the weekly anthropocene

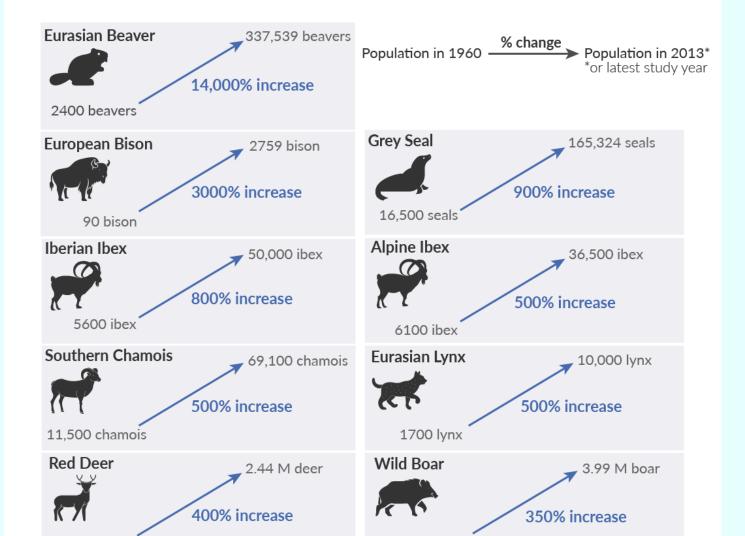


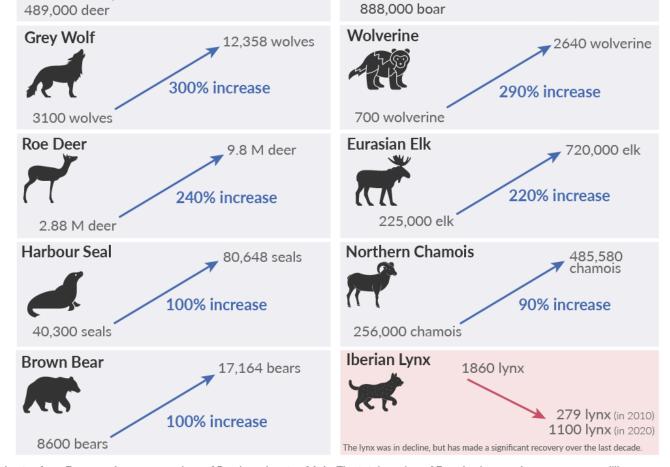
Dispatches From The Wild, Weird World Of Humanity And Its Biosphere

June 1 2022

Europe

Wildlife is making a comeback in Europe Our World in Data





*Estimates from Europe, minus some regions of Russia and parts of Asia. The total number of Eurasian beavers is now over one million. Note: The original assessment provides final population estimates and the percentage change since 1960 for each species. For some species this includes all countries in Europe. For others, only estimates from a subset of countries with high-quality studies are included. I have calculated the population in 1960 based on final population and percentage change figures from the original study. I have rounded this figure to not overstate the precision of these estimates. Source: Stefanie Deinet et al. (2013). Wildlife comeback in Europe: The recovery of selected mammal and bird species. Final report to Rewilding Europe by ZSL, BirdLife International and the European Bird Census Council. London, UK: ZSL. Icons sourced from the Noun Project. **OurWorldinData.org** – Research and data to make progress against the world's largest problems. Licensed under CC-BY by the author Hannah Ritchie.

By the early 1900s, Europe was almost entirely bereft of large mammals, with industrialization, pollution, war, and the expansion of agriculture to feed a growing population adding new pressures on top of centuries of overhunting and habitat loss. The last wild European bison was killed in 1927, with the species only surviving in zoos. The European beaver was hunted to near-extinction for its fur and <u>castor sacs</u>. Wolves were extirpated from much of Western and Central Europe, and other wild creatures were rare, declining, and confined to isolated areas. The future looked grim.

But by the 2010s and 2020s, mammal populations had skyrocketed across species and countries. This happy effect had a multitude of causes, including new, stricter hunting regulations, more efficient farming allowing the return of some lands to forest (notably, Europe produces more food today than historically, on much less farmland), and an array of highly effective conservation programs, often including reintroductions from captive-bred populations (for example, with European bison). There are many, many amazing stories of dedicated conservationists in Europe achieving astounding results: from the Knepp Wildland project to Rewilding Europe to guerrilla beaver rewilders, it's a subject worth reading about more deeply.

The infographic above highlights 18 species with particularly impressive rebounds over the 1960-2013 time period. (Check out the full infographic & story here). Some these increases are truly eye-popping: for example, there has been a *14,000%* increase in Europe's beaver populations since 1960, from 2,400 to over 337,000 individuals. Also, the one species that shows a decline in that time period, the Iberian lynx, has made great progress since then (as discussed in a recent newsletter, and indeed noted in text on the infographic), with just 94 lynx left in the 1990s but over 1,100 by 2021.

Recent decades abound with stories of animals being reintroduced or arriving on their own to countries where they had been absent for centuries. Wild beavers arrived in Italy in 2018 for the first time in 500 years. In 2019, wolves returned to the Netherlands for the first time in 140 years, and a brown bear was spotted in Portugal for the first time since 1843. Bison will be reintroduced to England later in 2022 for the first time in at least 6,000 years!

In sum, the story of the renaissance of the great mammals of Europe is a beacon of hope for the Anthropocene, an example of a breathtakingly awesome new paradigm of Pleistocene-level wildlife richness coexisting with high-technology, high-human development modern civilization. Truly the best of both worlds, and an example to follow for the rest of Earth. Great news!



