A Backward Glance at Iguana Exploitation

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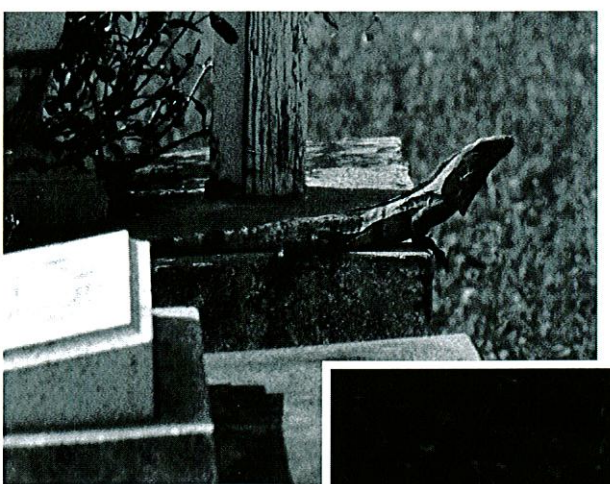
All photographs by RWH.

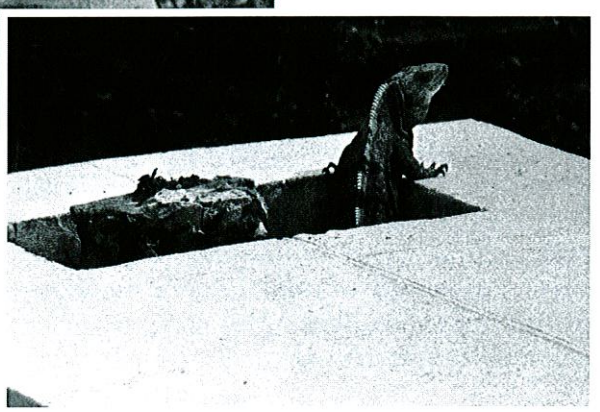
Over a quarter of a century has passed since we first investigated iguana exploitation in Central America. A "friend" recently pointed out to us that we were a couple of "old-timers" when it comes to that particular subject (see also the Profile on p. 86). Prior to collaborating on *Ctenosaura* and *Iguana* research, we independently had done considerable field work with these lizards. Fitch studied *C. similis* in Costa Rica in the late 1960s and Henderson worked with juvenile *I. iguana* and with *C. similis* in Belize in 1970–1. We were both well aware of the human-induced pressure imposed on these lizards, and we were interested in bringing their plight to the attention of our colleagues, conservation organizations, legislative bodies in the countries in which we were working, and to the general public (see the summary in Fitch et al. 1982, full citation at the end of this article).

In the United States, most folks familiar with iguanas associate them with the pet trade or consider them curios, and their importation for these purposes is a minor industry. However, within the iguanas' ranges in tropical America, these lizards are hunted for food and, in some areas, may be the principal game animals. In order to determine the extent of iguana exploitation and learn the methods used to hunt and subdue them, we visited each of the Central American countries, observed iguanas in their natural surroundings and in mercados, and we interviewed hunters and government officials.

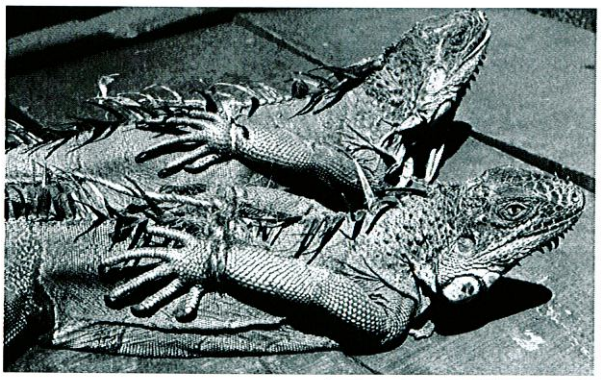
Early records revealed that iguanas had been hunted since ancient times by many of the native cultures, but, thanks to their high reproductive potentials, they had been able to maintain their numbers over hundreds of years despite exploitation. However, the widespread use of insecticides to protect crops, habitat destruction resulting in large part from an increase in the number of people, and overhunting inevitably altered ecosystems. The result was that both Green Iguanas and ctenosaurs have experienced rapid reductions in numbers in recent years and have disappeared from many areas where they were formerly abundant.



