

## Hotspots of rattan found in Western Ghats

### A rattan clump

Scientists have discovered that non-protected areas near the Agasthyamalai Biosphere Reserve, Silent Valley-Mukurthi National Parks and Coorg-Wayanad in the Western Ghats are hotspots of rattan or cane (light, flexible climbing palms) species. Urgent conservation attention in the face of threats including habitat loss and excessive harvesting would be critical here, warns a study published in *Plant Diversity*.

More than half a million people are directly employed in harvesting and processing rattan in Southeast Asia, including India. Though unsustainable harvests driven by rising demands are decimating rattan stands (clumps) worldwide, how are the rattans of the Western Ghats faring?

### Distribution

Using location records from field studies and literature, scientists at Bengaluru's Asoka Trust for Ecology and Environment (ATREE) and Pune's Indian Institute for Science Education and Research (IISER) first mapped the distribution of all 21 endemic rattan species across the Western Ghats. At 19, the Western Ghats in Kerala and Tamil Nadu have the highest number of species.

The team then designated 'conservation values' (CV) for each species based on aspects such as the area it is found in and the commercial harvesting pressure it faces. Three species (including *Calamus neelagiricus* which is found only in Kerala's Silent Valley National Park) showed very high CV; the authors suggest that these be classified as endangered (based on categories developed by the International Union for the Conservation of Nature) while three others be categorised as near-threatened and 15 as vulnerable for prioritising conservation action.

Utilising niche modelling to predict areas of high rattan diversity, the scientists also identified three rattan hotspots in the Western Ghats. — near the Agasthyamalai Biosphere Reserve, Silent Valley-Mukurthi National Parks and Coorg-Wayanad regions. All these areas fall outside existing protected area networks, where excessive unsustainable harvests could be a problem. Loss of tropical forest tracts to coffee and tea plantations — as is common in the Coorg-Wayanad complex — is also an issue, say the scientists.

"Forest department managers need to encourage farmers to establish large-scale plantations in private lands and develop agro-forestry systems as well," says co-author Aravind N.A. (ATREE). "The Forest Department has already established a few rattan plantations in some districts... this needs to be replicated at a wider scale where the demand for rattan is high. These extractive reserves could meet the requirements of communities that depend on these resources," says ATREE's G. Ravikanth, another co-author.

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