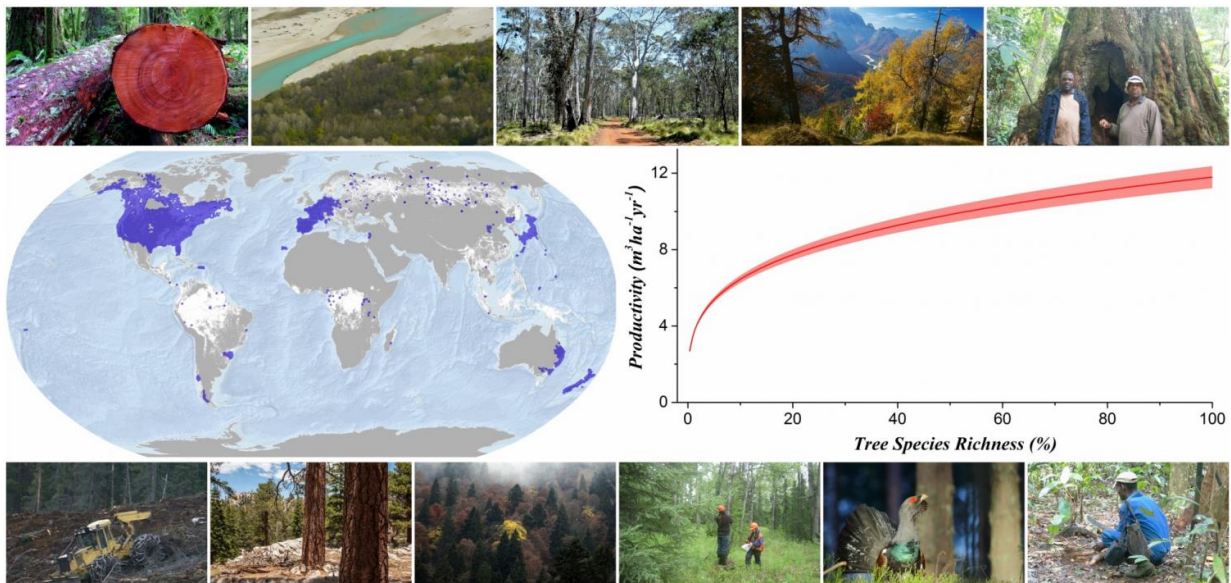


Scholars team up to show forest biodiversity is green in more ways than one

October 13 2016



Analysis of data from 777,126 global forest biodiversity (GFB) permanent sample plots (blue dots, left panel) reveals a consistent positive and concave-down biodiversity-productivity relationship (BPR) across forests worldwide (right panel). The photos, taken from the GFB sites around the world, represent forest biodiversity, forest ecosystem services, and forest inventory crews at work. Credit: Global Forest Biodiversity Initiative

Loss of biodiversity has long been recognized as detrimental for nature, for nature's sake. Now a team of scholars from 90 institutions in 44 countries show that it also provides enormous economic benefits. The

team, formally known as the Global Forest Biodiversity Initiative (GFBI), consolidated field-based forest inventory data from 777,126 permanent plots across the world, and discovered that for forests in every part of the world, those with many tree species are more productive than nearby forests with few.

The team then estimated that the economic value of biodiversity in maintaining commercial forest productivity alone is worth USD\$166-490 billion per year. This benefit- only one of many such benefits of biodiversity- is more than 20 times greater than what is spent each year on global conservation. This finding highlights the need for a worldwide re-assessment of biodiversity values, forest management strategies, and conservation priorities.

The research, published in the Oct. 14, 2016 issue of *Science*, marks the first major accomplishment of the GFBI team. The study, and the GFBI team, was led by Jingjing Liang from West Virginia University; Peter B. Reich, from the University of Minnesota, and Thomas W. Crowther, at the Netherlands Institute of Ecology.

Reich is also engaged in presenting these new scientific findings to the public in new ways. Reich is part of the team that produces the YouTube science education channel, MinuteEarth, which released a two-minute video on the value of biodiversity to help explain the paper to the public. Given its more than 1.3 million subscribers, MinuteEarth will extend the reach of the forest scientists beyond the science and policy arena into a great many kitchens and living rooms across the US and internationally.

More information: J. Liang et al, Positive biodiversity-productivity relationship predominant in global forests, *Science* (2016). [DOI: 10.1126/science.aaf8957](https://doi.org/10.1126/science.aaf8957)

Provided by University of Minnesota

Citation: Scholars team up to show forest biodiversity is green in more ways than one (2016, October 13) retrieved 26 April 2024 from <https://phys.org/news/2016-10-scholars-team-forest-biodiversity-green.html>

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