

# Native Cycad Beloved by Ancient Floridians

A stunning recent discovery: our native coontie, *Zamia integrifolia*, was dug up and carried around the state by early peoples! This discovery completes a rich narrative about this plant's relationship with people – for better or worse.

## The Coontie

*Zamia integrifolia*, the only cycad native to the United States, is presently found only in Florida; the plants were last seen in Georgia 50 years ago. It is widely used in civic landscapes, and is a critical food for the native Atala butterfly. In many places around the state, the coontie is now quite common. But 100 years ago, our coontie was nearly driven to extinction!

## From harvest to overharvest

Florida's Native Peoples kept an ancient tradition of harvesting, slowly processing, and cooking coontie stems. De Soto's 1539 expedition records the first time hasty consumption poisoned an impatient adventurer; neurotoxins in the starchy stems require a slow leaching process to make the coontie safe for eating. Nineteenth Century settlers learned this method from Seminoles, and developed a cottage industry producing starch for local sale. By 1900, industrial mills near Miami and Orlando were processing (literal) tons of wild coontie stems per day – thousands of plants! Once called a limitless resource, the coontie was a rare find by 1921, the year the Hurst Mill – the very last starch mill – closed down.

## A deeper history

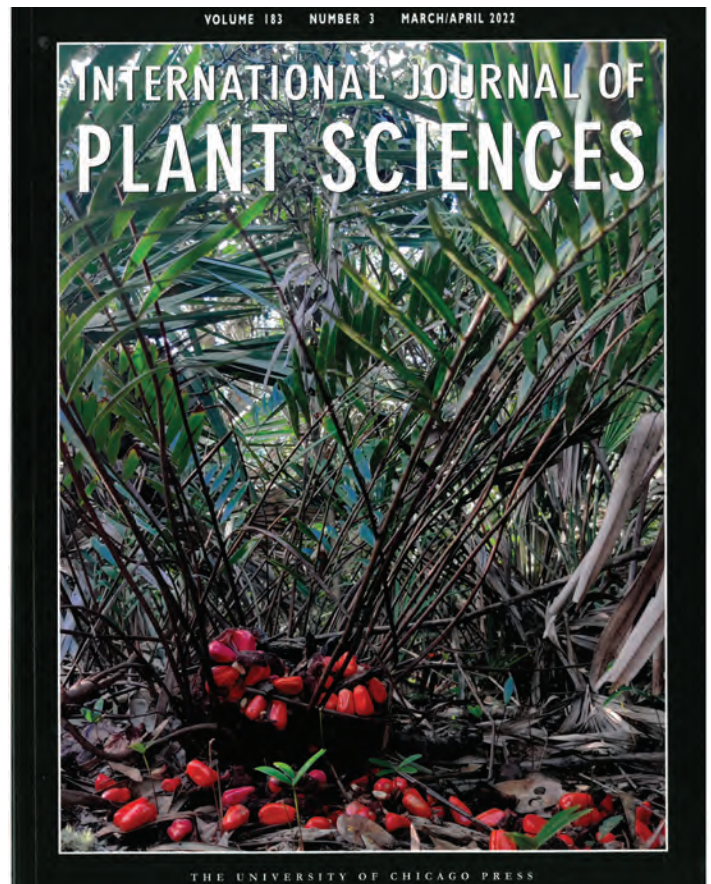
Experts studying this captivating plant have long asked from where the coonties came. Early theories proposed that Native Peoples may have traded this important resource. The genetic data showed one consistent pattern: plants from Crystal River always appeared to be central to any relationships. Even plants as far south as the Everglades and Cayo Costa always showed a close genetic affinity to this one location in the “bend” of Florida.

This result compelled us to read more deeply about Crystal River – and we learned that it was once the “Capital” of Florida! The shell mound building people there controlled a vast trade network reaching from Miami to Alabama. Artifacts from far-flung locales have all been recovered in the monumental mounds at Crystal River. Amazingly, the network of genetic relationships in Florida's *Zamia* closely matches that trade network recovered from the archaeological record.

So, we wondered if it was just a fluke – could pollination or seed dispersal give a pattern that looks



This photo from 1912 shows a parade float for the Hurst Mill decorated with zamia leaves and stems, parked in front of the Dade County Courthouse. The Hurst Mill was located at what is now the intersection of US 1 and 104th street, about 3 miles from Montgomery Botanical Center. *Zamia* starch was widely sold as “Florida Arrowroot” before natural populations were exhausted in 1921.



The study was featured on the cover of INTERNATIONAL JOURNAL OF PLANT SCIENCES, and is open access on the IJPS website.

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