



A

# SKINK STORY

---

THE BRIGHT TAIL OF A LOWLY LIZARD

by *Karuna* EBERL

*What would our lives be like if we woke up tomorrow and all the skinks were gone?*

“To the normal run-of-the-mill person down here, it would really not affect you in the slightest,” says wildlife biologist Adam Emerick. He says this, but looks dejected by the thought. For an hour now he’s been talking about skinks with the enthusiasm of someone who clearly cares about these creatures far beyond the fact that he’s paid to be a conservationist. ➔

### STRIPED MUD TURTLE

The rare striped mud turtle grows to just 6 inches long and prefers slow-moving fresh water where it dines on carrion, bugs and plants. We don't yet know if it's genetically distinct from populations on the mainland, but it is able to live for

a short while in brackish water, which could be a Keys' adaptation. If things get too dry around the watering hole, it will aestivate, or hibernate for months within the mud. They don't bask much, so you're most likely to see them on the road

after heavy rains, or when it's time to lay eggs. Breeding females can travel up to a kilometer to the same nesting spot each year, which is like a human walking from Key West to Miami to give birth.



Few humans have ever laid eyes upon this elusive predator even though it lives on, or rather under, our beaches. Look past the high-tide line of crunchy, brown seagrass and bouncing sand fleas to the beach berm, then imagine a tiny lizard with a flamboyantly bright tail, wiggling underground through soft sediment layers, seeking out bugs. Voilà! The Florida Keys mole skink.

Emerick might just be their biggest fan. He's a biologist for the four national wildlife refuges here, and has been studying skinks since graduate school. Not much is known about the Keys mole skink. Studies from the '50s and '60s on other subspecies of Florida skinks revealed that females brood over their eggs until they hatch, which is an uncommon trait for reptiles. Our skink is also very rare, so rare that as climate change takes hold, this mysterious creature might be on the verge of oblivion.

To find out, Emerick spearheaded an ambitious study to learn more about the ecology and distribution of Keys mole skinks, plus four other rare Keys reptiles. He and a team of volunteers set up 932 cover-board habitats and dozens of freshwater traps, which they checked twice a week. After a year, they had found 99 skinks, 63 striped mud turtles, 17 Key ringneck snakes, 13 peninsula ribbon snakes, and none of their fifth study, the rock-crowned snake.

A study in the Lower Keys the size of Emerick's is rare and exciting. It offered many new insights into this shy lizard, especially its preferred habitat. Then, 50 weeks into the 52-week project, Irma rolled in, practically obliterating the soft beach berms on which the skink relies. The most-populated skink homes, like Long Beach Key, Bahia Honda and Long Beach State Park, were leveled.

"Right now I'm sitting on a large tract of land that used to be a wonderful heterogeneous environment where skinks could be found if you knew where to look, and now I'm hazard to find a single one," he says. "To see events like this in real time, it really drives the point home there are some drastic changes we need to plan for."

For the seven years preceding the hurricane, the skink had been a candidate for endangered species protection, based on how little is known about its populations, impending property development, and most significantly, the long-term concerns over sea level rise and intensified storms from climate change.



Photos Contributed by U.S.F.W.S

### MOLE SKINK

Wildlife biologist Adam Emerick recently concluded a year-long field study of five rare Keys reptiles. Like many burrowing skinks, the Florida Keys mole skink's limbs are small in proportion to its body, which allows them to propel themselves through loose soil by wiggling, eliminating the

need to to move their legs back and forth. "They are remarkably fascinating," he says. "They are perfectly adapted to their environment." These skinks are endemic to the Keys, sport a distinctive red-orange or pink tail, and max out around 6 inches in length. Keys mole skinks are one of five

subspecies endemic to the southeast. Both the Keys mole skinks and their cousins on the Gulf, the Cedar Keys mole skinks, are geographically isolated, and live so close to the water that current climate change predictions put them in grave danger over the coming years.

KEY RINGNECK SNAKE

Over the year - long study, Emerick's team found 17 Key ringneck snakes, which are a subspecies believed to be endemic to the Keys. They are tiny, topping out at 10 inches, and rare. If you are lucky enough to spot one, it will probably be in the garden or the

Less than a month after Irma, the government denied its protection, along with 24 other species, including the Pacific walrus. That prompted a lawsuit, which was recently filed by the nonprofit Center for Biological Diversity.

Emerick tries not to get too involved in the politics of the skink. His objective field reports get handed to other biologists and planners, who draft plans that eventually land on the desks of the upper reaches of government for a ruling. But he isn't thrilled by the decision, and worries about the skink's survival.

"It's a shame to potentially lose it before we even know what we're losing," Emerick says. "It's really depressing. It's kind of the state of conservation here right now. There's an urgency of getting information as fast as possible."

So what would it matter, if a reptile that weighs no more than a penny and lives a life of almost complete seclusion from humans, disappeared forever? Well, it depends on whom you ask.

From a scientific standpoint, the skink's isolated evolution provides a rare opportunity to unravel mysteries of natural selection and to give insight into the Keys' ecological and geological history. From a legal stance, skinks' beach-front homes make them the proverbial canaries in the coal mine for climate change. When they are flooded out, so are we.

