

# Study provides insights into how cold-adapted species respond to climate change

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By analyzing historical data generated during and between ice ages, investigators have identified different mechanisms used by cold-adapted Arctic mammalian species to respond to severe climate fluctuations.

As described in a study published in *Mammal Review*, the team formulated three models to help interpret the responses of different species to such climate cycles. The models bring new understanding of how cold-adapted species are responding to anthropogenic climate warming, which is important for decision-making to enhance biodiversity and habitat conservation.

"Today, Arctic species suffer the most due to global climate warming and without a doubt, people are responsible for this trend. We cannot go back, but hopefully we can still prevent next massive extinction. And the best start is to understand how climate warming influence Arctic taxa," said corresponding author Joanna Stojak, Ph.D., of the Mammal Research Institute at the Polish Academy of Sciences. "We took a closer look on past and present changes in the genetic diversity of different cold-adapted [species](#) and how their ranges were changing along with changing [climate](#). It was very exciting to see that different taxa responded differently, yet still we were able to identify clear and common patterns."

**More information:** Extinction and replacement events shaped the historical biogeography of Arctic mammals in Europe: new models of species response, *Mammal Review* (2022). [DOI: 10.1111/mam.12298](https://doi.org/10.1111/mam.12298)

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