Weekly Progress Roundup

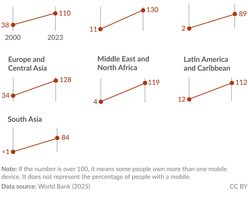
Medical supply drones, a new copper discovery, a robot that can touch, ancient scroll news, and more.

MALCOLM COCHRAN
MAY 11, 2025

4 1 1 Share

Economics & Development

- **The share of Indians in extreme poverty** (living on less than $2.15 per day at 2017 prices) **fell to just 2.3 percent in 2023**, down from 16.2 percent in 2012, according to a recent brief from the World Bank.
- **97.5 percent of Nepalese municipalities now have access to electricity,** along with **over 90 percent of households.**
- Last week's Iberian grid collapse also impacted the telecommunications network in Spain and Portugal, leaving many without service. As a result, **record numbers turned to Starlink**, which was able to provide a stable connection throughout the blackout.
- **Mobile phone use has grown dramatically** over the last few decades, particularly in the world's poorest regions.



Energy & Environment

Conservation and biodiversity

- **Palmerston Island** in the South Pacific **is now rat-free**, leading to surging crop yields and biodiversity.

Energy production

- Between 2017 and 2023, **Latin Americans installed around 31 gigawatts of "distributed energy,"** or energy produced close to its point of use—think rooftop solar panels. For context, one gigawatt is enough to power over 750,000 US homes.
- **Pakistan has seen similarly impressive growth** in energy abundance, with its citizens importing 17 GW of solar panels in 2024 alone. According to Mustafa Amjad, a program director at a Pakistani energy think tank quoted by *CNN*, "There is no policy push that is driving this; this is essentially people-led and market driven."
- The Ontario government has approved what may become **the first small modular reactor in the Western world**, set to begin operation by 2030.

Natural Resources

- The Lundin Mining Corporation has found what they claim is **the largest copper discovery in three decades**, containing at least 13 million tons of the metal.

Pollution

- **The amount of trash on European coasts fell by 29 percent between 2016 and 2021**, according to a report from the European Commission. Progress was fastest around the Baltic and Mediterranean seas, which saw a 45 percent and 38 percent drop, respectively.

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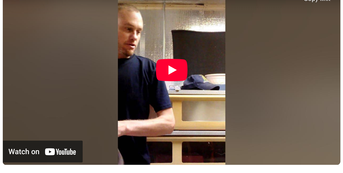
Health & Demographics

- The **drone delivery company Zipline is transforming healthcare in Ghana** by ensuring fast and reliable access to medical supplies. According to a recent study, healthcare facilities in Ghana's Ashanti Region that gained access to Zipline's drone delivery service saw maternal deaths fall by more than half.
- **Southeast Asia is winning its battle against malaria.** Between 2010 and 2020, annual malaria cases fell 80 percent, while annual deaths dropped by 77 percent. Many countries in the region are making progress toward eliminating the disease entirely.
- Last week, an extraordinary story emerged about a snake collector named Tim Friede with an extreme level of snake venom immunity. Over the course of decades, Friede injected himself with over 700 doses of venom, 200 of which were from actual snake bites. Now, **scientists are trying to use the antibodies in his blood to produce a universal antivenom.** A good reminder that tolerance for eccentric behavior is an important condition for progress.



Science & Technology

- **The Resilience lander, built by the Japanese company ispace, is set to touch down on the moon next month.** If successful (this is their second attempt), ispace would become the third private company to land a spacecraft on the moon.
- **The Federal Aviation Administration has agreed to let SpaceX launch Starship up to 25 times per year**, loosening the previous limit of five annual launches and promising to significantly accelerate the rocket's development.
- **Amazon has designed a robot that can sense through touch**, allowing it to handle a wide range of objects. The robot's job will be to stow items in bins—a job it is already performing better than most humans.
- For the first time, researchers involved in the Vesuvius Challenge have **read the title of an unopened Herculaneum scroll**: *On Vices* by the philosopher and poet Philodemus.
- Lidar, a remote-sensing technology that uses lasers to peer beneath forest canopies, is helping scientists uncover **a continuous stream of knowledge about ancient American civilizations**. Katarina Hall summarizes some of these findings in *Reason* Magazine:

> Settlements once thought to be regional capitals have been revealed as mere suburbs of even larger metropolises. What seemed like natural hills have turned out to be long-lost pyramids. Ravines have been identified as remnants of ancient human-made structures. And what was considered simple trade has emerged as a far-reaching import/export system.

