

# Florida frogs floated from Cuba

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Beach umbrellas are seen in the sand in Cuba in 2008. Two species of invasive frog which are hopping their way through Florida probably got to the state by hitching a ride on floating debris from Cuba, according to a study published on Wednesday.

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Amphibian experts have long wrangled over the origins of the greenhouse frog (*Eleutherodactylus planirostris*) and the Cuban treefrog (*Osteopilus septentrionalis*).

The two [species](#) are widespread across the Caribbean, but were first spotted in the Florida Keys -- the island chain that starts at Florida's southeastern tip -- in the mid-1800s.

A hundred years later, both began to be firmly established on the mainland and embarked on a relentless advance.

Today, the greenhouse frog has established colonies as far north as Alabama, while the Cuban treefrog can be found all around the southern Florida coastline.

Scientists led by Blair Hedges at Pennsylvania State University analysed the frogs' DNA to identify the amphibians' closest native relatives, which would tease out clues about this unusual migration.

The greenhouse frog's ancestry was pinpointed to a small area of western Cuba, while the Cuban treefrog came from at least two sources in Cuba, of which the best bet is a remote peninsula in the western part of the island.

The team believe that the two species came to Florida thousands of years ago, quite possibly by climbing on board vegetation that then floated like a raft across the narrow strait.

Once established in the Keys, the [frogs](#) adapted over the years to the colder winters of Florida compared to their Cuban home, and this enabled them to spread northwards when transport and commerce links developed in the mid-20th century.

"Both of them could have come across (to Florida) naturally, not by swimming, because these frogs would die pretty quickly in [salt water](#), but by floating across on vegetation," Hedges said in a phone interview.

"There are plenty of examples of flotsam crossings, on short distances as well as long distances, even across oceans. These frogs, especially the treefrog, are on many small islands in the Caribbean which have no humans, so clearly they get around. There's no other way they could have

got to those islands other than by floating."

Hedges added: "What we're speculating in this paper is that if they were there on the Keys on their own for thousands of years, they could have adapted to a more continental climate, making them better invasive species.

"And when they made their way up into Florida, that may explain why they have done so well."

Invasive species such as rabbits, rats, the cane toad and zebra mussels, introduced deliberately or accidentally into foreign habitats, can become a major problem in biodiversity.

Hedges said that although the two Cuban frogs had clearly adapted well to Florida, little was known of their impact on native American species.

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