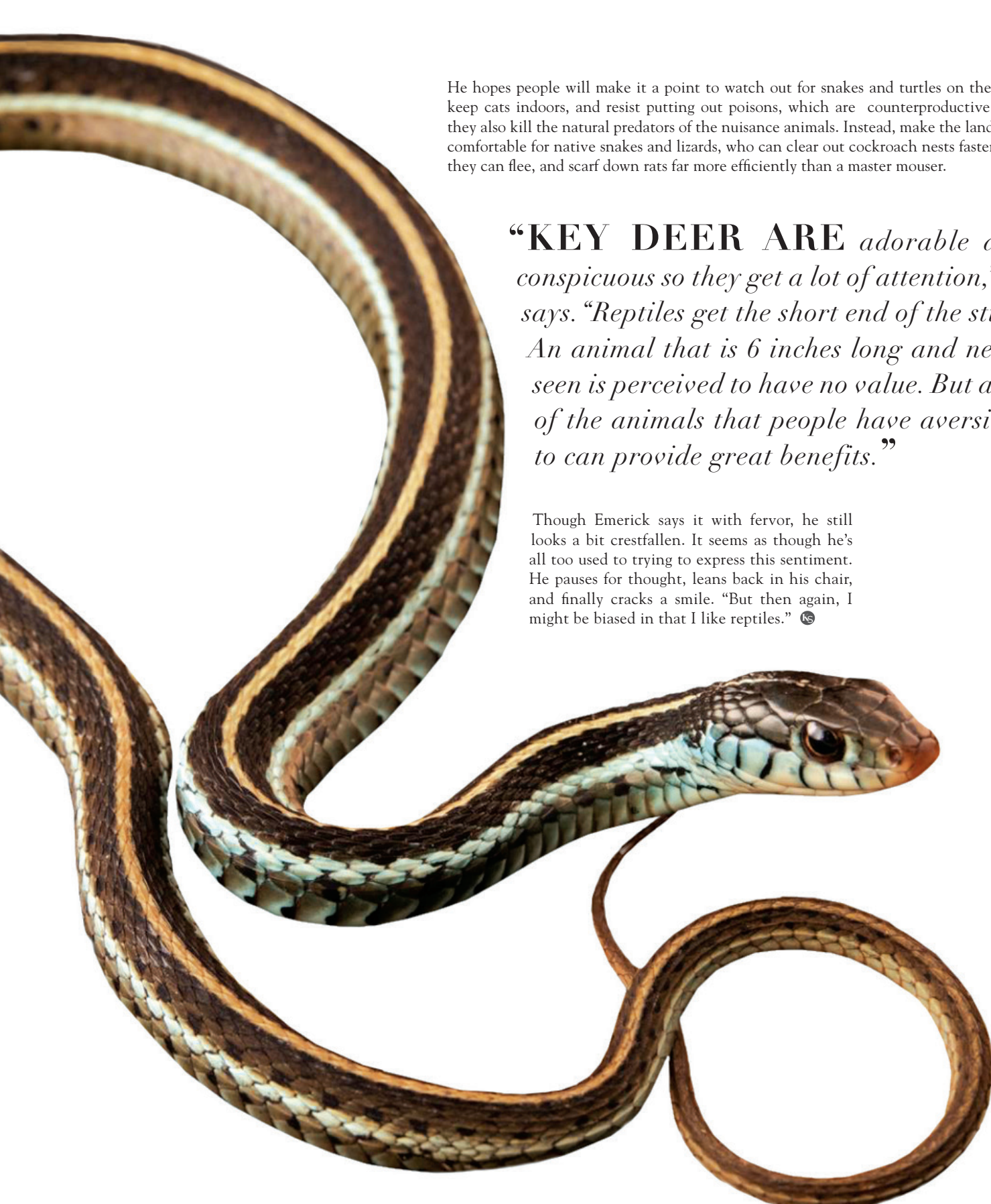
The success of the skink's last stand, however, may ultimately lie outside the scope of politics and science. It might simply come down to whether enough people care to make a difference. The idea of a species' right to exist, regardless of its charisma or immediate use to humans, is a journey from endemic self-importance into an existential tapestry of morality and spirituality. That takes some effort to think about. Add to that the fact that reptiles already suffer from an image problem that pre-dates organized civilization, and that's a pretty big hurdle to overcome.

Despite all of that, Emerick holds out hope in the resiliency of nature, and in the survival of the skinks. For now, he has had to put aside his research to focus on more pressing habitat management, like uprooting exotic plants, replanting native ones, and as manpower allows, monitoring sea turtle nests. Still, he aspires to put in a good word for the skinks, and for the rest of the reptiles.

| Photo Contributed by U.S.F.W.S |




shed. They enjoy hangouts with fresh water and prefer meals of insects, frogs, and reef geckos. They are venomous, but because their fangs are in the rear of the mouth, and the venom is for immobilizing tiny prey, they have zero ability to envenomate humans — though they might douse you with a nasty musk if you bother them.



He hopes people will make it a point to watch out for snakes and turtles on the road, keep cats indoors, and resist putting out poisons, which are counterproductive since they also kill the natural predators of the nuisance animals. Instead, make the landscape comfortable for native snakes and lizards, who can clear out cockroach nests faster than they can flee, and scarf down rats far more efficiently than a master mouser.

**“KEY DEER ARE** *adorable and conspicuous so they get a lot of attention,” he says. “Reptiles get the short end of the stick. An animal that is 6 inches long and never seen is perceived to have no value. But a lot of the animals that people have aversions to can provide great benefits.”*

Though Emerick says it with fervor, he still looks a bit crestfallen. It seems as though he’s all too used to trying to express this sentiment. He pauses for thought, leans back in his chair, and finally cracks a smile. “But then again, I might be biased in that I like reptiles.” 

#### PENINSULA RIBBON SNAKE

These semi - aquatic, nonvenomous snakes grow to 2 feet, and enjoy being around fresh water, where they feed on all life stages of frogs and small fish. They are

elusive, but on occasion can be spotted on roads, especially ones that bisect wetlands. They hunt largely by sight, so their oversized eyes make them easier to identify.

Help out the research and report sightings of any of these animals to Emerick; adam\_emerick@fws.gov.