

## Putting threatened trees centre stage

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Palms in Cuba, magnolias in China or conifers in Vietnam – all around the world tree species are in serious trouble. While the extinction crisis and the fate of the world's forests have been relatively high profile in the past two decades, rarely, if ever, is the fact that thousands of species of *trees* are threatened with extinction featured centre stage. And yet, of course, the serious conservation status of so many of the world's trees is as great a cause for alarm as the threats to the tiger or panda.



According to an analysis published in 1998 by the UNEP-World Conservation Monitoring Centre, *The World List of Threatened Trees* (Oldfield *et al*, 1998), 77 tree species have become extinct in the past century and 8,753 species are now threatened with extinction – around one tenth of the world total. As would be expected, the threatened status of tree species often results from the process of habitat modification and destruction. Unsustainable exploitation for timber or other products is another important cause – over 1,000 species are recorded as threatened by unsustainable felling.

Amongst the most critically threatened species is *Carpinus putoensis*, a species of hornbeam from China which is reduced to just one, fenced tree in the wild. Another species teetering on the brink is *Manglietia sinica*, a species of Magnoliaceae from China reduced to just six to seven individuals in the wild. For *Casearia tinifolia* it is already too late - this species from Mauritius, which has not been seen in the wild since 1976 and was included as Critically Endangered in the 1998 list, is now classified as Extinct.

Lack of information, or sometimes difficulty in accessing information, means that the figures on the number of species that are extinct or threatened are likely to be substantial under-estimates. The discovery in 1994 of the Wollemi pine *Wollemia nobilis* in the Blue Mountains just 200 km from Sydney illustrates how, even in a relatively well-explored country such as Australia, information on trees may be very incomplete. Another example comes from Vietnam, where a new species of conifer *Xanthocyparis vietnamensis* was discovered in 1999. A recent workshop on threats to trees in the Caucasus identified a lack of knowledge about rare *Pyrus* species as an obstacle to their conservation. Some of these little-known pear species may have economic value as breeding stock for fruit trees.

Efforts are now being made to up-date the *World List of Threatened Trees*, to

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derive a more complete picture of the global status of trees and to plug the gaps in the 1998 analysis. The Global Trees Campaign (an initiative set up by Fauna & Flora International and UNEP-WCMC in response to the 1998 publication) is leading a process to assess species according to revised categories and criteria agreed by IUCN. The work is being carried out under the auspices of the IUCN/SSC<sup>\*</sup> Global Tree Specialist Group, and the results of the assessments are fed in to the global Red Lists produced by IUCN for all groups of plants and animals.

The red listing process involves consultation with experts around the globe (most effectively through workshops), as well as thorough searches of the literature and botanical collections (where possible). Groups of trees are being assessed on both a taxonomic and a regional basis, and good progress is being made. An assessment of the endemic trees and shrubs of Ethiopia was published in 2005, the threatened trees of Guatemala will appear shortly, and assessments of the Fagaceae, Magnoliaceae, trees of New Caledonia and trees of the Caucasus are nearing completion.

Alongside this, the Global Trees Campaign has, since 1998, been initiating and supporting conservation measures for threatened trees around the world. Often conservation action has been one outcome of a red list process for a country or region. In almost all cases, the Campaign works in partnership with local organisations, ensuring local ownership of initiatives and increasing the chances that the results will be sustained in the long term. Approaches have varied, from building tree components into wider conservation initiatives to using small grants to kick-start projects for priority species. Solutions for threatened trees are equally diverse, from lobbying for new protection for a species or area, to assisting local communities to manage populations sustainably, to working with industry and governments to promote sustainable use. Policy interventions and public awareness are also important components of the Campaign; a dynamic website ([www.globaltrees.org](http://www.globaltrees.org)) helps to provide information and raise the profile of trees as threatened species.

One example of a Global Trees Campaign initiative is a programme to protect and restore the Cebu Cinnamon *Cinnamomum cebuense*, endemic to Cebu island in the Philippines. Described in 1986 by Kostermans, the tree had only been found in a handful of forest fragments not far from Cebu City. Known locally as 'kaningag', the bark of the tree is used to treat stomach-ache, either chewed or brewed into a tea, heightening concerns about the likely status of the species.