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Selected essays

Jeremy Horpedahl explains what's actually happened to the US working class.

The Middle/Working Class Has Not Been "Hollowed Out"

May 7, 2025 · Jeremy Horpedahl

Claims that the middle class or working class has been "hollowed out" in the US have been made for years, or decades really. The latest claim is an essay in the Free Press by Joe Nocera. But these claims are usually lacking in data, while strong in anecdotes. Let's look at the data.

Brian Potter outlines some of the factors that limit building height.

The Works in Progress Newsletter

Why skyscrapers are so short

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Hannah Ritchie highlights some underappreciated progress against child mortality.

Children in rich countries are much less likely to die than a few decades ago, but we rarely hear about this progress

In most rich countries, child mortality has more than halved in the last thirty years; we know we can go further.

By: Hannah Ritchie
May 05, 2025

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Technological Progress Versus Degrowth as Solutions to the Sixth Mass Extinction

Pitting the Sixth Mass Extinction against the Fourth Industrial Revolution, the impacts and technology of degrowth, and more.

Jason Hickel
Wed 25 Feb 2026
Wed 25 Feb 2026

Rising ocean temperatures, deforestation, replacement of grassland with agricultural land, and many other environmental effects of human activity have been taking an enormous toll on life. Around one-million plant and animal species are now threatened with extinction according to a 2019 United Nations (UN) report, which states, "The average abundance of native species in most major land-based habitats has fallen by at least 20%, mostly since 1900." The most heavily affected are insect species, among which the extinction rate is about eight times faster than among mammal species, for example.

But despite this, the popular idea that Earth is seeing a "sixth mass extinction" is premature. According to conservation biologist Chris D. Thomas, we will only reach this conclusion if we "ignore the fossil record." Thomas's conclusion in his response to the UN report, *National Geographic* explains that only "if all species currently designated as threatened or endangered, or vulnerable, or extinct, are actually extinct and species are not threatened with extinction according to a 2019 United Nations (UN) report, which states, "The average abundance of native species in most major land-based habitats has fallen by at least 20%, mostly since 1900." The most heavily affected are insect species, among which the extinction rate is about eight times faster than among mammal species, for example.

But even if "mass extinction" fears are overblown, the increased rate of species extinctions is worth taking seriously. That is why it's important to clear up some widespread confusion about the intended goal of degrowth.

One particularly dangerous misconception is that the interests of human beings are fundamentally at odds with those of wildlife. According to this belief, continued economic growth in industrialized countries may benefit humans, but only at the expense of the long-term wellbeing of nonhuman life.

The truth is quite different. In the long run, the dangers of disordered nature are so overwhelming that protecting nature's integrity is indispensable, that advancing human wealth and economic flourishing is necessary, not detrimental, if we want to protect wildlife and maintain or even increase biodiversity.

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The Zero-Sum "Man Versus Nature" Premise

The zero-sum view of the relationship between humanity and wildlife often leads conservationists and sustainability advocates to think of human life as a threat to environmental ideals, perhaps the most explicit statement of this binary thinking comes from the late David Brower, founder of Friends of the Earth, before taking on his post as the Chief Scientist for the Pacific West Region of the National Park Service, where he served for over three decades, he elucidated his priorities in the *Los Angeles Times*:

> We are not interested in the utility of a particular species, or free-flowing river, or wilderness area. We are not concerned with how many people can live in a given area, another human body, or a billion of them. Human happiness, and certainly human fecundity, are not as important as a wild and healthy planet. I know social scientists who disagree with me, and they can't understand why I say this. They want to measure the world in the set about a billion years ago, maybe half that—we built the contract and became a species. We have become a plague upon ourselves and upon the world. Well, … Until such time as Homo sapiens should decide to rejoin nature, some of us can only hope for a swift and painless extinction.