Ctenosaura similis in the Belize City cemetery.

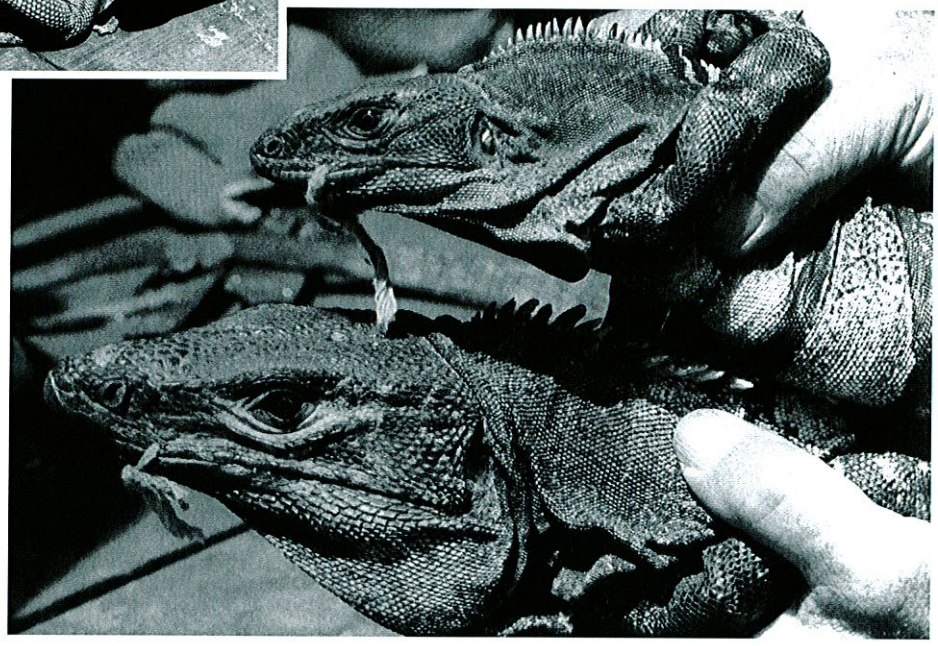


A ctenosaur emerging from a Belize City cemetery grave.



Tethered Green Iguanas at the Chinandega, Nicaragua market (February 1976).

Male and female ctenosaurs with their mouths sewn shut (Nicaragua, February 1976).



Both Green Iguanas and ctenosaurs have been important protein sources for people locally. Each kind is preferred in certain parts of the range. Beyond its actual food value, the flesh is valued for its supposed mystical power, and consumers are prepared to pay much more than they would for a similar amount of beef or chicken. The Catholic Church has ruled that iguana flesh, like fish, is a permissible substitute for "meat" (flesh of mammals or birds) on Fridays and during Lent. Over much of the range, ctenosaur flesh is highly valued as an aphrodisiac. In Belize, however, it is considered unfit for human food. The Belize City cemetery supports a colony of *Ctenosaura similis* and many of the lizards have burrows in the grave mounds. This led to the belief that they feed on human corpses in their graves.

In the Mercados

From the Isthmus of Tehuantepec along the Pacific Coast to Lake Nicaragua, at least 25 towns have mercados where iguanas were formerly sold. El Salvador was a major importer. Having depleted its own population of iguanas, it received them from Honduras, Guatemala, and Nicaragua by boat and by bus. The neighboring countries passed legislation banning the trade, but pedestrians carrying sacks or baskets full of reptiles in many instances were allowed to cross the border into El Salvador.

Cruel treatment of captured iguanas was routine. In the mercados, buyers often requested that vendors sell them unlaid eggs without the females. The vendors would slit the females' abdomens and rip out the eggs. Many commonly believed that such stripped females would survive and produce more eggs. Females stripped of their eggs and dying from the crude surgery were a common sight where street vendors were plying their trade. Also, because ctenosaurs were liable to bite a handler, their mouths were routinely sewn shut. In addition, pulling off the claw of the fourth (longest) hind toe with pliers and drawing out the tendon was common practice. The exposed tendon was then tied to that of the opposite side so that the animal was immobilized. Iguanas were often stuffed in sacks, several layers deep, and might be kept there for long periods without food or water.

