



Is it right to reverse extinction?

Several groups are working to bring back long-dead species, but these efforts could undo some hard-learned lessons, argues **Ben Minter**.

The North American sky, according to historical accounts, was once black with passenger pigeons. Hunters, however, saw to it that the sky was clear of the birds by the second half of the nineteenth century. ‘Martha’, the last individual of the species, expired in the Cincinnati Zoo in 1914.

Writers have long eulogized this vanished bird. The great conservationist-philosopher Aldo Leopold issued the most poignant tribute in his 1949 book *A Sand County Almanac*: “We grieve,” he wrote, “because no living man will see again the onrushing phalanx of victorious birds, sweeping a path for spring across the March skies, chasing the defeated winter from all the woods and prairies of Wisconsin.”

But what if we could once again see those victorious birds sweeping their path across the March skies?

Leopold could not have known that only a handful of decades after he wrote these words we would be on the verge of a scientific revolution in efforts to reverse the death of species. The ‘de-extinction’ movement — a prominent group of scientists, futurists and their allies — argues that we no longer have to accept the finality of extinction. By applying techniques such as cloning and genetic engineering, they believe that we can and should return lost species such as the passenger pigeon to the landscape. This is the goal of the San Francisco, California-based Long Now Foundation, which is actively supporting scientific efforts to recreate the lost bird within its ‘Revive & Restore’ project. But it does not stop there. Scientists in Spain say they are close to cloning the Pyrenean ibex, a mountain goat that took its last breath in 2000. Other species have also been targeted, including the Tasmanian tiger and even the woolly mammoth.

The de-extinction lobby makes persuasive arguments. The most powerful among them appeal to our sense of justice: de-extinction is our opportunity to right past wrongs and to atone for our moral failings. Advocates also point to the sense of wonder that the revival of extinct species could encourage among the public. Although we will always have passenger pigeons in museums and books, “book-pigeons,” Leopold lamented, “cannot dive out of a cloud to make the deer run for cover, nor clap their wings in thunderous applause of mast-laden woods.” De-extinctionists argue further that the revived species will restore lost ecological functions and enhance the diversity of ecosystems.

At the same time, the de-extinction proposal raises considerable concerns. Resuscitated species could create problems in contemporary environments and for native species that have evolved in the absence of the vanished biota. As with the introduction of any species into a new environment, there are risks of disease transmission and biological invasion. Some

conservationists also express the fear that, given decades of ecological change and human development, the landscape won’t be able to support the revived populations.

Others fret about the limited genetic diversity of any ‘de-extinguished’ species and question the assumption that reviving a genome is the same thing as recovering the animal’s behaviour and identity, which evolved over millennia. And there is also the particularly distressing concern that such aggressive manipulation of wildlife might actually end up diminishing our desire (and our limited resources) to conserve extant species — and that it would entail harmful interference in the lives of animals.

The most troubling aspect of de-extinction, however, is what it might mean for us. Attempting to revive lost species is in many ways a refusal to accept our moral and technological limits in nature. De-extinction thus reflects a new kind of Promethean spirit that attempts to leverage our boundless cleverness and powerful tools for conservation rather than for human enhancement. But things did not end very well for Prometheus.

Leopold was aware of our tendency to let our gadgets get out in front of our ethics. “Our tools,” he cautioned in the late 1930s, “are better than we are, and grow better faster than we do. They suffice to crack the atom, to command the tides. But they do not suffice for the oldest task in human history: to live on a piece of land without spoiling it.” The real challenge is to live more lightly on the land and to address the moral and cultural forces

that drive unsustainable and ecologically destructive practices.

That is why there is great virtue in keeping extinct species extinct. Meditation on their loss reminds us of our fallibility and our finitude. We are a wickedly smart species, and occasionally a heroic and even exceptional one. But we are a species that often becomes mesmerized by its own power.

It would be silly to deny the reality of that power. But we should also cherish and protect the capacity of nature, including those parts of nature that are no longer with us, to teach us something profound about the value of collective self-restraint and human limits. Few things teach us this sort of earthly modesty any more.

It cuts against the progressive aims of science to say it, but there can be wisdom in taking our foot off the gas, in resisting the impulse to further control and manipulate; to fix nature.

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