The disappearing plants
Thanks to its location at the crossroads of three main biogeographical regions _ Indo-Himalaya, Indo-China and Malesia, the biogeographical region straddling the boundary of the Indomalaya and Australasia ecozones _ Thailand's plant diversity is one of the richest in the world, with an estimated 1,900 genera and 10,000 species of vascular or higher forms of plants. Of the 70 per cent of Thailand's plant species that have been studied, 756 have proved to be endemic or unique to this country, with many found only in certain localities, such as limestone hills and mountainous areas.
A red book published earlier this year by the Office of Natural Resources and Environmental Policy and Planning, however, lists 1,407 species as vulnerable or in danger of extinction, with one thought to have already gone extinct in the wild.
"From a distance, the mountains look normal, but in fact they have already lost their biodiversity," Dr Piyakaset Suksathan, a botanist at the Queen Sirikit Botanic Garden, said. "In the North there are trails leading to nearly all mountains, where villagers go to collect things from the forest like bamboo shoots, mushrooms, etc., and to shoot animals. Now there are hardly any animals left, which is a pity because animals disperse seeds and help in plant propagation."

These mountains and hills have lost their biological diversity due to agriculture and forest fires.

"Adiantum thongthamii Suksathan", a rare species of fern that Dr Piyakaset
Dr Piyakaset also attributes the loss of biodiversity in northern Thailand to the
destruction of forests for agriculture and forest fires set by villagers so that a
favoured kind of mushroom, locally known as hed tob, will grow. He relates
how devastated he felt last summer when he went to see a beautiful wild
rhododendron he had seen on a mountain the previous year and found that it
had been destroyed by fire.

"It was not dead, but it would take years before it could become the
beautiful, bushy tree that I had seen earlier," he said.

Piyakaset has explored many of Thailand's forests to collect specimens for the
botanical garden's herbarium and living plants collection. The living collection
is for the purpose of conservation, while "the dry specimens in the herbarium
can be used for reference which, according to theory, can be kept for
hundreds of years so that later generations can also study them".

"It's like historical data," he added. "They tell which plants can be found in a
certain area, or how plants in a certain area have been affected by climate
change."

A taxonomist, Piyakaset says there are 300 species of ginger, or plants in the
family Zingiberaceae, "but many more are waiting to be discovered".
He himself has found several plant species new to science, including ferns,
orchids, gingers, arrow roots and impatiens. A rare species of fern he found
on a limestone mountain in eastern Thailand is now called Adiantum
thongthamii Suksathan, after Assoc Prof ML Charuphant Thongtham, his
adviser when he was taking his master's degree at Kasetsart University. The
discovery was published in the April/June 2004 issue of the American Fern
Journal.
now named Sirindhornia pulchella, Sirindhornia mirabilis and Sirindhornia monophylla, after Her Royal Highness Princess Maha Chakri Sirindhorn.
Piyakaset sees the importance of conserving Thailand's forests, but "as long as there is demand for beautiful plants from the forests, there will always be poachers who will go to collect plants for sale to collectors.
"It's like a forbidden fruit," he said, where the more it is forbidden, the more it is coveted. The best way to conserve the plants, therefore, is for forest officials to propagate the coveted plants and sell them at affordable prices. "Some plants are difficult to propagate elsewhere but they can be easily propagated near the place where they naturally grow," Piyakaset said. "Collectors will then be happy that they can buy already established plants instead of taking them from the wild."