

Alien plants on a city trip: Urban invaders originate from warmer native ranges

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Abstract

When colonizing new areas, alien plants prosper differently in diverse local conditions. Some thrive in urban areas, while others thrive in rural areas, which might be governed by microclimatic barriers. We tested the hypothesis that the climate in the native range is a good predictor of the urbanity of invaders. The relationship between climate in the native range and occurrence urbanity of 26 emerging alien plant species in western Europe areas with a temperate climate with warm summers but no dry season (termed oceanic Europe) was evaluated. Urbanity was calculated based on land imperviousness. Alien species growing in more urban environments originated from warmer or climatically more contrasted native ranges than oceanic Europe. These results have strong conservation implications in oceanic Europe because climate-warming will likely lift climatic barriers that currently constrain numerous alien plant species to cities, boosting the role of cities as points of entry for invasive plants.

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