

Large-scale environmental variation affects reproduction and survival of plants

February 22 2016

A new analysis looks at how rates of reproduction and survival of 26 shrub species with fire-dependent life cycles in the Cape Floristic Region in South Africa respond to environmental variation.

The study incorporates multiple environmental drivers—notably climate and fire—at large spatial scales for a significant number of species and populations. The findings provide important insights on how interactions among these drivers shape the [population dynamics](#) of plants.

"Our study of more than 3000 shrub populations suggests that our study [species](#) will react differently to changes in climatic variation, including summer heat, drought, and cold," said Martina Treurnicht, lead author of the *Journal of Ecology* analysis. "Plants are also affected by soil factors and their neighbors."

The article is part of a Demography Beyond the Population Special Feature that is a unique large-scale ecological collaboration including articles in all six British Ecological Society journals. Its goal is to highlight the potential of demography to connect across scales and inform a broad range of questions in ecology and evolution.

More information: Martina Treurnicht et al. Environmental drivers of demographic variation across the global geographical range of 26 plant species, *Journal of Ecology* (2016). [DOI: 10.1111/1365-2745.12508](https://doi.org/10.1111/1365-2745.12508)

Provided by Wiley

Citation: Large-scale environmental variation affects reproduction and survival of plants (2016, February 22) retrieved 8 May 2024 from <https://phys.org/news/2016-02-large-scale-environmental-variation-affects-reproduction.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.