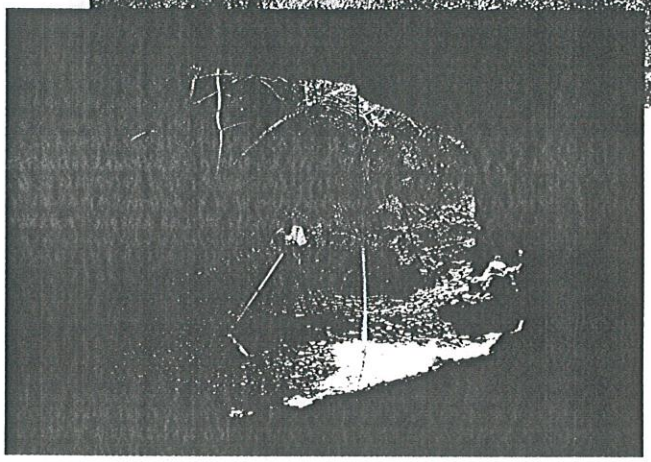
EXTINCT ANIMALS IN THE WEST INDIES

By David W. Steadman, Florida Museum of Natural History
University of Florida, Gainesville

To most people, tropical islands conjure up images of exotic, colorful places teeming with life. While few would doubt the truth in that statement, a much darker side to tropical islands lurks just beneath all the beauty. To many biologists, the most common theme uniting tropical islands around the world is extinction. The Turks & Caicos are no exception.

The reasons island animals are so vulnerable to human activities are obvious. The first is habitat loss through actions such as clearing forests and draining wetlands. The second is predation. Isolated from the rich floras and faunas that inhabit continents, islands often lack natural carnivores. As a result, island species are naive about predators, so that when people arrive with dogs, cats, mongooses, rats, etc., certain native island species can be decimated.

The processes that cause extinction on islands have operated for hundreds or thousands of years, ever since the first arrival of people on any particular island. In the West Indies, the animals lost following human colonization of the Greater Antillean islands (Cuba, Jamaica, Hispaniola, Puerto Rico) include ground sloths, monkeys, large rodents, eagles, condors, macaws and giant owls. Certain small species, such as various lizards, snakes, songbirds and bats, have been lost as well.



RICHARD FRANZ

Above: Indian Cave lies at the base of a limestone ridge similar to the ones pictured here near Blue Horizon Resort on Middle Caicos.
Left: Brian Riggs of the Turks & Caicos National Museum surveys the locations of the excavations from the interior of Indian Cave.

Only one method of investigation will teach us which species of animals used to live on any island before people first arrived. That method is to dig. However, it is not enough just to dig. Carefully controlled archaeological excavations are necessary. So it was that our field team—Richard Franz, William Keegan, Anne Stokes, Barbara Toomey, Reed Toomey and myself—from the Florida Museum of Natural History joined Brian Riggs of the Turks & Caicos National Museum in May, 1998 to excavate a cave on Middle Caicos. Known as Indian Cave, this site seemed likely to hold important clues to the island's past animal life.

Much to our surprise, Indian Cave yielded very little evidence of the prehistoric humans who once lived on Middle Caicos. The site was fantastic, however, in the rich variety of animal bones interred within dusty sediments as deep as seven feet. As detailed in the accompanying article by Richard Franz, the bones from Indian Cave featured abundant remains of a large iguana and a tortoise, as well as many thousands of bones of small lizards and snakes. Bats also were well represented.

As an ornithologist, I was more interested in the hundreds of bird bones in the cave's sediments. Some of these bones represent species that still live on Middle Caicos, including many kinds of herons, doves and songbirds. More importantly for understanding the long-term changes in bird life, the bones include species of birds that no longer live on the island: a petrel, a hawk, two rails, a thick-knee, a quail-dove, a parrot and two or three owls. Details of these finds will require further research in my laboratory over the upcoming year. These studies will compare the prehistoric bird bones with skeletons of living species of West Indian birds.

We have not yet radiocarbon-dated (see accompanying article about this technique) the multitude of bones from Indian Cave, so we do not yet know their time span. Our guess is that the deeper layers may extend back into the last ice age, more than 10,000 years ago. Without doubt, this exciting fossil site will provide unparalleled information on the ancient animal life of the Turks & Caicos Islands for years to come.