

A New Threat to the Utila Island Iguana

AJ Gutman
West Hartford, CT

Dr. Gunther Köhler performed the first modern study of the ecology and reproductive habits of the spiny-tailed iguana of Utila, *Ctenosaura bakeri*, in 1994. Utila is the smallest (42 km²) of the Bay Islands off the northern coast of Honduras. Only a few hundred specimens were estimated to exist at the time of Köhler's study. The population consisted mainly of adult males, young females, and a small number of juveniles. Unlike *C. similis* and *Iguana iguana*, which also are found on the island, *C. bakeri* is uniquely adapted to living in and on mangrove trees in the swampy areas of Utila. Gravid females that leave the relative safety of the mangroves for nesting sites on the few undisturbed sandy beaches, some up to a kilometer away, fall prey to local hunters. The hunters will plow through the beach sand looking for eggs, which also are at risk from careless visitors who unwittingly step on the shallow nest burrows, crushing the contents.

The effort initiated in 1994 to protect *Ctenosaura bakeri* was called "Conservation and Research Project Utila Iguana." Initially, the presence of conservation personnel on the island worked favorably for the iguanas. A year-round ban on hunting enforced by a full-time wildlife ranger reduced the hunting pressure and an increase in juvenile specimens was noted in 1995 and 1996. Eventually, however, the employment of hired wardens to prevent iguana hunting proved unsuccessful and iguana hunting continues to be a very real threat.

In 1997, the name of the project was changed to "Conservation Project Utila Iguana" (CPUI), and the Iguana Research and Breeding Station was

established on the island, primarily with the support of the Senckenberg Nature Research Society and the Frankfurt Zoological Society. Located on the outskirts of the town of Utila, the main structure of the station is a large, two-story wooden building, which contains a visitor's center, a laboratory, and storage areas as well as living quarters, a kitchen, and bathrooms. In addition to housing the *in-situ* breeding program, the station serves as a base for volunteer conservationists and researchers in related fields. Iguana Station personnel actively participate in town gatherings and also provide local school education programs to teach children about the biodiversity of Utila and Central America and the importance of conserving their natural heritage.

In 1998 and 1999, the Station had variable success with breeding *C. bakeri* and established a program of releasing half of the hatchlings directly into the mangrove thickets and raising the other half for a full year

before release to give them a greater chance of survival. Between 1998 and 2000, 237 hatchlings were released into the wild in an attempt to supplement and reverse the decline of the iguana population.

By 2000, the growth of the Conservation Project Utila Iguana was such that Dr. Köhler was unable to handle the entire workload while proceeding with his other research duties. Utila Iguana Rescue Committees had been established in various countries, including the U.S., the Netherlands, and Honduras, and communication between the various groups had become a major undertaking. Sven Zoerner became the new Project Director and took on that job, among oth-



Subadult *Ctenosaura bakeri* at the Iguana Research and Breeding Station. Photograph by John Binns.



The mangrove swamps on Utila during the dry season. Photograph by John Binns.



Nesting area on the beaches of Utila. Photograph by John Binns.

ers. He has devoted his considerable energy to updating the Utila Iguana website (utilaiguana.org), moderating on-line discussion groups and participating in Internet Ecotourism Conferences. Sven also handles the administrative paperwork, prepares annual reports, and does long-term planning.

A New Threat

Most Utilaños feel that tradition gives them the right to hunt iguanas, and regarding the animals as anything other than a food source is difficult. From the outset, teachers found that neither young people nor adults had any concept of conservation and environmental issues. The Education Officer from the Bay Island Conservation Association, Dolfos Stanley, visited most of the island's schools and found that "many of [the] children had only a limited understanding of the various birds that share [their] island home. They could only identify the most common and knew very little about even these." A volunteer teacher from the Iguana Station brought a frog and a boa constrictor into the classroom only to find a wall of prejudice that needed to be broken down. The students knew that none of the snakes on the island were venomous, yet believed that it was impossible that frogs also lived there. This misconception was based on the children's belief that snakes always became poisonous after eating a frog.

Also by 2000, a much greater threat to the iguanas than that posed by the local hunters became evident. A huge new international airport



The Iguana Research and Breeding Station, Utila, Honduras. Photograph by John Binns.



Iguana education at the local school. Photograph by John Binns.

and a multi-lane highway leading into the town of Utila were on the drawing board. To accommodate the anticipated influx of tourists provided by this proposed gateway, new hotels and resorts were an integral part of the expansion plan. Prominently absent in this endeavor were environmental impact studies and development plans, which took into consideration conservation and preservation of the island's biodiversity. Ironically, these are the things that are most attractive to people who are drawn to this small sector of paradise. The environmental impact of uncontrolled development on an island with no waste disposal or fresh water and a power utility plant, which already leaks a substantial amount of fuel oil into the ocean, would be nothing short of an ecological disaster.

