

## 3Qs: The ethics of species 'de-extinction'

March 25 2013, by Angela Herring

---



Philosophy professor Ron Sandler is director of Northeastern's Ethics Institute and a research associate in the Environmental Justice Research Collaborative. Credit: Brooks Canaday

Scientists are closing in on the capacity to clone extinct species using biotechnology and DNA samples from the ancient past, a process that is called "de-extinction." The prospect of bringing back extinct species was discussed last week at a conference hosted by National Geographic and TEDx, in which many conservationists, geneticists, and biotechnologists supported the idea. We asked Ronald Sandler, a professor of philosophy

at Northeastern and author of the new book [The Ethics of Species](#), to share his take on what has been described as the "mind-blowing idea of the year."

## **What is "de-extinction" and why is it a hot topic of public conversation right now?**

Extinction occurs when there are no longer living members of a species. To say that the woolly mammoth, [passenger pigeon](#), and [thylacine](#) are extinct is just to say that there are none left alive in the world. It is common in [conservation biology](#) and environmental ethics to claim that "extinction is forever." This is thought to be part of what makes human-caused extinctions so bad—extinction does not just involve the death of individual [organisms](#), but the permanent elimination of a form of life. However, it now appears that it is possible to use biotechnology to create living individuals of species that have gone extinct, perhaps even species that have been extinct for hundreds or thousands of years (so long as useable [DNA samples](#) are available in preserved [specimens](#)). This is "de-extinction."

## **What are the arguments in favor of de-extinction?**

Part of what motivates those working on de-extinction are the scientific and [technological challenges](#) involved. It would be an incredible scientific accomplishment to be able to create organisms of a species that has been extinct for some time, such as the passenger pigeon or mammoth. (There have already been efforts to use established cloning techniques to bring back individuals of species that have been extinct for only a few years, such as the bucardo, a Spanish ibex.) There is also a desire, on the part of many people, to see living examples of extinct animals (or plants), particularly charismatic or culturally valued ones, such as the ivory-billed woodpecker or thylacine. Some have claimed

that bringing back species that were caused to go extinct by human practices would, to some extent, help make up for the wrong of the extinction. Finally, it may be that the biotechnologies and techniques involved can be used to help conservation biologists in their efforts to preserve highly endangered species. For example, it could help increase the genetic diversity of small populations or those in captive breeding programs.

**Does de-extinction fit into the conclusions you made about species in *The Ethics of Species*?**

It does in several respects. In *The Ethics of Species*, I show that there is nothing intrinsically ethically problematic about modifying species, combining genomic material of different species, or using interspecific surrogates. So there is nothing wrong with conservation cloning or the genomics involved in de-extinction in virtue of their being "unnatural" or "playing god." However, another thing that I emphasize in the book is that, on a clear understanding of the value of species, it is much better to prevent species from becoming threatened in the first place than it is to try to save them (or bring them back) after they are imperiled. In addition, it is always preferable to conserve species in their co-evolved ecological context. For these reasons, de-extinction is not a particularly well-justified conservation strategy in most cases, and the technologies and techniques involved are likely to have only a very small role in conservation efforts.

Finally, it is crucial that our approaches to species conservation can, as much as possible, scale to the extinction crises we face—potentially thousands of species going extinct each year. The only way to do this is by aggressively reducing the causes of extinction, including habitat destruction, climate change, pollution, and extraction. De-extinction does not do this, and it is important that it not reduce the urgency with which we address the causes of extinction and that it not divert resources

from efforts to conserve currently existing species. So while de-[extinction](#) would be scientifically amazing and there is nothing intrinsically wrong with it, it is important to keep it in proper perspective from a species conservation perspective.

Provided by Northeastern University

Citation: 3Qs: The ethics of species 'de-extinction' (2013, March 25) retrieved 23 June 2024 from <https://phys.org/news/2013-03-3qs-ethics-species-de-extinction.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.