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This Green Iguana was captured on Providenciales and is being kept at the National Environmental Centre.

New Scales

Reptiles invade the Turks & Caicos Islands.

Story & Photos By R. Graham Reynolds & Matthew L. Niemiller

The Turks & Caicos have a very special group of animals that are native to the Islands—the reptile “belongers.” From the regal Rock Iguana to the radiant Rainbow Boa, the ten species of native terrestrial reptiles play a major role in the local ecosystem and add an aesthetic interest to the

Islands justifiably known as “Beautiful by Nature.” However, the reptilian fauna of the TCI has recently grown, nearly doubling to a total of 17 species! What is causing such a rapid increase in the numbers of snakes and lizards that share the Islands?



Unfortunately, this diversity explosion is due to the arrival of species that are not native to the TCI, known as alien or non-native species. Alien species are plants and animals that are moved beyond their native range by either direct or indirect human activities. Many of these organisms cannot survive in the new area, and hence may persist for a while but never become established. These are referred to as “non-native species.” Other organisms might find the new area to be very much to their liking, and they establish themselves and begin to proliferate, earning the epithet “introduced species.” In the unfortunate event that the new arrivals begin to impact native wildlife populations, they are called “invasive species,” and must be controlled to prevent the destruction of local ecological communities.

Over the last few decades or so, researchers have been keeping track of new species showing up in the TCI and monitoring them to determine if they pose a threat to native wildlife. Some of these organisms arrive accidentally in shipments, while others are probably intentionally introduced or are escaped pets. Yes, even feral cats and potcakes represent invasive species, and they have had terrible effects on local species such as rock iguanas. Indeed, rock iguanas have been driven from most of the major islands in the TCI by cats and dogs, who like to eat their young and dig up their burrows. Other escaped pets are less harmful, such as a single Savannah Monitor Lizard, a plant-eating reptile native to Africa and a popular pet that once roamed Leeward for several years.

So far, researchers have identified seven introduced reptile species in the TCI, a number that continues to increase. These animals do not appear to pose an immediate threat to wildlife, but they are being closely watched in case they move from introduced species to invasive species. I will introduce you to each one, so that perhaps you may report sightings or species that you don't recognize to the DECR or the author.

Introduced species of reptiles in the TCI

Red-Eared Sliders (*Trachemys scripta elegans*) are freshwater aquatic turtles native to the eastern United States. They have been introduced all over the world due to the pet trade and as food items, especially in Asia. They need a constant source of fresh water to survive, and are often seen basking on the banks of ponds. They are easily identified by the yellow stripes on their necks and legs and the red patches on the sides of their heads. So far, a few indi-

viduals have been seen at the Provo golf course in Leeward.



This Red-Eared Slider was found in a pond on Providenciales.

Antillean Sliders (*Trachemys stejnegeri malonei*) are also freshwater aquatic turtles, though they are native to Great Inagua. They are very similar in appearance to Red-Eared Sliders, though as adults they have less red on the sides of their heads. A few individuals were spotted in 1975 and 1997 in ponds on Pine Cay, though they apparently haven't been seen there since 1997. Have you seen one? Let us know!

If you have walked around a lighted building at night, you have probably seen a Common House Gecko (*Hemidactylus mabouia*) gobbling up insects attracted to the light! These geckos, which have been introduced all over the world, are known as human commensals, which means that they live very well near people. They have specialized pads on their feet that allow them to walk up walls and across ceilings, a neat trick when you are hunting disoriented insects. These are one of the few lizards that can make an audible sound—the males call to each other at night to establish territories. The call sounds like a muffled clicking sound, which you can replicate by puckering your lips inside of your closed fist and making a “kissing” sound. If you can imitate it, they will call right back to you! These geckos are now abundant on most of the major islands of the Turks & Caicos Banks, and are expanding to smaller islands as well. So far, they do not appear to be having an impact on native wildlife, but researchers are concerned that they might compete against the native Caicos Gecko (*Aristelliger hechti*). This native gecko is an endemic species, meaning it is found nowhere else in the world. They are found on only a few of the Caicos Islands

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Left: An introduced Common House Gecko is out foraging at night on Salt Cay. Right: This native Caicos Gecko is found only on a few of the Caicos Islands. Note the “scapular spot” on the native gecko.

and are considered to be vulnerable to extinction. House geckos may be identified by their brown, gray or yellow coloration, which changes throughout the day, and a general lack of distinct markings. Caicos Geckos are readily identified by having a dark circle above each of their shoulders, known as a “scapular spot.”

