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Insect infestation: Tiny Asian scale bugs, nearly impossible to eradicate, are killing off Sago trees

By Travis Reed

Associated Press

LAKELAND - At 6 feet high, it once stood tall and proud and dark green. Now, the decades-old King Sago tree's long stems weep and wither, mottled white and sick.

Within a year, if untreated, the palm-looking plant on Florida Southern College's campus will be sucked dry by that white menace -- a flaky coat that looks like a fungus, but is actually hundreds of thousands of tiny bugs called Asian Scale.

The same thing is killing thousands of other trees across the state, where the King and Queen Sagos are widely deployed in commercial and residential landscapes.

According to the Global Invasive Species Database, it's also in Hawaii, Georgia, Texas, Alabama, California, Louisiana and South Carolina. Further, the scale been reported in the Cayman Islands, Puerto Rico and Vieques Islands, U.S. Virgin Islands and Guam -- of particular concern because it's threatening native plants on the island.

The bugs are from southeast Asia, and believed to have been introduced to the United States through Miami ports in the mid-1990s. They have no natural predator here, can spread in the wind and hide in plant roots -- making quarantine particularly difficult and costly.

"This insect builds real big populations rather quickly," said Greg Hodges, a taxonomic entomologist for the state based in Gainesville.

The Sagos resemble palm trees, but are actually a type of cone-bearing plant called a "cycad," which has about 300 species. They're generally tropical or subtropical, and most are threatened with extinction.

But not the King Sago, whose abundance in yards and on roadway medians all over Florida owes greatly to the fact that the hardy plant historically requires very little to maintain in the first place, even surviving storm surges and extreme temperatures.

Some of its owners might not even know they have scale. If they do, few may be inclined to invest the substantial time, labor and cost necessary to beat it.

An estimated 90 percent of cycads in Miami -- most of them King Sagos -- have been destroyed by scale.

Within five years, estimates Lakeland nursery owner Tom Broome, the same could happen in Tampa and Orlando.

"The landscape maintenance people don't know how to treat it, so they think cutting off the bad leaves is the best thing to do," Broome said. "Then they put the leaves on a truck, haul it away and spread it all over town."

THREATENED ISLAND

Researchers say scale affects only certain cycads like the Sagos, but its recent, rapid spread to native species of cycad in Guam (possibly from U.S. Sago exports) has raised alarm it could unbalance island biodiversity.

"That has much more of an ecological impact than destruction of some attractive, ornamental plants," imported for U.S. landscaping, said Ron Cave, assistant professor at the University of Florida's Indian River Research and Education Center in Ft. Pierce.

FIGHTING SCALE

Several pesticides can help control scale, but they require multiple and thorough application, said Catharine Mannion, an assistant professor and extensions specialist in Homestead with the University of Florida's Institute of Food and Agricultural Sciences.

"The tricky part is you have to do repeat applications and you've got to get good coverage," she said. "This insect hides very well. Even if you think you've got it cleaned up, there may be some still on it."

Jody Haynes, a cycad biologist at Montgomery Botanical Center in Coral Gables, said workers there are using, with some success, a mix of natural predators and insecticides to control scale.

"The problem is that it hides under old leaf bases on the trunk, it hides in the root system, and it's nearly impossible to eradicate," he said. "You get just a few insects that are hiding out, and they reproduce so fast that the population cycles -- once it starts, it can increase exponentially."

A parasitic wasp and predatory beetle introduced by Florida researchers in the late '90s to control scale are still established, but haven't done much to curb the pest population.

HOPE FROM OVERSEAS

However, University of Florida researchers, with funding from the U.S. Department of Agriculture, are planning a spring Vietnam expedition to search for other natural predators or parasites.

Cave said required lab tests mean it could take years before any of those creatures could be introduced in a nonnative habitat.

Further complicating eradication, a treated tree likely will be re-infected if others in the neighborhood aren't also sprayed. The male scales can fly, and newborn "crawlers" are able to drift on the wind from one location to the next. Even pruning tools used on an infected tree can spread scale if they're not properly cleaned.

"It's the people down the street that don't know about it and don't take care of their plants that are spreading it," Broome said. "We need some sort of solution, because people can't be spraying these plants forever."