Flowers Growing in Antarctica Are the Latest Sign of Environmental Catastrophe

Warmer weather has made the frigid continent more hospitable to two flowering plants, which are now proliferating.

By Molly Taft

Some cute little plants in Antarctica are flourishing in warmer temperatures—an ominous sign for rest of the continent and the world. A study published Monday in Current Biology finds that the continent's only flowering plants have been growing rapidly in the past decade, thanks to warmer temperatures.

"Antarctica is acting as a canary in a coal mine," Nicoletta Cannone, the study's lead author and an associate professor of ecology at Italy's University of Insubria, wrote in an email.

Antarctica's harsh landscape means that plants are few and far between, and only two are able to flower. The study looked at the spread of these two unicorns, *Deschampsia antarctica*, a type of grass, and *Colobanthus quitensis*, which sprouts tiny yellow flowers, between 2009 and 2018. These plants, Cannone said, "have a well-adapted metabolism to the harsh Antarctic climate: they are able to photosynthesize at temperatures below zero and covered by snow and can restart their growth at the end of the long Antarctic winter."

While the plants live across parts of the Antarctic islands and some of the peninsula, Cannone and her team concentrated their observations of the plants on Signy Island, in the South Orkney Islands range, because of a robust historical dataset related to the plants' growth. The scientists then compared the growth rate over this nine-year period to previous surveys of growth taken since the early 1960s.

It turns out the plants are loving the warmer weather. The researchers found that *Colobanthus* grew five times faster between 2009 and 2018 compared to growth rates between 1960 and 2009. *Deschampsia*, meanwhile, *really* took off, growing 10 times more in the past decade than before. Signy Island has seen an overall increase of 1 degree Celsius (1.8 degrees Fahrenheit) in mean annual average air temperature between 1960 and 2018; it's clear that these plants are benefiting from the new balmy environment.

"Our work provides the first evidence of accelerated impacts of climate warming in Antarctica," Cannone said. Plants, she wrote, "are the best bio-indicator of the terrestrial ecosystems as they can't avoid climate warming by moving" like animals can.

While the continent isn't seeing as rapid of climactic changes as the Arctic, new research increasingly shows that Antarctica is not immune to warming, as some scientists previously theorized. A study published in 2020 found that Antartica has warmed three times faster than the rest of the world over the past 30 years. In the past few decades, Antarctica has also seen a pretty nerve-wracking amount of ice loss: Between 2008 and 2015, ice loss into the ocean in the continent increased by 36 billion gallons per year, while a 2019 study found that a quarter of Antarctic glaciers have now destabilized compared to measurements taken in 1992. Several key glaciers that act as backstops for large amounts of ice, like the Thwaites Glacier—known, ominously, as the Doomsday Glacier—have shown incredibly worrying signs of stress in recent years.

There are probably some non-climate factors helping the flowers flourish, according to the study. The Antarctic fur seal rests and molts on Antarctic islands like Signy, and all that blubbery on-land seal activity can seriously disturb plant populations. The study found that these seals have been less present in recent years on Signy Island, which may be helping the plants.

But overall, it's clear that warmer weather driven by climate change is accelerating the growth of these plants, at a much faster rate than scientists expected.

“We were surprised of the speed of the acceleration detected here, because we were confident to record an increase of these plants between our surveys but we could not hypothesize an event of such magnitude,” Cannone wrote. “Our statistical analyses show clearly the link between summer warming and plant growth.”

Fuente: https://gizmodo.com/antarctic-plants-thriving-climate-change-1848542296