Maine



In October 2022, a company called <u>Vertical Harvest</u> will <u>begin construction</u> of a 70,000 square foot indoor greenhouse in Westbrook, Maine, in a space that is now an empty parking lot. It should be completed in mid-2023. (<u>Pictured above:</u> <u>a rendering of how the project will look when completed</u>). The new complex under construction will also include 60 apartments, retail space, and a parking garage. Vertical Harvest estimates that at least 50 new jobs will be needed for work in their greenhouse (specializing in producing "specialty microgreens" like wasabi), and they are looking to preferentially hire people with mental disabilities in order to help provide an understanding and supporting workplace for these marginalized groups.

This is a relatively small development from a global perspective, of course: one new multi-use project being built in one relatively small New England town. This writer included it for two reasons. First, local pride: Westbrook is within a few hours' walking distance from their family home, and the Presumpscot River in the background of the picture above is a longtime favorite hiking spot. Second, it's just so dang *inspiring*, a multifaceted effort to add a little value to the world, with more efficiently grown greens, accepting jobs, and community business opportunities. It's also a local example of the massive advances in ultra-efficient agriculture occurring worldwide, from indoor farming to plantbased meat to cutting-edge stuff like single cell-derived <u>solein</u> proteins. Big changes in economies and food systems are made up of thousands of projects like this. Good news!



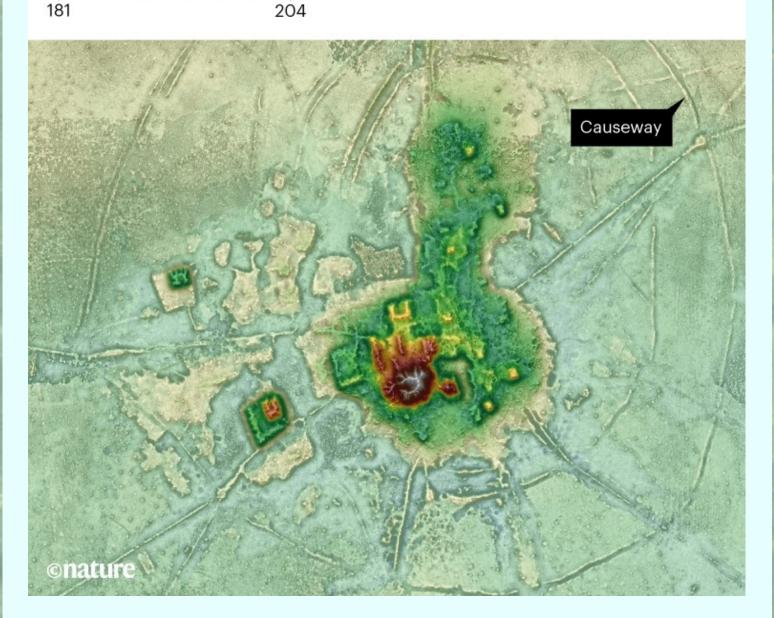
Bolivia

THE SETTLEMENT BENEATH

Dense vegetation hid this ancient urban centre from view. Researchers unveiled it using a remote-sensing technique called lidar. The site in Bolivia, called Cotoca, had earthen pyramids (largest shown in red), terraces and elevated roads (causeways), and was occupied by the Casarabe culture between AD 500 and 1400.

Metres above sea level

200 m



For decades now, conjecture has floated around the idea that the Amazon Rainforest was home to great unknown civilizations, the equal of the Aztec, Inca, or Maya, before they were devastated and scattered by disease spreading from points of contact with Europeans elsewhere in the Americas. Several tantalizing pieces of evidence have gradually made this theory seem more likely. The first European exploration of the Amazon River, led by Francisco de Orellana, <u>reported</u> great cities and managed farmland on the river's banks in the 1540s, though this was dismissed as a fantasy when much-later expeditions found nothing like it. Ecological analysis suggested that the Amazon's super-abundance of edible plant species and patches of <u>ultra-rich</u> "terra preta" soils suggested the aftermath of cultivated agroforestry, a <u>human-managed "food forest"</u> gone wild. Suspiciously built-looking hills, mounds, ditches, and possible roads uncovered by lidar surveys in the Xingu River basin <u>suggest the presence</u> of a widespread earthworks-building culture. Now, a new study published in *Nature* has found knock-down conclusive evidence of ancient Amazonian cities, forever changing our understanding of what the Americas looked like before European invasion. (For the full story, click here. For the full open-access study, click here).

Aerial lidar analysis around previously found archaeological sites in the <u>Llanos</u> <u>de Mojos</u> region of the Bolivian Amazon has revealed 26 ancient settlements, over an area that would likely have taken over 400 years to fully survey on foot. Two of the largest cities were each larger than Vatican City is today, and contained 22-meter high earthen pyramids, 6-meter raised terraces, and kilometers-long elevated causeways connecting to both nearby terrace and pyramid complexes within the city and other settlement nodes further away. (See lidar map above of the Cotoca site, one of the largest two cities). Other settlements also featured networks of canals and reservoirs, indicating highly organized water management. All this had previously been hidden from view by the thick forest vegetation covering it.

Amazonian archaeology is particularly fascinating in the Anthropocene because it offers an example of ancient civilizations, still little-known, managing an incredibly biodiverse landscape alongside heavy settlement. We may yet build a world civilization in the 21st century and beyond that enriches the soils and plant life of the land around it, as the mysterious inhabitants of the ancient Amazon Basin did. This new study sheds more light on that fascinating history.

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