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'Bumper year' for botanical finds

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The flower of the *Berlinia korupensis*, the largest plant in the list of new finds

Giant rainforest trees, tiny fungi and wild coffee plants are among almost 300 species that have been described by UK botanists for the first time in 2009.

The finds were recorded by researchers from the Royal Botanic Gardens, Kew, who carried out surveys involving teams in 100 countries around the world.

The discoveries showed how little of the world's plant species had been documented, the researchers said.

They warned that nearly a third of the finds were in danger of extinction.

"These new discoveries highlight the fact that there is so much of the plant world yet to be discovered and documented," said Stephen Hopper, director of the Royal Botanical Gardens, Kew (RBG Kew).

"Without knowing what's out there and where it occurs, we have no scientific basis for effective conservation."

Kew's botanists have described 2009 as a "bumper year" in which they described 292 new species, compared with 200 in an average year.

Exploding pods

The largest of the new finds was a previously unknown giant of Cameroon's rainforest, stretching more than 42m (138ft) into the canopy of the Korup National Park.



The *Berlinia korupensis* pods explode, spreading seeds over a wide area

The *Berlinia korupensis* - a member of the pea family - has a one-metre-wide buttressed trunk, and produces white flowers that then give rise to massive seed pods, which can reach 30cm (1ft) in length.

When fully ripened, the pods explode, sending the seeds flying away from the tree, ensuring the best possible chance of survival.

"We found just 17 trees in our survey," explained Xander van der Burgt, who led the team that found the tree.

"Even though the Korup (National Park) is protected, *Berlinia korupensis* is critically endangered due to human pressures on the park," he added.

At the other end of the scale, the smallest finds were wood-rotting fungi, which were less than 1mm thick and covered their hosts "like a lick of paint".



Coffea ambongensis "bean" (left) and the commercial Arabica variety

Seven wild coffee species also feature on the list of new species, most of which were discovered in the mountains of northern Madagascar.

Two of the plants - *Coffea ambongensis* and *Coffea boinensis* - have the largest seeds of any coffee species, whose "beans" are more than twice the size of Arabica coffee (*Coffea arabica*), the main species used in commercial coffee production.

"Coffee is the world's second most traded commodity, after oil, with at least 25 million farming families dependent on its production for their livelihoods," explained RBG Kew's coffee expert Aaron Davis.

"Yet, we still have much to learn about its wild relatives."

Dr Davis estimated that almost three-quarters of the world's wild coffee species were threatened, as a result of habitat loss and climate change.

"Conserving the genetic diversity within this genus has implications for the sustainability of our daily cup, particularly as coffee plantations are highly susceptible to climate change," he added.

Professor Hopper said that, around the globe, about 2,000 species were described for the first time each year, adding that it was "vital" that these areas of botanical sciences were adequately funded and supported.

Kew Gardens has published profiles of the new species on its website, and added the information to Google Earth.