

Decades after Chernobyl disaster, this radioactive landscape has become one of wildlife's most unlikely strongholds

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The Ukrainian CEZ and adjacent Drevlianskyi Reserve had the highest mammal diversity, including rare species like lynx and Przewalski's horse. Credit: Anton Zelenov, Wikimedia Commons.

An hour after midnight on 26 April 1986, a catastrophic explosion at the Chernobyl Nuclear Power Plant caused loss of human life, left people scrambling to flee, and within days, the entire area of Pripjat and Chernobyl had become a desolate wasteland. Forty years later, the Chernobyl Exclusion Zone (CEZ), where radiation levels remain above normal, has become a haven for wildlife.

A recent study investigated the impact of human presence and activities on mammal diversity in Northern Chernobyl. Information obtained from camera traps indicated that the [Ukrainian CEZ](#) and the adjacent Drevlianskyi Reserve, protected areas (PAs) with the least human activity, had the highest mammal diversity and occupancy rates. Compared to nearby PS and non-PAs, this area has the highest numbers of rare or sensitive animals—such as the Eurasian lynx, gray wolf, red deer, and the endangered Przewalski's horse.

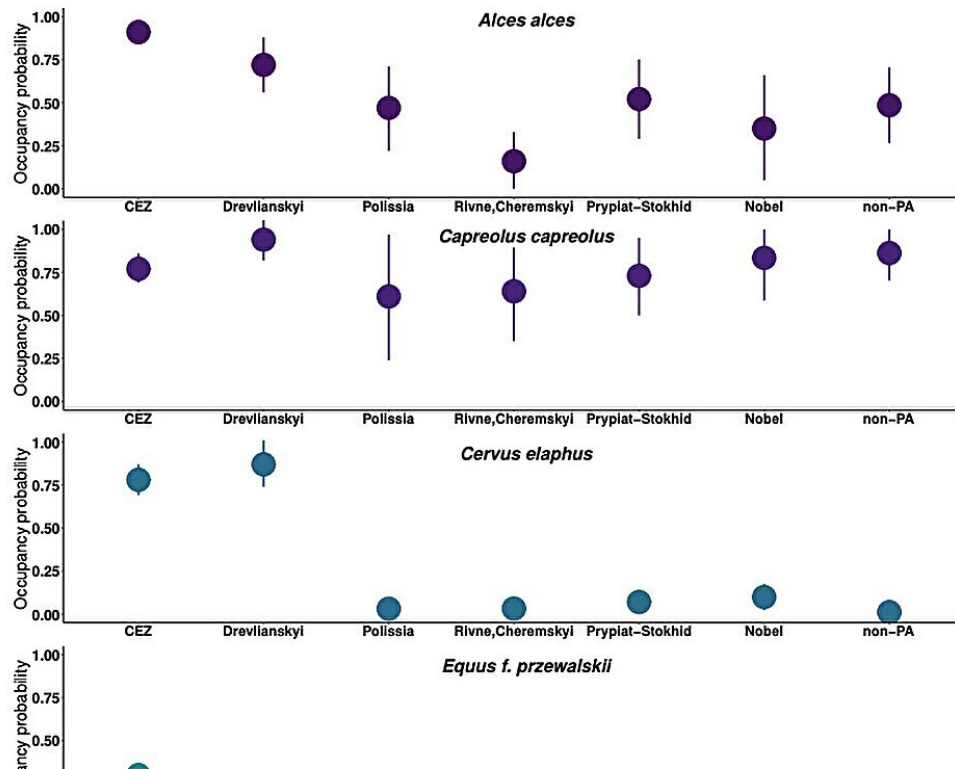
The findings are [published](#) in *Proceedings of the Royal Society B: Biological Sciences*.

Blooming biodiversity in radioactive land

There are nearly 8 million species on our planet, yet around 15,000 of them are now threatened with extinction. Even more alarming is the speed at which this is happening. Species today are [disappearing at a rate](#) estimated to be 1,000 to 10,000 times higher than the natural extinction rate—in other words, the pace at which species would have vanished if humans weren't here.

It is well documented that human activities and changes in land use for agriculture, industrialization, and urbanization have destroyed several habitats, leading to a decline in biodiversity. Establishing protected areas is a sound way to protect vulnerable species and preserve biodiversity. Compared to [unprotected regions](#), these special zones experience far less

human disturbance, reducing stressors such as hunting, habitat loss, and human-animal interactions, allowing ecosystems to recover and thrive.