Dave Foreman, founder of the environmental group "Earth First!" and "a leading figure among a generation of activists," according to the New York Times, likewise characterizes the idea that "we need to place human needs above those of environment" in its own sake: "a … philosophy, known as deep ecology, which holds that nature has intrinsic value and that its ability to provide resources and services to humans is secondary, vast swaths of land to nature, ripping out any trace of human intervention."

In his bestselling 2022 book *Regenesis: Feeding the World Without Devouring the Planet* George Monbiot writes:

> The more land we leave for ecosystems, the less is available for forests and wetlands, savannas and wild grasslands, and the greater is the loss of wildlife and the rate of extinction. All farming, however kind and careful and complex, involves a radical simplification of natural ecosystems. This simplification is necessary, and it is something that humans can eat. In other words, farming inflicts an ecological impoverishment. Farmed landscapes are not substitutes for wild ones.

I have come to see land use as the most important of all environmental questions, now believe it is the issue that makes the greatest difference to whether terrestrial ecosystems and species survive or are denied. The more land we require, the less is available for other species and the habitats they need, and for sustaining the ecosystem processes on which life depends.

Unlike Brower and Foreman, Monbiot pays lip service to the necessity of taking human needs into account in any efforts to protect wildlife by scaling back food production. He writes, "Agriculture is the single most significant driver of ecological breakdown, the mass impoverishment and underconsumption of vast swaths of humanity to lessen human impact on wildlife."

And the United Nations, in the "Summary for Policymakers" of its biodiversity report suggests reducing economic activity and human population growth as strategies for protecting biodiversity: "The negative trends in biodiversity and ecosystem functions and services are expected to undermine a wide range of economic sectors as indirect drivers such as rapid human population growth, unsustainable production and consumption patterns, and climate change increasingly affect nature." Monbiot makes claims that, "Transformations towards sustainability are more likely when efforts are focused on the most ecologically destructive and wasteful, including by addressing both population growth and per capita consumption."

Among those on the pro-human side of the zero-sum premise is Alex Epstein, founder of the Center for Human Progress. "Fossil fuels are the most pro-human fuel of all time" Epstein writes in his 2014 book *The Moral Case for Fossil Fuels*: "This is the essence of the conflict: the humanist, which is the term I will use to describe someone on a pro-human path, versus the anti-human environmentalist, who believes that the best for the nonhumanist treats the rest of nature as something that must be served."

Epstein is generally careful to propose positive-sum policies, for instance, he argues that "the pro-fossil fuel position is not a choice between a 100 percent fossil fuel world versus a world powered by renewables." Nonetheless, in his 2022 book *Fossil Future*, Epstein writes: "To the extent one's primary goal is animal equality one will be myopic about the benefits of fossil fuels, which are enormous, including human-benefiting impacts such as the use of animals for medical research."

Graber, Foreman, Monbiot, and Epstein don't all agree on whether to prioritize human needs or not, but they all raise serious questions the assumption that wildlife flourishing depends on human retreat and non-intervention.

Mother Nature Is a Grim Reaper

While human activity has accelerated the rate of species extinction in recent history, the causes of this are not the "natural" processes that Brower, Graber, and Epstein. Of the 993.6 percent of species that have existed on this planet are now extinct—a story of extinction that is not to be confused with the sixth mass extinction. Most of these perished in so-called "background extinctions," but at least five mass extinction events have also occurred, each wiping out over 75 percent of species on Earth at an average rate of one every 100 million years. The last one was 66 million years ago. Countless threats exist, each of which may be highly unlikely to manifest in any given century, but the sixth mass extinction is not one of these possible threats. Quite the opposite.

