Invasive Cuban tree frogs threaten native wildlife, damage utilities

June 12 2007

North Florida residents accustomed to tiny tree frogs may feel jumpy — a giant Cuban species has colonized half the state and is moving north, a University of Florida expert says.

The Cuban tree frog may threaten its native counterparts, said Steve Johnson, an assistant professor with UF's Institute of Food and Agricultural Sciences. The amphibians have already become a nuisance to homeowners and utilities workers.

Johnson, based at UF's Gulf Coast Research and Education Center in Plant City, wrote a recently published extension document on Cuban tree frogs.

"We don't really know (how serious the issue is)," Johnson said. "They're not going to attract the attention of citrus canker or some other problem that has huge economic importance."

But "huge" is a good word to describe the frog, which can be more than 6 inches long. Usually creamy white to light brown, they have large eyes and rough skin. Their skin is coated with a secretion that irritates mucus membranes; Johnson says people shouldn't touch the animals barehanded.

Cuban tree frogs adapt well to residential areas and sometimes enter homes via pipes and open doors. This can cause unpleasant surprises for homeowners, particularly when the amphibians turn up in toilets, one of

their favorite indoor destinations.

“The frogs are around just about everybody’s homes in South and Central Florida,” Johnson said. “That may or may not be a problem, depending on how wildlife-friendly you are.”

He’s more concerned about the frogs becoming established in natural areas. Early research suggests they may eliminate native tree frogs by competing with them for food and shelter or by simply devouring them. In one wooded area, Johnson set up PVC pipe “homes” to attract tree frogs for study. He found 130 Cuban tree frogs and no natives.

Johnson has begun a project in the Tampa area, where researchers from UF, the University of Tampa and a Florida-based consulting firm, Biological Research Associates, will remove Cuban tree frogs from wetlands and investigate the impact on native species.

He’s also testing a commercial animal repellent to see if it can keep Cuban tree frogs away from electrical utilities. The amphibians can cause blackouts and damage equipment by creating short-circuits, caused when they contact two surfaces and one or both carries an electrical charge.

Initial results suggest the product repels frogs, Johnson said. Testing should be finished in about one month, he said.

That’s good news for Lakeland Electric, the state’s third-largest public power utility, said Steve Perkins, a system operations engineer. The frogs have been a problem since the mid-1990s and now cause two or three blackouts per week in the spring and fall.

Perkins believes power poles attract the frogs because they offer shelter for the animals and the insects they eat. Native species never caused

blackouts, probably because they're too small to contact surfaces that are widely spaced apart.

The company has tried numerous ways to protect equipment, installing insulated disks, tape and tubing. Though they've never tallied the frog-related expenses, he said a single incident can cost up to $10,000 in repairs.

Cuban tree frogs were introduced to South Florida in the early 20th century, probably via shipping crates from the frog's native habitat, which includes Cuba, the Bahamas and the Cayman Islands, Johnson said.

Today, breeding populations are found in Cedar Key, Gainesville and Jacksonville, and lone frogs have been found in Georgia, South Carolina and the Florida Panhandle.

How far north could the frogs survive? Johnson says it's anyone's guess.

"They do so well in human habitats, so the question is, how far north are microclimates set up where they could avoid freezing?" he said.

For more information, see Johnson's publication, "The Cuban Treefrog (Osteopilus septentrionalis) in Florida," at edis.ifas.ufl.edu/UW259 .

Source: University of Florida