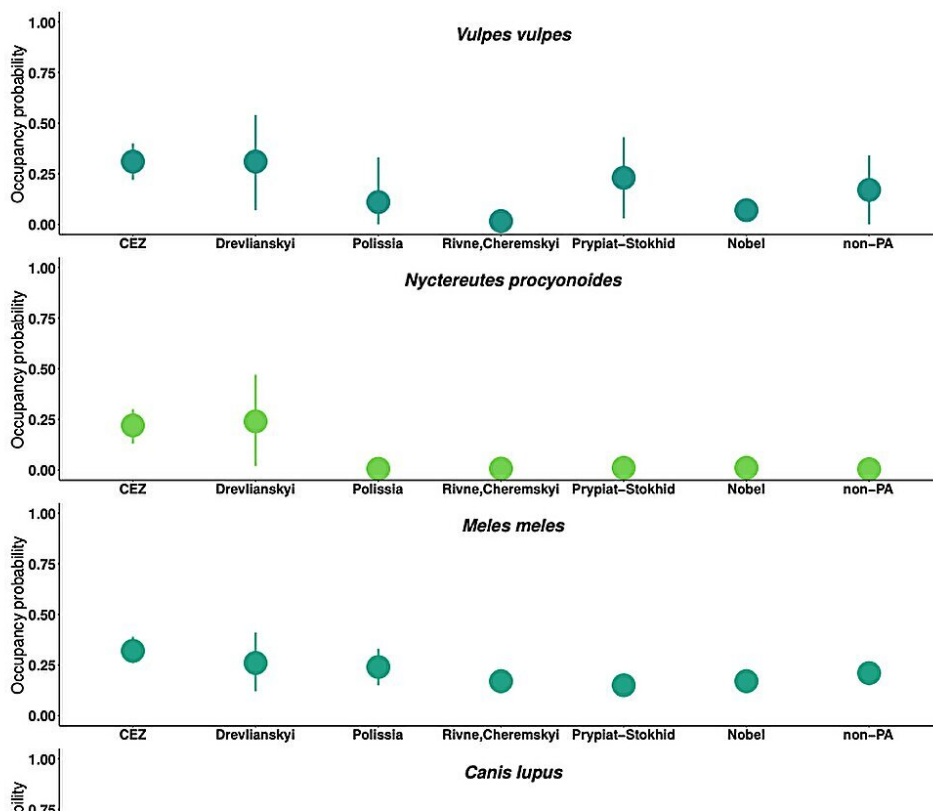


Moose (*Alces alces*), roe deer (*Capreolus capreolus*), red deer (*Cervus elaphus*), Przewalski's horse (*Equus f. przewalskii*), wild boar (*Sus scrofa*) and brown hare (*Lepus europaeus*) occupancy probabilities in the Ukrainian CEZ, six protected areas (Drevlianskyi, Polissia, Rivne and Cheremskiy Nature Reserves, Prypiat-Stokhid and Nobel National Nature Parks) and non-protected areas. Credit: *Proceedings of the Royal Society B: Biological Sciences* (2026). DOI: 10.1098/rspb.2025.3151

Some areas are deliberate PAs, while others are devoid of human establishments due to natural or man-made disasters such as the CEZ.

The researchers in this study explored a vast area of about 60,000 km² in northern Ukraine to see how different levels of PAs—CEZs, nature reserves, national parks, and areas with no legal protection—affected where large animals live. They set up 174 [motion-sensing camera](#) traps to capture images of wildlife residents in the area and analyzed the images using mathematical tools such as Bayesian occupancy models to estimate occupancy and detection probabilities.

The results revealed that the CEZ and its nearby natural reserve have transformed into an excellent refuge for endangered and shy wildlife. The number and variety of animals in the region were much higher than in smaller parks, owing to the region's strict human-entry rules.



Red fox (*Vulpes vulpes*), raccoon dog (*Nyctereutes procyonoides*), European badger (*Meles meles*), gray wolf (*Canis lupus*) and Eurasian lynx (*Lynx lynx*)

occupancy probabilities in the Ukrainian CEZ, six protected areas (Drevlianskyi, Polissia, Rivne and Cheremskyi Nature Reserves, Prypiat-Stokhid and Nobel National Nature Parks) and non-protected areas. Credit: *Proceedings of the Royal Society B: Biological Sciences* (2026). DOI: 10.1098/rspb.2025.3151

Small parks didn't provide enough protection or space for large mammals to thrive, so they often had as little wildlife as areas with no official protection at all. Yet protected areas still played an important role, helping species like red deer, red foxes, and raccoon dogs flourish. At the same time, wolves, lynx, and wild boar were often found roaming near roads and croplands rather than in small PAs, where low human activity and fewer disturbances created safe space for wildlife to live.

The diversity of wildlife in large, strictly protected areas offers yet another powerful example of how animals can thrive when free from human interference.

More information: Svitlana Kudrenko et al, The Chernobyl Exclusion Zone as a wildlife refuge: restricted human access shaped mammal recolonization, *Proceedings of the Royal Society B: Biological Sciences* (2026). [DOI: 10.1098/rspb.2025.3151](https://doi.org/10.1098/rspb.2025.3151)

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