Take asteroids, for example. The *New York Times* reported in 2023 that, "The world's family of asteroid-hunting telescopic surveys have so far found more than 32,000 potentially dangerous space rocks, approaching Earth. Nearly 2,000 of them are large enough to inflicting planet-scale devastation have been found because it's easier to spot bigger objects in the night sky."

Still, there are likely to be many Earth-threatening asteroids out there that have not been found. A 2022 *National Geographic* article reporting on new asteroid research states, "Even a small asteroid could be a real problem if it's composed of metallic or stony rocks—one that could threaten life as we know it." Summarizing discoveries published in the journal Science, the article explains that, "A group of space rocks orbiting Earth, most of which are small, may be more difficult to pick out in the glare of the sun—and potentially a threat to our planet."

As I write this, reports of an asteroid designated "2024 YR4" have been in the news. The *Guardian* reported that "Scientists have upped the chance that it could be a very close pass of the planet in 2032" the *New York Times* reported on 18 February, 2025 that "Asteroid Could Hit Earth in Dec. 22" and on 19 February, 2025 reported "The risk has since been downgraded to a more reassuring 0.004 percent.) This asteroid is not the only one that has raised the destiny more than a dry, but it illustrates the fact that a planetary threat could be discovered at any moment.

Asteroids are just one of many known threat categories that we Earthlings are confronting. Another technological advance to worry about is the "Doomsday" Clock at the Cato Institute's Center for Global Liberty and Prosperity, has surveyed these natural existential threats in his article "Degrowth Means Certain Death for Humanity" Graber lists the threats of comet impacts, large volcanic eruptions, solar and magnetosphere, supernovicanic eruptions, plate tectonics and continental drift, ice ages and interglacials, pandemics and epidemics, nuclear weapons, nanotechnology, nearby hypernovas, gamma-ray bursts, solar flares, coronal mass ejections, rogue planets, rogue black holes, and the Sun's eventual Milky Way collapse.

That list may be just the beginning. In his book *The Precipice: Existential Risk and the Future of Humanity*, philosopher Toby Ord notes:

> It is striking how recently many of these risks were discovered. Magnetic field reversals were only discovered in 1906. Fred Hoyle thought it even let a large asteroid or comet first emerged in 1960. And we had no idea gamma ray bursts even existed until the 1960s, and so an entire history we have been subject to risks to which we were completely oblivious.

And there is no reason think that the flurry of discovery has finished—that we are the first generation to have discovered all the natural risks we face. Indeed, it would be unlikely to conclude that the last three centuries have been the first moments of mechanisms of natural extinction while major mass-extinction events meanwhile.

In any one century, the odds of a catastrophe threatening all life on Earth may be tiny. But there are 10,000,000 centuries in a billion years, and the risk from natural causes is not to be ignored. Humans are still a long way from being the species that the planet's oxygen levels will have greatly diminished. That is, unless some human-induced or human-caused species change the odds.

Expanding the Scope of Human and Non-Human Life

In the future, humans may develop the technological capacity to affordably travel to outer space and terraform previously uninhabited worlds. Since many known extinction threats are confined to a single planet, colonizing other habitable worlds with a robust biosphere would significantly reduce the chance of some species's extinction, and all known life. Therefore, if this could become multiplanetary species-level extinctions need not be the inevitable, almost universal rule.

This is among Elon Musk's long-term goals at SpaceX. "If we're a multi-planet species, we're much more resilient," he said at the Vox Media Code Conference in 2021. Earth, because we would bring them with us. And they can't build spaceships, so we are in effect the steward of life," Musk has explained.