Green Iguanas (*Iguana iguana*) are arboreal (tree-dwelling) reptiles native to Central and South America, and can be easily recognized by their green color and spiked crest on their heads and back. Recently they have been introduced well outside of their native range due to their popularity as pets, even though they are poorly suited for this activity. Green Iguanas are now extremely common in South Florida and the Florida Keys, as well as on other islands in the Caribbean. A few of these iguanas have been sighted in the TCI on both Providenciales and Grand Turk. It is most likely that these are pets that have escaped, and no reproduction has been noted in the wild.

Cuban Knight Anoles (*Anolis equestris*) are medium sized green lizards with white stripes on their shoulders and a triangular head with large plate-like scales on it. Like the Green Iguana, Knight Anoles have been introduced well outside of their native range in Cuba due to the pet trade. They are now well established in many areas of the northern Caribbean, including south Florida. Four Cuban Knight Anoles have been found on Providenciales on the grounds of a resort in Grace Bay. These individuals are probably either escaped pets or they arrived on decorative vegetation imported from Miami. They do not appear to be reproducing, but it is likely that they would thrive in the lush grounds of this resort.

Brahminy Blind Snakes (*Rhamphotyphlops braminus*) are tiny black creatures



This Cuban Knight Anole is perched on a tree limb in Provo. Can you spot it?

BRIAN RIGGS



that look nothing like a typical snake. In fact, they would be easily mistaken for a black worm or arthropod, until you look very closely and see the scaly body and the tongue flickering in and out. These snakes are native to the Indian subcontinent, but they have been introduced accidentally all over the world. They are especially good at colonizing new areas due to their unusual mode of reproduction—all Brahminy Blind Snakes are female and give birth to young without the use of a male of the species! This interesting behavior is known as parthenogenesis, where females essentially make clones of themselves. Thus, it only takes one snake to start a new colony! These blind snakes are not completely blind, but they have a thick scale covering their eyes which means that they cannot form images, just sense light from dark. They live almost entirely underground, and can occasionally be found underneath rocks or other cover. They are harmless, and spend their lives feeding on ant larvae. In many areas they are known as “Flowerpot Snakes,” because they have a proclivity for the potting soil of plants—a habit which allows them to be transported easily with shipments of ornamental plants or mulch. So far, this species has only been sighted on Grand Turk, but it is highly likely that they will arrive on Providenciales very soon if they are not already there. Have you seen one?

Corn Snakes (*Pantherophis guttatus*) are brightly colored and harmless snakes native to the southeastern US, where they are quite common and feed on rats, birds, and mice. They are also popular pets, which has likely contributed to their establishment in areas well beyond their native range, such as Grand Cayman. Three of these handsome creatures have been sighted on Grand Turk near the cruise ship terminal. It is possible that these snakes arrived as juveniles or even eggs in shipments of ornamental plants from Florida, unless some unlucky pet owner on Grand Turk left a cage door open! The individuals that have been found so far have color patterns that resemble wild individuals, not the rainbow of colors that people keep as pets, so we believe that these are accidental introductions from vegetation imports.

Invasive and introduced species have caused major ecological problems around the world, including the TCI. Perhaps the best publicized recent cases are the establishment of *Casurina* pine trees from Australia, which supplant native Caicos Pines, as well as the Lionfish, a marine predator that is vacuuming up native coral reef fish. Less

attention has been paid to the reptiles, but we hope to make everyone aware of these introductions so that sightings can be reported and proper control measures implemented. Though none of these reptiles have moved from introduced to invasive, it is vitally important to keep track of their status and any impacts on native wildlife. A



This Corn Snake was captured on Grand Turk in 2010.

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fun outdoor activity for children, schools, or adults might be to survey a small area for some of these species. You could also contact the local TCI Environmental Club about organizing surveys, you never know what might turn up! 🌟

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