Wilting, A. (2022). A system for designating taxonomic certainty in mammals and other taxa. Mammalian Biology, 102(1), 251-261.

Submitted by Suvi Viranta and Geraldine Werhahn

About the IUCN SSC Canid Specialist Group

The IUCN Species Survival Commission Canid Specialist Group (CSG) is a global network of researchers, conservation practitioners, and wildlife managers dedicated to the study and conservation of wild canids.

Our mission is to promote the conservation of all canid species by advancing scientific knowledge, supporting evidence-based management, and fostering collaboration across regions and disciplines. We work to assess the conservation status of canids, identify threats, and develop strategies that support their long-term persistence in a rapidly changing world.

The CSG also serves as a platform for communication and exchange within the global canid community, connecting experts and practitioners working across diverse ecological and cultural landscapes.



Get involved

We welcome contributions from researchers, conservationists, students, and canid enthusiasts worldwide.

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