

Two new species of *Cycas* found

Andaman and Nicobar islands home to thriving adult populations of "living fossils"

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Research conducted on a tree found in the Acharya Jagadish Chandra Bose Indian Botanic Garden in West Bengal – the tree had, for years, been a puzzle to botanists and scientists – has revealed two new species of *Cycas* to the world.

Cycas are one of the most ancient plants whose fossils date to the Jurassic period and are often referred to as "living fossils".

While initial studies on the lone tree revealed that it was *Cycas*, a gymnosperm, further research based on its morphological and anatomical characters led to the discovery of new species of *Cycas pschannae* and, later, *Cycas dharmrajii* in the Andaman and Nicobar Islands. The species were named after scientists Paramjit Singh Channa and Dharmraj S. Mishra.

14 species in India

This discovery takes the number of *Cycas* species found in the country to 14.

"The lone *Cycas pschannae* found in the Botanic Garden may have been planted by the British. Cycads are very slow growing trees and this particular tree did not catch much at-



Rare discovery: *Cycas pschannae* and, right, *Cycas dharmrajii*. ■ SPECIAL ARRANGEMENT

tention before 2001 when we started working on it," Lal Ji Singh, Scientist and Head of Office, Botanical Survey of India, Andaman and Nicobar Regional Centre told *The Hindu*.

Mr. Singh, along with D.R. Mishra – a professor of Botany at University of Allahabad, published a paper in the international journal

Bionature in 2017 on the locations of the species in the Andaman and Nicobar Islands.

Of the nine locations where the species was found, it was only at two places that a congregate population of significant adult plants could be located, Mr. Singh said.

"We found about 1,200

plants at Middle Andaman Curt Burt Bay Wildlife Sanctuary, which included only 13 adult trees and 500 in North Andaman, Ross Island which also had 13 adults.

In the rest of the places the population of the new species was scattered with very few adult plants," Mr. Singh said.

It was while hunting for

Cycas pschannae that the scientist laid his eyes on *Cycas dharmrajii* in Table Excelsior Island.

Cycas dharmrajii, whose morphological and anatomical details were made public in the *Nordic Journal of Botany* in April, is characterised by the abnormal branching habit of its giant trunk and its swollen base.

Unique features

What makes the *Cycas dharmrajii* distinct from other *Cycas* found in the country is the well-defined 10 to 28 hook-like structures in the apex of the mega sporophyll (sporophyll are spore-bearing leaf-like female sex organ of the plant).

The sporophylls of *Cycas pschannae* are characterised by the presence of two lateral horn-like structures.

According to scientists, *Cycas* evolved on the earth as the first seeded plants and they grow very slowly, adding only a few centimetres every year.

Nearly 65% of *Cycas* are threatened but what makes the flora unique is that despite being a contemporary of the dinosaur, the genus continues to thrive.

There are over 100 species of *Cycas* found across the globe.