A pile of iguanas: mostly *Ctenosaura similis,* but some Green Iguanas, too (Chinandega, Nicaragua; February 1976).

An iguana vendor at the Chinandega, Nicaragua mercado (February 1976).

Visiting the mercados, we would at times encounter many dozens of iguanas. Approaching the vendors, we requested permission to examine the lizards and to take measurements and can recall being spurned only once; the rest were more than willing to let us handle their merchandise. We would often work for several hours at a stretch, standing in open markets and recording data, while curious onlookers watched. I'm sure our peculiar behavior was attributed to the fact that we were gringos, thereby making it perfectly acceptable. After handling several dozen adult Green Iguanas and, especially, ctenosaurs, our arms would be covered with scratches and cuts, sometimes from the lizards' claws, but more often from their lashing tails.

Visting the Hunters

The iguana vendors provided us with the names of villages from which the lizards originated. Based on this information, we worked backward from the mercados and were able to track down several hunters in order to learn how they captured their prey. In hunting iguanas for home consumption, a .22 rifle was often used, but some Central American countries banned the use of firearms or even slingshots. Professional hunters for the commercial market in El Salvador captured their iguanas alive and unharmed. This was usually accomplished with a bamboo pole and noose. The hunter slowly approached the basking lizard and extended the pole with noose toward it, with a piece of calf's liver dangling as bait.

Hunters often used trained dogs, and these were especially effective in hunting female Green

A young iguana vendor and her merchandise (Chinandega, Nicaragua; February 1976).

Iguanas during the nesting season. The hunter would move stealthily along a stream, scanning the terrain ahead for signs of nesting activity. Several females might be digging their nesting burrows in a sand bank, and some might have their forequarters in a hole so that they could not see danger approaching. At a signal from the hunter, the dog would race ahead and might catch a female before she could escape from the burrow or outrun her before she could reach the safety of a tree. Females bearing a heavy burden of eggs were relatively slow runners. The dogs were trained not to injure the lizards.

Some hunters used shovels to dig iguanas from their burrows; excavation also could be accomplished with a pointed stick and their hands. Females concentrating on nest excavation were especially vulnerable to capture. Again, a female with her head and forebody in the burrow was less likely to be aware of an approaching hunter than a lizard involved in other activities.

We also became aware that iguanas were sometimes used merely for target practice. They would be shot with a .22 rifle from a vehicle as they sat on roadside boulders or fence posts. If not killed outright, ctenosaurs that were shot often escaped into nearby burrows, whether or not their wounds were mortal. The "hunters" would make no attempt to retrieve the dead or wounded lizards.

What's Happenend Since?

After our multi-year stint with iguanas, we moved on to new projects or resumed old interests. Fitch continued his studies of *Anolis* lizards and his long-term work with Kansas snake ecology. Henderson moved on to the West Indies and its intriguing snake fauna. We assume that the mercados of Central America no longer sell iguanas in the numbers that we observed in the mid-1970s. Is it because of legislation protecting the tasty lizards, or because population densities have dramatically plummeted? We suspect the latter. The U.S. now harbors denser populations of *Ctenosaura similis* and *Iguana iguana* than do some areas where they occur naturally.

On a brighter note, interest in iguana biology has never been greater, and exciting research is being conducted in many countries and with a diverse cadre of species. The long-term (20+ years) mark-and-recapture study of John Iverson on *Cyclura cychlura inornata* in the Bahamas is especially exciting. Also, efforts to protect species with dramatically declining numbers (e.g., *Ctenosaura bakeri, Cyclura lewisi*) are, on the one hand, disheartening because the numbers are so dangerously low, but, on the other, gratifying that people care enough about the iguanas to do something. Iguanas of all species are fortunate to have the International Iguana Society in their corners.

References

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Adult male St. Lucian Iguana (*Iguana iguana*) (story on p. 71). *Photograph by Matt Morton, Durrell Wildlife Conservation Trust.*