Project Utila Iguana

In response to these imminent threats, Dr. Köhler and his associates came up with a plan to minimize the impact of these sudden changes on

the iguana population and their dual habitat of mangrove swamp and sandy beach. The proposal called for a nature sanctuary on Utila located in the prime habitat of Iron Bound and eastern Rock Harbor. Mangrove swamp, rocky coast, beach habitat, Caribbean dry forest, wet savanna, and seasonal dry forest all occur here in close proximity and almost all known vertebrate species on Utila have been recorded in this area. The proposal is outlined on the Utila iguana website and in an article in *Iguana Times* (Vol. 8(2)). An important feature of the sanctuary is the raised walkway, a 4.5 mile eco-trail with specific habitat observation platforms and “points of information” where visitors can learn about the island’s biodiversity. The trail would follow an existing path currently traversing several types of habitat, and also would include sites of geological, historical, and cultural significance — and a hopefully thought-provoking view of the dump. The eco-trail, while helping to preserve the habitat of the iguanas, also would educate visitors to the natural riches of Utila, which are virtually unknown to the locals, many of whom believe the swamps are little more than a place where hunters go to collect iguanas, coconuts, and crabs.

Local Conditions

In May 2001, John Binns of the U.S. Committee for the CPUI, visited Utila to carry a load of needed supplies to the Iguana Station and to gather first-hand information about conditions on Utila to better facilitate operations from the U.S. The results were published in a report detailing his observations and making some specific recommendations to enhance the conservation effort. He and colleague Roger Membreno found that



Iguana hunters searching for eggs and iguanas. Photograph by John Binns.

Adopt a Swamper Program

An important part of the breeding program at the Research and Breeding Station is to stabilize the natural population and conserve the genetic diversity of a species that has a very limited distribution. Half of all *C. bakeri* hatched at the station are immediately released into the wild. With a virtual adoption, individuals can enable the staff at the Iguana Station to take care of a young iguana for the first year before being released. Mortality amongst the young animals in the wild is extremely high and releasing them once they have reached a larger size gives them a much better chance of resisting predators and other environmental dangers.

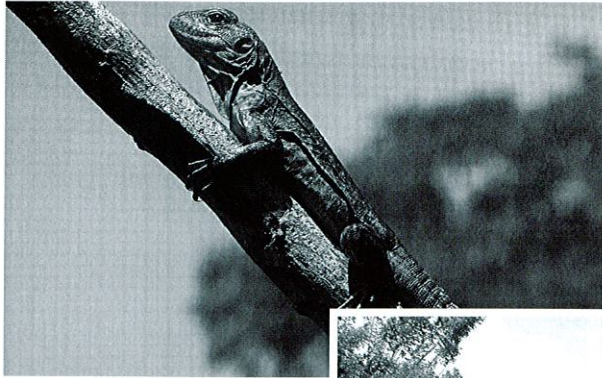
The Iguana Station registers each new iguana that hatches. This includes the hatchling’s measurements, hatch date, and ID number. Photographs are taken digitally with a camera supplied by the International Reptile Conservation Foundation. The images are transferred to CD, and then hand-carried by one of the returning volunteers to the U.S. Unfortunately, determining the sexes of the hatchlings is not possible at this time.

If you adopt a swamper for a \$25 donation, you will receive an adoption certificate with specific data about the iguana that you are supporting and a photograph of the hatchling. The certificate, suitable for framing, also carries the official seal of the project.

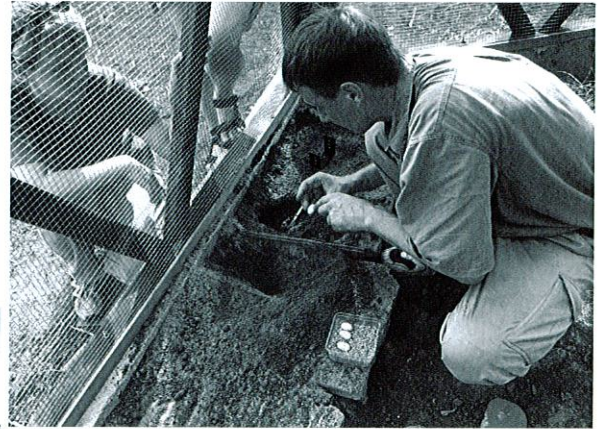
For a \$50 donation you also will receive (current offer) either a Utila Iguana poster or a species Data Sheet signed by Gunther Köhler.

For either adoption donation, the parent can name the iguana. This name appears on the Adoption Certificate.