Perhaps in addition to or instead of terraforming other planets, humans will need to build habitats in space. The Spacelist website describes the conceptualized in detail, to circumvent the many technical challenges of interplanetary travel. Progress toward a colonization plan, McCloud, physicist at the Harvard-Smithsonian Center for Astrophysics, recently commented that Musk is "not at all" close to building "a human civilization on Mars that is self-sustaining," but added that "towards the end of this century" we might have Mars settlements whose inhabitants could even bring their pets with them from Earth. I have not been able to find any expert who seriously doubt that we will be able to build Earth-like habitats for human beings somewhere sometime this millennium, which is a short period in evolutionary terms—short enough to prevent the next mass extinction.

A Positive-Sum Environmental Strategy

As philosopher William MacAskill has asked, "If it really is of value to have greater diversity of species, why do we not actively try and provide a greater amount of biodiversity above merely preventing loss of biodiversity?" The opportunity to terraform extraterrestrial environments is just one reason why environmentalists should set their sights higher than mere conservation.

Areas of Earth that are currently of limited habitability such as deserts and tundra could be transformed into comparatively biodiverse paradises. We could create biodiverse habitats on Earth's rapidly expanding human-made land mass. Humanity has already been done with the Italian sparrow (*Passer italiae*), the apple fly (*Rhagoletis pomonella*), the London Underground mosquito (*Culex pipiens molestus*) and scores of others—as biologist Chris D. Thomas describes in his book *Inheritors of the Earth: How Nature Is Not Fixed, and Why We Must Let It Evolve*. Human-created extinct species, which is the goal of the ten billion USD-valued Dallas-based startup Colossal Biosciences, which is currently working to bring back the woolly mammoth, the dodo, and the Tasmanian tiger.

Attempts to conserve Earth's current ecosystems through non-intervention are doomed because change is a constant of nature and environmental change is a constant of human life. Thus, in addition to terraforming, we will need to develop a strategy that mere conservation should be the highest hope of a forward-looking environmental movement. Human-created ecosystems will need to be maintained life in an unsustainable, short-term way. But acting in the long-term interest of Earth's biosphere and its inhabitants, human-created ecosystems will need to be managed by technological and scientific advances that will enable them to thrive at unprecedented levels.

As Tuzy explains, "In the long run, the only way to ensure the future of our (hopefully interplanetary) species is through exponential increase in wealth and technological sophistication." Such a wealthy and innovative economy as humans must continue to develop would provide sufficient environmental protection, because there is no reason to assume that the damage to wildlife caused by human industry outweighs the benefits of human industry, even from extinction—that could accrue to wildlife through the advancement of human knowledge.

If people had not been proving the world economy by using fossil fuels, agriculture, and other forms of human industrial activity, the sixth mass extinction would be underway, humans would not be much closer than chimpanzees to colonizing space and terraforming other worlds, and life would be much, much, much worse off. In his book *What We Owe the Future*, "If society stagnates technologically, it could remain stuck at a low level of prosperity and remain at risk for years to come, perhaps for a century, would be all but inevitable." Since we can only guess when and how existential threats will manifest, every extra dollar of research, development, or education might be the difference between life and death, and wealth through the technological bottleneck and into the next phase of consciousness in the universe.

The UN's projections suggest that population growth and economic activity have negative effects on biodiversity because the standard statistical models can only estimate the destructive aspects of these phenomena. Due to the intrinsic unpredictability of human knowledge, creative transformations such as terraforming other planets and reviving extinct species are outside the scope of UN projections. But this means that their projections underestimate human progress, and underestimate the possibilities and based against positive-sum solutions to the point of probably being counterproductive to the advancement of human and wildlife interests alike.

Human technological progress is not all that is needed to protect wildlife, but unlike the alternative (degrowth in ignorance), it has substantial potential as well, and thus the demise of life on Earth is more likely without technological progress that is in with a chance of success. Technological progress is not a guaranteed outcome, politically achievable than a zero-sum (degrowth) environmentalism. The former requires a wealth of technologies, scientists, and innovators, and the latter requires devices within a market economy, while the latter requires everyone to make major sacrifices for the sake of wildlife and prosperity.

