

# Large-scale environmental variation affects reproduction and survival of plants

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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)

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