research highlights

ECOLOGY

Human legacy in cloud forest

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Credit: Rosanne Tackaberry / Alamy Stock Photo

The arrival of Europeans in the New World in 1492 AD and the subsequent collapse of indigenous populations marked the start of profound cultural, demographic and ecological changes — including in the great forest landscapes of the Andes and Amazonia. Evidence shows that parts of these forests had large indigenous populations, but the extent of their impact on and management of the environment remains uncertain.

Nicholas Loughlin and colleagues present a palaeoecological lake record that traces human-environment interactions in the Andean-Amazonian forest corridor — an ancient Incan trade route — across centuries from pre-European times. They find that indigenous populations extensively burned and managed the landscape around the lake for maize agriculture and evidently had an even greater impact on its structure and ecology than later Colonial settlement or modern-day cattle ranches. The mature mountain cloud forest encountered by later European settlers in the nineteenth century was therefore not pristine, but represented a regrowth following indigenous population collapse, probably shaped by the long history of human management.

Linking palaeoecological and historical accounts is a powerful way to reveal complex histories of human–environment interactions. Future work will need to determine whether the intensive impacts seen at this site are typical of the wider region.

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