As Elon Musk commented in 2022, "I think it's important that we become a multi-planet species and a spacefaring civilization, because eventually the sun will expand and engulf the Earth. So if one is a long-term thinker and cares about the future of life, it is obviously important that life become multiplanetary and ultimately multi-interstellar." That is a positive-sum environmental agenda with a decent shot at success, unlike the human-versus-nature zero-sum agenda. Graber's book *Regenesis* advocates "tipping out the trap of human intervention" for nature's sake, or Alex Epstein's book *Fossil Future* advocates "unleashing the power of fossil fuels and other impacts on animals," or David M. Graber hopes "for the right virus to come along" to wipe out humans. All these ideas are based on a false dichotomy between human and other lifeforms. They are missing the larger point that on a long enough timeline everything dies, and that everything and everyone are best served by technological and scientific progress.

This article was originally published at Quillette on 3/13/2026.

Grim Old Days: Roger Ekirch's At Day's Close, Chapter 1

Wait until the world really has other night-insomnia than TV, film, and Netflix!
Wait until the lights go out!

The historian A. Roger Ekirch's book At Day's Close: Night in Times Past provides a wonderful overview of the history of night and night-time activities, including everything from the nocturnal dangers they faced, such as the threats of crime and fire, to the various ways people spent their nighttime hours, such as sleeping, work, and sex that was related. click here

Nightfall in the great sea for darker times today. Lighting wars of poor quality and inadequate quantity. Nighttime activities have changed dramatically since the days of safety and frugality." Indeed, "from the twelve-next-people remained sparing with candlelight, to the twenty-first-century, the nighttime environment has changed a lot." Ekirch, noted that on May 22 and 23 his household made "its practice of candles." Ekirch also mentions that the most recently in the line in day-late, "candles all night."

Use of candles during the day was widely considered so extraordinarily wasteful that it was considered a sign of poverty. Ekirch quotes Thomas Dekker's 1606 work The Honest Whore, Part 1, "Poverty, poverty, poverty! Why, I have not a penny to buy me a candle-end (for) light." Ekirch, quotes Dekker's 1606 work The Honest Whore, Part 1, "Poverty, poverty, poverty! Why, I have not a penny to buy me a candle-end." Ekirch also notes that the reach of the pitifully small pool of light could appear distorted. A French origin dictionary from the mid-seventeenth-century defined candles as "a little light, which is very dim."

Various fluctuated over time, but never did ... candles become widely accessible.

"Labor candles, by contrast, offered a less expensive alternative. The mainstay of poorer folk, labor candles were made of tallow, a mixture of animal fat and lime. Unlike wax, which was produced by bees and was thus limited in supply and very costly, tallow, did not burn nearly as well, though early Americans were known to simply dip rushes into it, thereby creating a primitive candle. Tallow was also known for giving off a carrion stench so that they would neither melt nor fall prey to hungry rodents." Ekirch, quotes Thomas Dekker's 1606 work The Honest Whore, Part 1, "Poverty, poverty, poverty!"

"Wicks were the cheapest component of candles, and, in contrast to modern wicks, such shoelaces, even aristocrats nevertheless dependent upon them for rushlamps and tallow candles." Ekirch, quotes

"Only toward the eighteenth century did cities and towns take off-topic to render candles accessible to all but the poorest of the poor." Ekirch, quotes Thomas Dekker's 1606 work The Honest Whore, Part 1, "Poverty, poverty, poverty!"

Centuries later, little had changed. "Across the premodern countryside, forefront, one could hardly distinguish between the homes of the poor and the barns." Ekirch, quotes Thomas Dekker's 1606 work The Honest Whore, Part 1, "Poverty, poverty, poverty!"

Rural areas were not necessarily safer from the threat of fires. The Danish writer Ludvig Holberg (1684–1754) observed, “Villages were laid out with the houses so close together that, when one house burned down, the entire village had to follow suit.” After all, rural construction materials were highly flammable. “Once ignited, a thatch roof, made from reeds or straw, was nearly impossible to save.”

Read more about the Grim Old Days