Antarctica's only flowering plants have been growing more rapidly, likely due to warmer temperatures
16 February 2022, by Bob Yirka

Location of the sites where D. antarctica and C. quitensis expanded at Signy Island since 1960
Distribution of D. antarctica and C. quitensis in 1960 (yellow dots) (A and D), 2009 (B and E), and 2018 (C and F) (green and magenta dots) in relation with the patterns of Holocene deglaciation and glacier boundaries and indicating the occurrence (magenta dots) or absence (green dots) of marine vertebrate disturbance in 2009 and 2018. Legend: dark blue, glacier boundaries as recorded in 2016; blue, glacier boundaries during the Little Ice Age; pale blue, terrains deglaciated between 6600 years BP and the Little Ice Age; white, terrains deglaciated before 6600 years BP. Credit: DOI: 10.1016/j.cub.2022.01.074

A team of researchers from Italy, the U.K. and South Africa has found that over the past decade, the only two flowering plants in Antarctica have been growing more rapidly. In their paper published in the journal *Current Biology*, the researchers suggest the changes happening with the plants in Antarctica are likely due to warmer temperatures associated with climate change.

Prior research has shown increased plant growth of several species in the Northern Hemisphere in response to warmer temperatures over the past several years. But up until now, there have been no recorded changes in plant growth in the southern Antarctic. In this new effort, the researchers suspected that the two flowering plants, Colobanthus quitensis (which produces yellow flowers) and Deschampsia antarctica (a grass) have been harder in recent years. To find out if that was the case, they took pictures of multiple samples at multiple sites on Signy Island over the years 2009 to 2019. Then, they searched the literature to compare recent plant growth with growth over the past half-century.

The researchers found that the plant sites had grown denser over the past 10 years, which meant that the plants were not only growing bigger but also more plentifully. They also found that the plants grew faster as the air temperature around them increased. More specifically, they found that the density of the plants had grown as much over the past decade as they had in the prior 50 years. The researchers suggest that such a change in plant growth could very well represent a step change in the Antarctic climate.

The researchers acknowledge that other factors could play a role in increased plant growth, such as declining seal populations, but suggest such factors are likely not as prominent as global warming. They further suggest that changes are happening all across the Antarctic region as temperatures rise. They note that no one knows for sure what a warmer Antarctica will look like, but most assume it will mean major changes to both plant and animal populations.

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