

The Search for Endangered Cowhorn Orchids in Big Cypress National Preserve

The cowhorn orchid (*Cyrtopodium punctatum*, also called cigar orchid) is one of Florida's largest and most spectacular orchids. Once common, it is now endangered in the state due to habitat loss and decades of over-collection. Today, only scattered plants survive in wild swamps like those found in Big Cypress National Preserve.



A striking cowhorn orchid (Cyrtopodium punctatum) in bloom at Big Cypress National Preserve.

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A Rare Orchid in Peril

Cowhorn orchids depend on many partners. They need [cypress trees](#) to cling to, fungi to germinate their seeds and support growth, and bees for pollination. When any of these are missing, the plant struggles.

Little was known about how the remaining orchids were faring—whether they were reproducing or struggling against threats like poaching, pests, fire, and invasive species. Without knowing how many were left, where they grew, or how healthy they were, it was difficult to plan for their protection.

Uncovering What Remains

To learn more, Big Cypress partnered with the National Park Service [Inventory and Monitoring Program](#) and scientists from Florida International University. Lead researcher Dr. Hong Liu and her team searched cypress wetland forests across more than 700 acres in 2021 and 2022.



Dr. Hong Liu and her research team collecting data in Big Cypress National Preserve.

Photo courtesy of Hong Liu

They walked careful transect lines through swamp forests, recording each cowhorn orchid's size, location, and whether it had flowered. They also noted habitat factors such as the type of cypress tree it grew on, the tree's size, and how high the orchid sat on the trunk. These details provide clues about the conditions that best support the orchid's survival.

Researchers also surveyed a subset of orchids for signs of invasive Boisduval scale insects (*Diaspis boisduvalii*), tiny pests that can weaken or kill orchids.



Scientists recorded each cowhorn orchid's size, location, and condition to better understand the population. Transect lines helped researchers search the swamp in a systematic way.

Photos courtesy of Hong Liu

The Findings

The team documented 85 cowhorn orchids. Most were large adults, some were juveniles, and only a handful of seedlings were found. None had produced fruit during the study period, indicating that few new plants are being added to the population.

Orchids appeared less common in areas that burned more often, but the relationship is not straightforward. Fire can damage or kill adult plants, but it may also help new seedlings establish. Boisduval scale insects were found on just over a third of the cowhorn orchids examined; infestations were light at the time, but their presence is concerning because introduced scales can spread quickly. Researchers also observed the invasive Chinese crown orchid (*Eulophia graminea*), which could compete with cowhorn orchids for growing space.



The invasive Chinese crown orchid grows on cypress trees and may compete with native orchids.

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Hope Remains

Despite its struggles, cowhorn orchids are persisting in Big Cypress for the time being. The study gave park managers a clearer picture of where orchids remain and what they need. This knowledge will guide future efforts, whether through protecting adult plants, controlling pests, removing invasive orchids, or even exploring hand pollination to boost numbers.

Protecting these orchids also means discouraging poaching. Removing vulnerable orchids from the preserve is illegal and threatens plants already at risk. The park is home to several rare orchids, and their survival depends on responsible visitors. By observing from a distance, staying on designated trails, and helping spread awareness, visitors become vital partners in protecting these delicate species. With continued care from staff and visitors, the striking yellow blooms of the cowhorn orchid will keep lighting up the park's swamps.

Want to learn more?

- [Visit the final report of the study](#)
- [Know the law](#)
- [Discover more about orchids in Big Cypress National Preserve](#)

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