The Utila Iguana Adoption Program originated in Germany, and is currently headed by the Conservation Project Utila Iguana Director, Sven Zoerner (Sven@svenzoerner.de). The U.S. Committee for the project was initiated by Lori King, and currently is being administered by John Binns (jbinns@cyclura.com).



Above: Juvenile *Ctenosaura bakeri* at the Iguana Research and Breeding Station. Photograph by John Binns.



Above: Gunther Köhler retrieving iguana eggs at the Iguana Research and Breeding Station. Photograph by John Binns.



Right: Cages at the Iguana Research and Breeding Station. Photograph by John Binns.

none of the information published by the CPUI prepared them for the “local conditions, social environment, education levels, and customs existing on Utila today. The preservation of the Utila habitats and biodiversity presently hangs solely on the whims of the developers, while hunting of *C. bakeri*, *C. similis*, and *Iguana iguana* continues daily without restriction.”

On excursions into the mangrove areas of Rock Harbor and Iron Bound, John and Roger saw nine female *C. bakeri*, and the remains of another that had been killed by hunters at a nest site. They also videotaped hunters carrying bloody bags and each day “heard no less than 5 gunshot sounds coming from the mangrove area or while traversing the mangroves or swamp routes to the beach areas.” On one occasion, they were even fired upon by someone hidden in a wooded area while they were about 1/4 mile from the station. Biologist Alex Gutsche, Manager of the Research and Breeding Station in 2000 and 2001, suggested that the increase in hunting may be due to the presence of migrant workers from the mainland. Inexpensive mainland laborers are hired for the construction projects but not reimbursed for boat transportation, or provided with island hous-

ing, or sanitary facilities. These laborers live in tents on the outskirts of town and hunt whatever is available for their food using guns, machetes, and string-loops.

A practical-minded conservationist, Binns listed several suggestions to enhance the conservation project. Several of these related directly to improving the relationship with the community. Honduran involvement should be increased by inviting student volunteers from Honduran colleges to participate in various areas of the project related to their studies. Spanish fluency should be a requirement for international volunteers, making them more effective as ambassadors to the local populace. Partnerships with Honduran environmental, conservation, and preservation organizations should be forged, and Honduran teachers and students sponsored to visit the Research and Breeding Station. Given the general distrust with which the people of Utila regard the mainlanders, the report further suggested that a program be developed to present “the negative impact of island development and long term effects on the local residents. Development of the island without careful planning will have severe impact on what the islanders treasure most, the absence of author-

ity, their free-living style, local free enterprise, and their culture.” Other suggestions included improvements to the Station itself, providing eco-hikes immediately, and setting up a storefront in town to increase the visibility of the Station and the tours and hikes available.

Nothing, however, is completely straightforward on Utila. Even communications are complicated, with a long waiting list for access to telephone lines and Internet access expensive and monopolized by the Internet Café. Honduran law is complex and difficult enough to navigate in Spanish, much less in English by the Iguana Station personnel who are predominantly native German speakers. Even the term “National Park”

is contentious. The protected area must be called a “Sanctuary” or “Nature Reserve,” and the application for special status must come from a Honduran organization. The Iguana Station personnel are only guests, known by the locals as the “iguana people,” a title in itself suggesting that they are considered outsiders. Lacking residence further isolates them from stronger connection with local organizations and municipal officials to promote partnerships that could effectively manage growth while saving the biodiversity of the island.

The new airport has been open since mid-November and 47 development projects are proposed or already in progress. The proposal for the

The Frankfurt Hatchlings

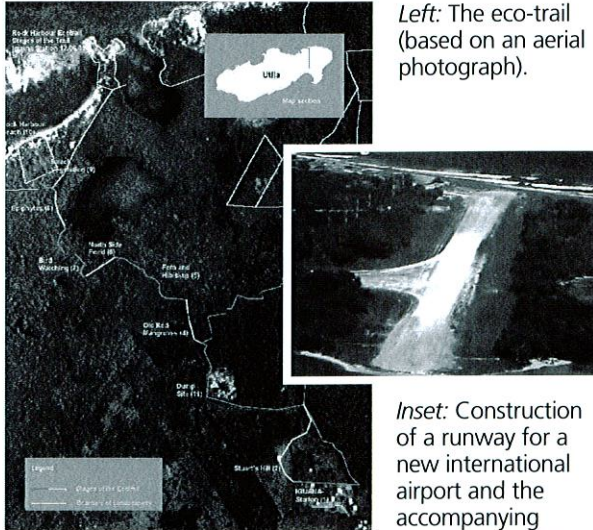
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Since 1999, *Ctenosaura bakeri* have been hatched successfully at the zoo in Frankfurt, Germany. All are descendants of four animals that were taken there in 1998 by Dr. Gunther Köhler. Many of these hatchlings have been returned to Utila and restored to the wild. In August 2001, 20 of the 44 *C. bakeri* that were hatched in June were exported to Mark Malfatti of West Coast Iguanid Research in California. From there, some of the hatchlings were distributed to private breeders and other individuals, who have supported the Utila Iguana Conservation Project. These persons include John Binns of the International Reptile Conservation Foundation and Lori King of the Chicago Herpetological Society. Lori is a long-time supporter of reptiles in general and of iguanas of every stripe, especially *C. bakeri*. Lori also has been a great friend to the International Iguana Society and to me. When she was offered some of the hatchlings, instead of asking for two, she requested three, knowing of my interest in spiny-tailed iguanas and the Utila project. When she called to tell me about the babies, I was simultaneously shocked and deeply honored. I also had Lori in stitches when I told her what I was going to call my little German adoptee. It had to be “Gunther!” All of the people who received these very special iguanas are committed to keeping these animals from entering the pet trade. You can view a few of these remarkable babies live on a web-cam at <http://cyclura.com>.

