

# Weed invaders are getting faster

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Dr. Daniel Montesinos is a Senior Research Fellow at the Australian Tropical Herbarium, at James Cook University in Cairns. He is studying weeds to better understand (among other things) how they might respond to climate change.

He said most invasive plants are characterized by their rapid pace when it comes to taking up nutrients, growing, and reproducing—and they're even faster in the regions they invade.

"New experiments comparing populations from distant regions show a clear trend for already-fast invasive plants to rapidly adapt even faster traits in their non-native regions," Dr. Montesinos said.

This is further pronounced in the tropics and sub-tropics.

"Even though invasives' growth rates are already among the highest for plants, when they invade new territory in the tropics and sub-tropics, they develop those weedy traits more rapidly than they do when they invade in temperate climates," Dr. Montesinos said.

"This might be explained by higher chemical processing at higher temperatures, which suggests that global warming will increase invasive impacts in these regions, as long as enough water is available."

Dr. Montesinos said [invasive plants](#) usually take hold in land that has been disturbed by human intervention (for example farms and roadsides) and then spread to other habitats.

"It's important to recognize disturbed habitats as a gateway for [plant invasions](#)," Dr. Montesinos said. "If we can limit disturbance of natural environments, we can reduce biological invasions, particularly in tropical areas that are threatened by increasing human encroachment."

Dr. Montesinos said that range expansions by native species trying to 'escape' from changes in climate could be a further complication. This involves [climate change](#) enabling some native plants to grow where they previously could not.

"This can be seen as a double-edged sword—some [native species](#) will survive climate change, but they might achieve that by disrupting the habitats of others.

"The study of invasion ecology is complex, but [invasive species](#) can be models in which to study, and make predictions about, the responses of [native plants](#) to climate change, giving us clues on improved management techniques for both natives and invasives," Dr. Montesinos said.

**More information:** Daniel Montesinos et al, Fast invasives fastly become faster: Invasive plants align largely with the fast side of the plant economics spectrum, *Journal of Ecology* (2021). [DOI: 10.1111/1365-2745.13616](#)

Provided by James Cook University

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