

Who will find Earth's missing plant species?

Written by jamie

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A very small number of Plant collectors are responsible for the discovery of most of the world's known plant species, scientists have found. Research has revealed that more than half of the world's plant species have been discovered by just two per cent of plant collectors, or more accurately, plant explorers. The research was carried out by scientists from Oxford University, Earthwatch, Natural History Museum, Royal Botanic Garden Edinburgh, and Missouri Botanical Garden.

With an estimated 15-30% of the world's flowering plants yet to be discovered, finding and recording new plant species is seen as vital

to our understanding of global biodiversity.

The age of great botanical explorers, such as Sir Joseph Banks and Alexander von Humboldt, might appear to have passed. But the study,

led by Dr Robert Scotland of Oxford University's Department of Plant Sciences, found that modern botany has its own

'great plant hunters' - individuals whose experience and skills enable them to make a disproportionate contribution to the discovery of new plant species.

A report of the research is published today in the science journal *Proceedings of the Royal Society B*.

"Species discovery is fundamental to understanding biodiversity," said the report's lead author Dr. Dan Bebber, head of climate change research at Earthwatch.

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"This study assembled four datasets totalling 100,000 type specimens to investigate the relative contribution of plant collectors, showing that relatively few

'big hitting' collectors make a massive and disproportionate contribution to the discovery of plant species. While there are exceptions, these 'big hitters' are

generally distinguished by long careers, high rates of collection, broad geographical and taxonomic scope, and increasing productivity through time.

Our knowledge of global plant diversity owes much to a small number of inspirational individuals, and support should be given to nurture the

next generation of 'big hitters'."

The study assembled four datasets totalling 100,000 specimens from four institutions; The Natural History Museum, Royal Botanic Garden Edinburgh,

Missouri Botanical Garden, and Royal Botanic Garden Melbourne.

The researchers found that the most productive collectors are distinguished by five attributes: they collect over many years, they collect more types per year,

they collect from several different countries (although specialising in one particular country), they collect from a wide range of plant families (although again,

often specialising in a particular family), and they collect more types towards the end of their

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careers.

The study suggests that greater efforts should be made to identify, train, and support plant hunters throughout their careers as they can make a substantial

contribution to the discovery of new species.