After several excursions in a packing box, my little Gunther was happy to settle down in as close to a swamp habitat as I could manage on my kitchen table. Oblivious to the plight of his family on Utila, he still has a tremendous sense of his own importance, as any proper iguana will. When I look at him, he will fearlessly return my gaze. He has the hunting skill, appetite, and table manners of the average Klingon warrior and has been growing steadily. The only noticeable remnant of the German portion of his heritage is a fondness for German children’s songs, his favorites being the existential “Horch, was kommt von Draussen rein” and the rather gory “Fuchs, Du hast die Gans gestohlen.” A natural showman, Gunther already has been to school to teach young people about the vanishing swamp iguanas of Utila.



Gunther, the lizard (not the person). Photograph by Carole Saucier.



Left: The eco-trail (based on an aerial photograph).

Inset: Construction of a runway for a new international airport and the accompanying development for

increased tourism poses a serious threat to the remaining iguana habitat. Photograph by John Binns.

eco-trail, which was presented to the “Rare Center” in the summer of 2001 for funding, has not received a formal reply. Portions of the land for the proposed trail pass through private land and the Center is reluctant to fund the project unless all the land can be put in a public trust. A British conservation group known as the Biodiversity Trust expressed an interest in purchasing land for their own environmental program. Following an initial investigation by the Trust, \$100,000 was set aside for land acquisition, but during the course of the transaction with local land owners, the money disappeared.

In 2001, Stefanie Clauss and Christian Wild, Master’s degree students in landscape architecture and landscape planning at the Technische Universität, Munich, spent several months on Utila developing a long-term sustainable land-use plan. Like so many other first-time visitors, they were astonished at how little interest the locals had in environmental issues. They saw first-hand the burning dumpsites, the non-existent sewage system, uncontrolled hunting, and a nature reserve that existed only on paper. Nevertheless, they forged ahead with their surveys. Over 50 different kinds of vegetation were easily identified, many of them influenced by intermittent inundation by salt water. Suggested land use took into account not only the types of vegetation, soil structure, and frequency of saltwater inundation, but also the presence of endangered species and, most importantly, the pre-



Increases in tourism and the number of Hondurans providing related services will increase the likelihood of sights such as this dump. Photograph by John Binns.

sent and future needs of the community for education, health care, power, waste disposal, and sewage.

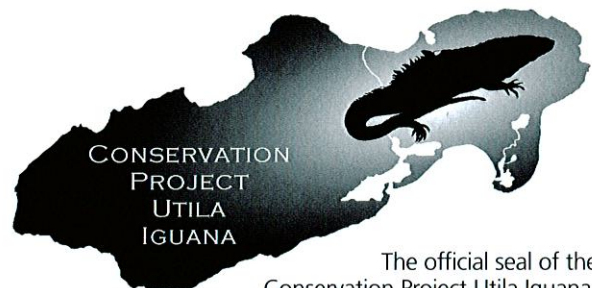
Hope for the Future

Some hope for the future of the Utila iguana is not entirely unrealistic — despite the restricted distribution of the species, low reproduction rate, the need for two different kinds of habitat, and the increase in hunting. The most recent surveys performed by former Station Director Alex Gutsche indicate a population that is substantially higher than Dr. Köhler’s 1994 estimates. He believes that increased education and public awareness, the establishment of a specific protected area, especially during the egg-laying season, and control of the ban on hunting can positively influence the long-term survival of the species.



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The official seal of the Conservation Project Utila Iguana.

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A rare site: Adult male
Grand Cayman Blue
Iguana, *Cyclura nubila
lewisi*, free-ranging on
Grand Cayman Island.
Photograph: John Binns