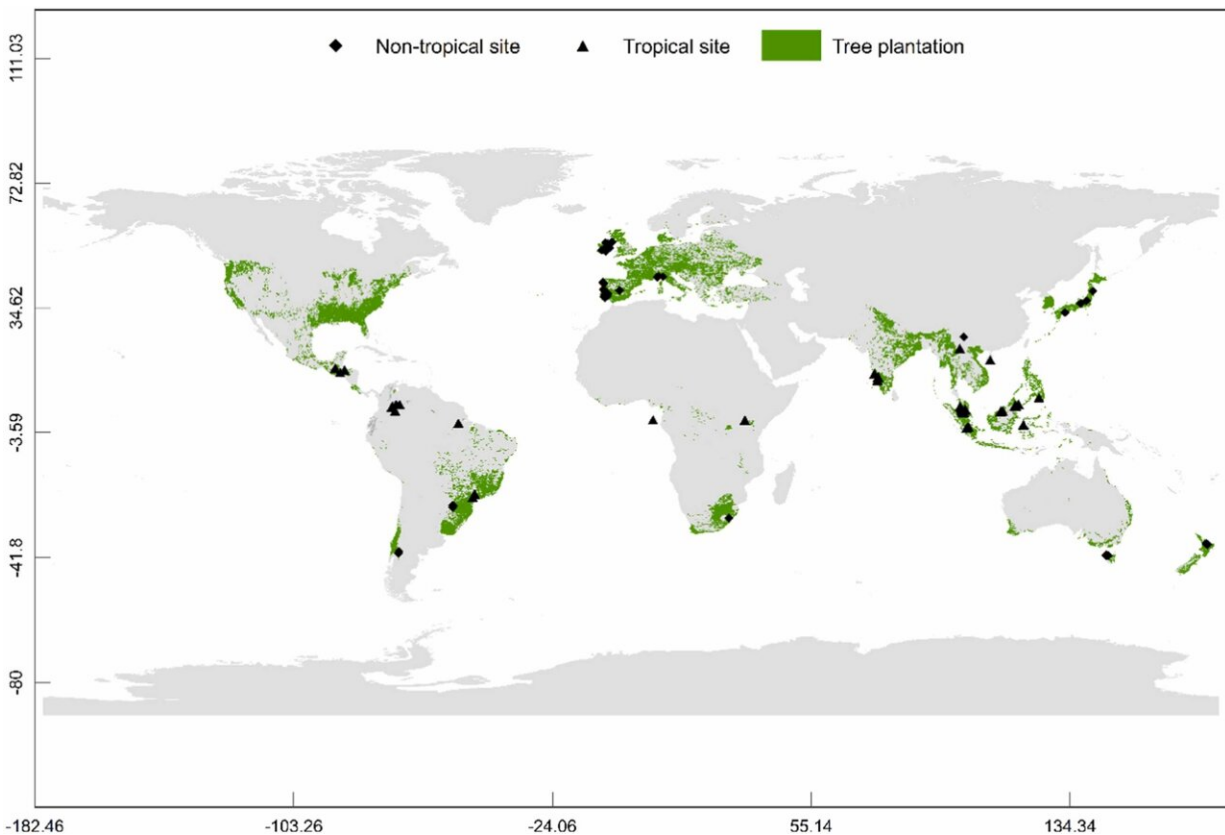


Tree plantations can get better with age, but original habitats are best

December 20 2023



Location of tree plantation sites (n = 314 for the non-tropical and n = 328 for the tropical realm), overlaid onto the Spatial Database of Planted Trees, Version 1.0, from Harris et al. (2019a). Credit: *Global Ecology and Conservation* (2023). DOI: 10.1016/j.gecco.2023.e02751

Older tree plantations can be more attractive to animals who are looking for a new home than younger plantations, according to a new study from the University of Surrey. In the tropics, older plantations also welcome a greater variety of different plants and animals—though sadly, Christmas tree plantations do not become more biodiverse over time.

Across the world, people are planting more trees. This can be for wood, fuel, food—or even carbon offsetting. The problem is that tree plantations are often less biodiverse than the habitat they replace.

Sophie Tudge, who led the study at Surrey's Centre for Environment and Sustainability, said, "We found older plantations were generally more biodiverse than younger ones—and this was true even for [oil palm plantations](#). Sometimes, you even find [new species](#) arriving in plantations that weren't in the area before.

"Yet make no mistake—original habitats are generally much more biodiverse than artificial plantations."

There are currently 223 million hectares of tree plantations globally. To study biodiversity within plantations, the researchers took a recent global map of which year these were planted. They compared that map with a database measuring how many species and individuals lived where.

The [research](#) is published in the journal [Global Ecology and Conservation](#).

The researchers hope that their analysis will help tree planters be more mindful of biodiversity, promoting UN Sustainable Development Goal 15—Life on Land.

Dr. Zoe Harris, Senior Lecturer in Environment and Sustainability, said, "The world is planting trees like never before—but our study urges

caution. While plantations are important for providing products and services, there is a clear limit to the conservation value of plantations. Yet, taking into account an area's natural history and reducing the intensity of management can help encourage [biodiversity](#). Therefore, we hope our findings can help achieve responsible planting that protects nature as far as possible."

More information: Sophie Jane Tudge et al, Global trends in biodiversity with tree plantation age, *Global Ecology and Conservation* (2023). [DOI: 10.1016/j.gecco.2023.e02751](https://doi.org/10.1016/j.gecco.2023.e02751)

Provided by University of Surrey

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