



LIZARDS

AT FAIRCHILD

By James T. Stroud

Any visitor to Fairchild Tropical Botanic Garden will have seen lizards scuttling across the garden paths, perched on tree trunks and sunbathing on rocks at some point—indeed they are hard to miss. What many visitors may not realize, however, is just how special the lizard community of Fairchild really is. Right now there are 13 species of lizards living at the Garden, 12 of which are exotic non-natives. This kind of assemblage is rarely seen in nature, and in fact it may be one of the most species-diverse non-natural lizard communities in the world.

Some of the more common lizards of the Garden:

Red-headed agama, *Agama agama*, East Africa

Green iguana, *Iguana iguana*, Central America

American green anole, *Anolis carolinensis*, Florida

Crested anole, *Anolis cristatellus*, Puerto Rico

Bark anole, *Anolis distichus*, Hispaniola

Knight anole, *Anolis equestris*, Cuba

Cuban green anole, *Anolis porcatius*, Cuba

Brown anole, *Anolis sagrei*, Cuba/Bahamas

Brown basilisk, *Basiliscus vittatus*, South America

Tokay gecko, *Gekko gekko*, South east Asia

Asian house gecko, *Hemidactylus frenatus*, South east Asia

African house gecko, *Hemidactylus mabouia*, Pan-Africa

Mediterranean house gecko, *Hemidactylus turcicus*, Southern Europe

Red-headed agama (*Agama agama*)

One of the most striking lizards in the Garden is the beautifully vibrant red-headed agama lizard (*Agama agama*). Hailing originally from across sub-Saharan Africa, these lizards have likely colonized the Garden as a result of their popularity in the pet trade. True to their name, males sport brightly colored heads, which is a sign of dominance in this highly territorial species. These lizards are especially abundant in The Lin Lougheed Spiny Forest of Madagascar.

Green iguana (*Iguana iguana*)

The largest lizard found in the Garden is the green iguana (*Iguana iguana*), likely another result of the international pet trade. Big male iguanas can be seen basking lazily on branches overhanging the lakes, and juveniles are often observed on the walls of the Victoria Pool. These lizards are entirely herbivorous as adults, a detail I'm sure many of our green-thumbed readers know all too well.

Brown basilisk (*Basiliscus vittatus*)

The brown, or striped, basilisk (*Basiliscus vittatus*) is native to South America. This species has a remarkable talent: As a predator-escape tactic, it can run very fast on just its back legs. This lizard can run so fast, in fact, that it is able to run across water without breaking the surface tension and sinking, which has led to a notable pseudonym: the "Jesus Christ lizard."

Cuban knight anole



Cuban brown anole



Cuban knight anole (*Anolis equestris*)

The Cuban knight anole (*Anolis equestris*) is the largest, and arguably the prettiest, species of the *Anolis* genus at Fairchild. These lizards are hard to spot, as they spend the majority of their time high up in tree canopies. Occasionally some individuals may venture down the trunk, and you will be able to see them around two to three meters up, often facing head-down on royal palms or in the Garden's Rainforest habitat. These are also the most predatory lizard; we have frequent records of them eating other species of anole.

Cuban brown anole (*Anolis sagrei*)

The Cuban brown anole (*Anolis sagrei*) is by far the most abundant lizard you will see during a visit to the Garden. Cuban brown anoles are found on the ground and at the base of trees, and seem particularly prone to blocking visitors from reading plant species identification plates by laying on them! They are sun worshippers, and are one of the few anole species that is active during the hottest parts of the day.

Cuban brown anoles are avid displayers, and while walking around the Garden you can often observe adult males fanning their brightly-colored red dewlaps, pieces of loose extendable skin on the throat. All species of anole fan their dewlaps as a form of visual communication, and different species have evolved different-colored dewlaps. Territorial males frequently display to warn other males of their presence, often accompanied by other obvious visual signals such as head-bobbing and push-ups.

Puerto Rican crested anole (*Anolis cristatellus*)


The Puerto Rican crested anole (*Anolis cristatellus*) is a relatively new introduction to Miami, having only been first detected here in the mid-1970s. Little is known about

its behavior and ecology here, however the interaction between it and the Cuban brown anole (a very similar species which evolved independently) is of great interest. In contrast to the brown anole, the Puerto Rican crested anole is less tolerant of open areas and is often found in greatest abundance in the highly shaded rainforest area in the Garden. Its most distinguishing feature, as the name suggests, is the prominent crest found on the tail in adult males.

Hispaniolan bark anole (*Anolis distichus*)

The final exotic anole lizard is the bark anole (*Anolis distichus*) from the island of Hispaniola (which contains Haiti and the Dominican Republic). You can find bark anoles almost anywhere in the Garden, however you may not see them for very long. Bark anoles live higher up on the trunk of a tree than either brown or crested anoles—usually one to three meters up—and they are incredibly fast. These are the lizards that you may see dashing around a tree trunk out of the corner of your eye. Perfectly adapted to a life living on wide tree trunks, as opposed to perching on thinner branches like most other anoles, they have a more splayed appearance.

American green anole (*Anolis carolinensis*)

The only native species of lizard found in the Garden is the American green anole (*Anolis carolinensis*). It is recognizable by (not surprisingly) its green coloration, although green anoles are able to slightly darken their skin color. This color-changing ability led to their incorrect and now largely unused misnomer, "the American chameleon." Its diet is comprised primarily of small insects, although it has also been observed licking nectar from plant inflorescences. Little is known about this behavior, or its potential impact on plant pollination. 

James Stroud is a PhD student at Florida International University working with Dr. Kenneth Feeley. His primary interest lies in attempting to understand how ecological communities are formed and organized—which gives him a great excuse to catch lizards all day. He is particularly interested in Fairchild's lizard community, which is comprised almost entirely of exotic introduced species.

Green iguana



Red-headed agama

