# Colossal Biosciences’ dire wolf pups spark debate on de-extinction and environmental priorities



In April 2025, Colossal Biosciences, a Texas-based genetic engineering firm established in 2021, announced the birth of three pups described as de-extinct dire wolves, reigniting public fascination with the species that vanished between 8,200 and 12,700 years ago. The announcement has sparked extensive debate concerning the scientific, ethical, and ecological implications of reviving extinct species, especially within the context of ongoing environmental destruction.

The three pups, named Khaleesi, Romulus, and Remus, after popular cultural references including the HBO series Game of Thrones and Roman mythology, were reportedly bred within an eighteen-month period. Colossal Biosciences, which has also promoted projects to revive woolly mammoths, Tasmanian tigers, and dodos, has partnered with the University of Melbourne on de-extinction efforts related to the Tasmanian tiger, whose last captive individual died at Beaumaris Zoo in 1936 due to neglect.

Despite the excitement around the announcement, experts express significant scepticism. Vincent Lynch, a genetics researcher at the University of Buffalo, emphasised that what has been created is essentially a grey wolf resembling what is thought to be a dire wolf, derived from genetic material extracted from a 13,000-year-old tooth and a dire wolf skull approximately 72,000 years old. The genetic reconstruction involved several sources, including modern grey wolves, domestic dog egg cells, and gestational surrogates. Lynch stressed to The Independent that “what Colossal Biosciences have done is create a grey wolf that superficially resembles a dire wolf,” highlighting the scientific challenges posed by the significant temporal span between genetic samples and questioning the notion of true ‘de-extinction’.

Co-founder Ben Lamm claimed the new animals' physical traits, such as thicker fur and longer tails than contemporary grey wolves, signify successful de-extinction. Additionally, George R.R. Martin, whose popular fantasy series helped popularise the dire wolf, serves as a cultural adviser to Colossal Biosciences and expressed emotional responses to the animals, stating, “Colossal have created magic by bringing these majestic beasts back to our world.” His celebrity involvement has undoubtedly amplified the project's visibility and, according to critics, contributed to prioritising charismatic extinct species in funding and public attention.

However, a detailed analysis published by Bella Caledonia challenges the broader narrative surrounding this scientific achievement. The article presents de-extinction efforts as a potentially superficial response to the ecological crisis, reflecting capitalist tendencies to seek marketable solutions without addressing systemic environmental destruction. It argues that such projects create illusions of security, potentially lessening the urgency to protect extant habitats and species. Efforts to revive aesthetically appealing extinct animals, often deemed "charismatic megafauna," receive disproportionate scientific and financial support, while less popular species continue to face neglect, widening the inequalities in conservation priorities.

The article critiques the portrayal of extinction as a momentary event that can be reversed by “re-inserting” species, underscoring that extinction is an extended, complex process involving habitat loss, hunting pressures, and environmental changes. Introducing genetically engineered analogues might disrupt existing ecosystems, effectively constituting the introduction of invasive species with unpredictable impacts.

Moreover, the report situates the announcement within a context of ongoing widespread environmental degradation characterised by habitat destruction, pollution, and climate change, citing severe water contamination incidents across Ireland, Colombia, and India. It draws on evidence from the United States Environmental Protection Authority regarding phenomena like algal blooms caused by sewage discharge, which harms marine life and disrupts ecosystems. Such environmental harms persist despite legal sanctions and public awareness, often compounded by inadequate enforcement and violent suppression of environmental activism.

The article further critiques the capitalist framework underpinning many such technologies, asserting that the reliance on high-tech fixes to ecological problems perpetuates a disconnect from fundamental environmental responsibilities. It references academic perspectives arguing that true environmental sustainability requires systemic change beyond reformist market solutions and calls for collective action to safeguard natural habitats and species.

This multifaceted discussion highlights the complex intersection between scientific innovation, cultural influence, ecological realities, and socio-political dynamics. While Colossal Biosciences’ announcement marks an intriguing advancement in genetic engineering, the broader implications for conservation, ecological balance, and environmental policy remain subjects of active debate. The interplay of popular culture, commercial interests, scientific ambition, and environmental ethics frames a contentious dialogue about humanity’s role in preserving and interacting with natural life.

Source: [Noah Wire Services](https://www.noahwire.com)

## References

* <https://colossal.com/direwolf/> - This article supports the claim that Colossal Biosciences has successfully brought back the dire wolf through de-extinction, highlighting the use of genetic engineering to increase resilience in species and the company's broader de-extinction goals.
* <https://time.com/7274542/colossal-dire-wolf/> - This piece corroborates the birth of Romulus, Remus, and Khaleesi, the first dire wolves brought back after a long period of extinction, and discusses Colossal's further plans to work on other extinct species like the woolly mammoth.
* <https://www.businesswire.com/news/home/20250407444322/en/Colossal-Announces-Worlds-First-De-Extinction-Birth-of-Dire-Wolves> - It confirms the scientific breakthrough achieved by Colossal in de-extincting the dire wolf, noting it as a critical step towards de-extinction technologies and highlighting the company's conservation efforts for other species like the red wolf.
* <https://abcnews.go.com/US/dire-wolf-revived-biotech-companys-de-extinction-process/story?id=120558562> - This news article provides details about the genetic engineering process used by Colossal Biosciences to bring back the dire wolf, including the use of surrogate dogs and modern genetic techniques like germline editing.
* <https://www.federalregister.gov/documents/2024/11/15/2024-25534/negative-option-rule> - Although unrelated to the main topic of dire wolves and de-extinction, this source highlights legal and regulatory issues in marketing and technology, which indirectly relates to broader discussions on ethics and legal frameworks in biotechnology.