In 2003 FFI's partner on Cebu, the Cebu Biodiversity Conservation Foundation (CBCF) conducted a series of surveys in the three known localities for the species. These yielded a population count of 47 individuals, only four of which were mature trees. Following this, further surveys were conducted in two other areas of forest, ultimately resulting in a much healthier population count of 748. However, many of these are young trees and the number of mature individuals still only stands at 20. All trees with a diameter at breast

<sup>\*</sup> SSC is the Species Survival Commission, a part of IUCN, the World Conservation Union

height of 10 cm or more have been marked with a tag and are closely monitored by CBCF and local forest wardens for signs of cutting or bark stripping (both are illegal). The results of the surveys have been presented to the local councils and community organisations, and meetings held to discuss ways to protect the species. A tree nursery is being established at the project site and it is hoped to build up numbers of the tree through planting programmes – the good news is that the tree appears to grow well in nursery conditions.

Another Global Trees Campaign initiative is supporting the National Botanic Gardens in Cuba to conserve threatened palms. Cuba is home to around 100 species of palm, 90% of which are endemic to the island. At least 14 species are classified as globally threatened. The project aims to increase information on six key species and support measures for their conservation. Targets include the critically threatened *Copernicia fallensis*, thought to number just 15 scattered individuals in the wild. The project is yielding good results: a thorough search for *C. fallensis* has located 84 adult trees. Information gathered on another target species, *Coccothrinax crinita*, and presented to the government resulted in the declaration of a new Managed Floral Reserve to protect an important site for the species. Project funds have also been used to buy basic equipment such as machetes, clothing and wire for fencing to allow a restoration area for *C. crinita* to be fenced off and invasive species to be cleared from around the trees, showing how even small amounts of money can make a big difference in cash-struck countries or communities.

In Vietnam, the Global Trees Campaign is working on the conservation of threatened conifers identified in a multi-institutional review led by FFI: *Vietnam Conifers: Conservation Status Review 2004*. Vietnam is a hot-spot for conifer diversity, with 33 species native to the country, 14 of which are listed as globally threatened. The Global Trees Campaign is supporting the development of a conservation action plan for the recently discovered *Xanthocyparis vietnamensis*, and the establishment of a community-managed protected area where the only Vietnamese population of *Taiwania cryptomerioides* occurs. The latter is a threatened species so valued by local people that in winter they dress the trees in clothes to keep them warm! A village tree nursery has also been set up to supplement the population of this and another species *Fokienia hodginsii*, a near-threatened conifer used by local inhabitants for timber.

Whilst the Global Trees Campaign is very active, far more needs to be done to secure the future of the world's tree flora. In 2002, Parties (governments) to the Convention on Biological Diversity agreed a strategy relating specifically to plants, the Global Strategy for Plant Conservation. This landmark document contains 16 ambitious targets, including that, by 2010, there should be a preliminary assessment of the conservation status of all known plant species, 60% of the world's threatened species should be conserved *in situ* and the protection of 50% of the most important areas for plant diversity should be assured. Regrettably, with a few notable exceptions, these fine words have yet to be matched by action at the governmental level, and adequate resources to really make an impact on plant conservation have not been forthcoming.

At a joint Global Trees Campaign / IDS meeting in Cambridge in September 2005, the need to increase awareness of the threats to trees was highlighted – to make the issue one of popular concern. Ways to harness the media to inspire and educate were discussed. Along with this, the support to field initiatives needs to be stepped up and the number of species being addressed increased.

At the start of 2006, a new agreement has been signed between FFI and Botanic Gardens Conservation International (BGCI), incorporating BGCI as a full member in the Global Trees Campaign. This should help boost the level of activity and raise the profile of tree conservation. Ideas on how to take Global Trees Campaign forward and increase its impact for the benefit of the world's trees are always welcome – please get in touch with the Campaign at the address on page 35.

#### **Reference**

Oldfield, S., Lusty, C. and MacKinven, A. (1998). *The World List of Threatened Trees*. 650pp. World Conservation Press, Cambridge, UK.

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