

We may weep for the dodo, but could and should we bring this lovely bird back from the dead? De-extinction is the science of restoring lost species and it has been in the news, sporadically, for decades.

5 The story in modern times began in 1990 when Michael Crichton published his science fiction novel [mystery title] in which he imagined a world where [mystery story]. Crichton had trained as a biomedical scientist, so he was aware of the then new polymerase chain reaction (PCR) technology that was revolutionising life-sciences labs. PCR enabled molecular biologists to make millions or billions of copies of DNA very quickly meaning that only tiny samples were needed.

10 Crichton imagined that PCR could be a way to amplify tiny quantities of [mystery animal] DNA and thus build a living embryo. [...]

Famously, the science imitated the art, and several encouraging papers were published in the 1990s that made it seem as though Crichton's inspired guess would be borne out. Sadly, biologists soon realised that DNA in fact breaks down super-fast; even after 100 years, DNA from museum skins of dodos, quaggas, great auks and other recently extinct animals were decayed beyond repair.

15 [...]But why would anyone want to see mammoths, or something like them, roaming present-day Siberia? Well, they were undoubtedly amazing, mesmerising beasts. As well as hunting them, our distant ancestors painted their likenesses in caves across Europe. Fascinating as they may be, there's some ecological justification for the project too.

20 The plan is for the resurrected mammoths – OK, actually engineered Asiatic elephants – to help increase the biodiversity of the Siberian and Canadian tundra to levels not seen for millennia. Today most of the tundra, when not frozen in winter, is covered by short grasses, which represent a much poorer flora than existed at the time of the mammoths more than 10,000 years ago.

25 Back then, they and other herbivores such as woolly rhinoceroses, mastodons and aurochs, the giant wild cattle of northern Eurasia, fed on a range of species of flowering plants collectively called forbs. As these large animals trampled about over the tundra snatching trunkfuls of vegetation, they left irregular gaps in the plant cover, allowing different species to thrive. Their hooves created deep prints in which plants could germinate, and their urine and dung provided richly nutritious islands of opportunity for germinating seeds.

30 [...] True, it's not de-extinction in the sense of bringing a long-dead species back to life. Instead it's more like making a "dodo" by engineering a modern pigeon, its closest relative, to become huge and flightless. The result would be a big, fatty pigeon that, whether it looked like a dodo or not, would probably fulfil some of its ecological roles.

35 [...]As a palaeontologist, I would of course love to see living [mystery animal], mammoths and dodos. In some ways, though, I am relieved that the optimistic claims for cloning and genetic technologies have not been borne out. The slowdown gives us time to consider the outcomes – and hopefully avoid some of Michael Crichton's more fevered imaginings.

Adapted from "Should we bring extinct creatures back to life?", by Mike Benton
The Guardian, 7 August 2023

1 – Identify the arguments in favor of bringing extinct species back to life.

2 – Try to guess the title of the novel by Michael Crichton. Does it make you think of more arguments against bringing back extinct species? Complete the chart.

3 – Do you find this article convincing? Identify the most efficient rhetorical tools or passages.