

Rare plants in the Everglades undersiege, struggling against extinction

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Sensitive landscape: A new report found sea level rise, invasive exotic species and human activities threatening the health of the Everglades National Park in Florida. Photos: AFP

Many plants that used to flourish in South Florida are now barely clinging to existence in the Everglades and nearby protected areas.

A landmark report – 10 years in the making – looked at critically imperilled plants at Everglades National Park and found that 16 of them may already have vanished from there. Possible culprits? The same threats faced by the park’s endangered animals: rising sea levels, invasive species and humans.

The expansive study by the Institute for Regional Conservation catalogued 59 species of trees, shrubs, orchids, ferns, grasses and other plants. It was commissioned by the National Park Service as a tool to help prioritise, manage and protect at-risk Everglades plants.

Report author George D. Gann said the findings should alert the public as well as conservationists that the Everglades’ overlooked flora deserves protection, too.

“I don’t think we should have to lobby to get plants noticed as well as animals,” said Gann, the institute’s chief conservation strategist. “Funding for rare plants is a drop in the bucket compared to funding for python control.”

While the scientific report was created for professional land managers and policy-makers, Gann hopes it also will spur volunteer citizen scientists to pitch in. “They can help attach plants to trees, work on eradicating invasives and educate others,” he said.

Some plant populations that once flourished in South Florida are barely clinging to life here, the study found, existing only in the Everglades and the Florida Keys. Of the 16 missing plants that at some point were documented in the park, two – the Florida *Govenia* orchid and Simpson’s cupgrass – may be globally extinct.



Sadle (L), botanist at Everglades National Park, and Gann, chief conservation strategist for the Institute for Regional Conservation, in their search for rare plants in the Everglades.



The endangered Mule ear orchid was reintroduced to an area of the Everglades National Park after it had disappeared due to years of poaching.

Steven Woodmansee, an environmental consultant, said people need to realise that placing endangered plants in botanical gardens or endangered animals in zoos isn't the same as trying to keep them in their native habitats. "We need to conserve more wild areas as the human population increases," he said.

The longtime poaching of rare ferns and orchids for sale or private collections, while waning, continues to affect species depletion, the report said. Changes in the Everglades' natural drainage system, caused by construction or man-made canals, are another factor. The institute's research, however, documented new enemies: invasive plants that are choking out native species, and rising sea levels that are dramatically altering coastal habitats.

"We kind of knew (sea level rise) was going on. But now we see it's real, and it's happening down here," said Jimi Sadle, a botanist at Everglades National Park who did field work for the report.

When habitats change, rare plants are wiped out. Some places in the park's remote coastal zones like Cape Sable, which along with other rarely surveyed inhospitable lands were examined for the new report, "are on the verge of becoming another habitat because they are so close to the ocean," Sadle said.



The endangered pineland sandmat (above) and longclaw orchid (below) are among the 59 rare and endangered plants barely clinging to existence in the Everglades. – AFP



While people may not mourn the potential loss of, say, the modest pearlberry shrub versus a showy orchid, Sadle said the elimination of any species affects the Everglades' delicate biodiversity.

The fascinating species' histories in the report – some reading like a novel with plots spanning a century – may give the clearest picture of how chance, nature, weather and human beings can intersect to determine a plant's survival. Take the spider orchid, *Brassia caudata*, a yellow stunner with tiger-striped markings and tendril leaves. The report says it was first collected by botanists in 1916 in the rare plant-rich Long Pine

Key hammocks, near what later became the Everglades National Park's main entrance.

By the 1950s, poachers had wiped out many spider orchid colonies. So one Everglades biologist stealthily relocated the plants to more secluded hammocks. The move, rodents and Hurricanes Donna and Betsy in the 1960s all took their toll. The last known single Everglades spider orchid died following a freeze in 1977, the report said. Intensive institute searches in 2003 and 2008 found no survivors. In Florida, the spider orchid today is ranked "endangered". The chances of ever finding another in the park are "unlikely," the report said.

The latest report builds on a 1979 list of the park's rare plant life. Its detailed species inventory will give park managers and scientists a baseline for tracking plant population changes, Gann said, allowing for proactive management. There is information about each rare species' background, its conservation status

and preservation recommendations. Suggestions range from monitoring programmes to researching sea level rise to reintroducing vanished species that still are found in other parts of the world.

The report found orchids to be the most imperilled plants, accounting for 46% of those listed, followed by ferns at 24%. Hardwood hammocks were the most common home for the park's rare plants, containing about half of the surveyed species, followed by pine rocklands.

Sadle said some plant species in the report are unique to their habitats and, like the wild spider orchid, could some day be gone without preservation. — Sun Sentinel/Tribune News Service