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Utila Iguana:
A young male
*Ctenosaura
bakeri*.
Photograph:
John Binns

Statement of Purpose

The International Iguana Society, Inc. is a not-for-profit corporation dedicated to preserving the biological diversity of iguanas. We believe that the best way to protect iguanas and other native plants and animals is to preserve natural habitats and to encourage development of sustainable economies compatible with the maintenance of biodiversity. To this end, we will: (1) engage in active conservation, initiating, assisting, and funding conservation efforts in cooperation with U.S. and international governmental and private agencies; (2) promote educational efforts related to the preservation of biodiversity; (3) build connections between individuals and the academic, zoo, and conservation communities, providing conduits for education and for involving the general public in efforts to preserve endangered species; and (4) encourage the dissemination and exchange of information on the ecology, population biology, behavior, captive husbandry, taxonomy, and evolution of iguanas.

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Manuscripts based on original research are solicited to communicate recent findings not only to other scientists but to the general public as well. We wish to instill in our readers a greater appreciation for scientific research and a better understanding of how it can contribute to the conservation of threatened iguana populations or the well-being of captive specimens. Research Articles will be subjected to peer review, and should be fairly general in scope (i.e., manuscripts having extremely detailed theoretical or statistical bases should be submitted to more appropriate journals). Manuscripts of any length will be considered, and must be accompanied by an abstract of corresponding length. Authors can expect rapid turnaround time for the reviews and quick publication of acceptable material. Research Articles will be cited as appearing in the Journal of the International Iguana Society, and will be forwarded to the major citation and abstract journals. Research Updates should be comparatively brief and written in non-technical language. They will not be subjected to peer review. Submission of photographs to accompany research reports is encouraged.

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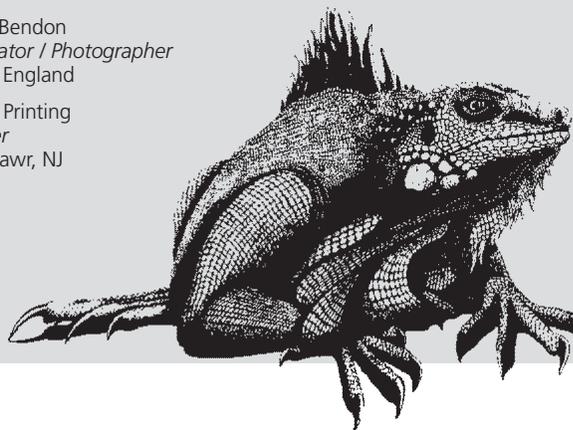
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The "Rhino Factory" at Manatí Park

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When tourists visit the rapidly developing eastern coast of the Dominican Republic (DR), they cannot help but notice signs inviting them to visit Manatí Park, an 8-hectare site where they can swim with dolphins, interact with snakes, parrots, or other animals, learn about the history and culture of the West Indies, or merely have a good time. Our recent (January 2002) visit, however, was motivated by a more limited agenda, namely the opportunity to experience first-hand the iguana facility which has and continues to be phenomenally successful at breeding the Hispaniolan endemic Rhinoceros Iguana, *Cyclura cornuta*.

Manatí Park is in Bávaro, a rapidly developing resort area near the easternmost tip of the DR. The Park opened in 1997, coinciding with a major tourist boom in the region, fueled largely by the development of an international airport at Punta Cana. Club Med pioneered the area, which now is festooned with nearly 30 major resort hotels, most of them offering all-inclusive services, upscale lodging and activities, and access to some of the most beautiful beaches in the Caribbean. Although

traditional travelers seldom stray from the grounds of all-inclusive resorts, the more adventurous seek to experience the local ambiance, getting to know something about the culture into which they've ventured and maybe even learning a little about an area's natural wonders.

However, access to much of the eastern DR is

limited to a few main roads that serve the larger towns. Parque Nacional Los Haitises is not far, but accessible from the east only by boat. Parque Nacional del Este also is geographically closeby, but paved roads merely lead to the park boundaries. Both are characterized by harsh landscapes, prickly plants, and oppressive heat. Although both parks serve effectively as reservoirs for native species, only the hardiest of tourists would consider even a brief visit. Consequently, Manatí Park provides a

real service. Not only is the visitor entertained by its attractions, they can experience animals in a very personal way and learn something about conservation in the process.

The Spanish developers of the Park had envisioned a facility that would provide entertainment and educational opportunities while remaining

***"Not only is it by far
the best exhibit
in the park,
it's a virtual
iguana factory."***



The Manatí Park logo that adorns the many signs directing visitors to the Park.

actively engaged in conservation. Entertainment would be provided by dolphins and sea lions, dancing horses, and parrot shows. Education would focus on native animals, their habitats, and the region's Taino heritage (the Tainos were the original human settlers of the islands that Columbus first encountered in 1492). Conservation goals would address the needs of threatened or endangered Dominican species through education and by providing an ideal habitat within the Park boundaries (the native vegetation planted in what had been a severely disturbed site supports many species of birds, insects, and reptiles, including the very rare and poorly known endemic snake, *Ialtris dorsalis*).

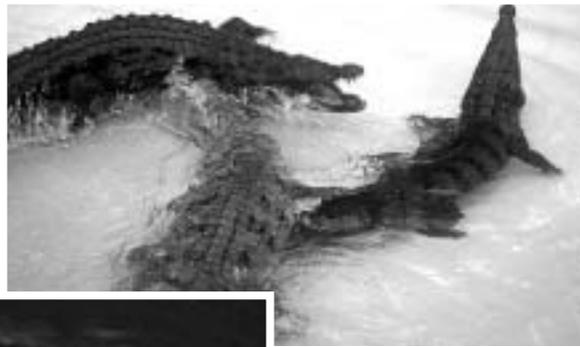
The Bávaro area was ideal for such an enterprise. New resorts are springing up like weeds, providing a steady supply of the tourists on which the Park depends for its economic well-being, a suitable infrastructure exists or is being developed, and the DR has a plethora of species that are unique, appealing, and often in dire need of conservation. Believing that conservation begins with education and that the best way to educate the public is to combine opportunities for up-close encounters with selected species and more tradi-



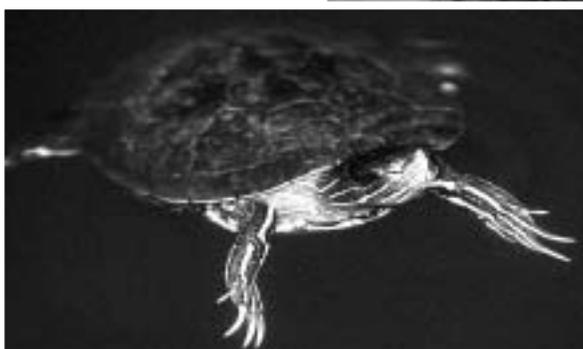
Map of the eastern Dominican Republic. Black dots indicate published locality records for *Cyclura cornuta*.

tional tourist activities, the developers brought their vision to the DR, where they made the fortunate decision to seek help and advice from Dr. José Alberto Ottenwalder.

Dr. Ottenwalder combines extensive experience with zoos and a background in conservation biology. Among other qualifications, he was the



Most natural Hispaniolan populations of American Crocodiles (*Crocodylus acutus*) have been extirpated. Photograph by Robert Powell.



Hicotecas inhabit many of the aquatic exhibits. This Greater Antillean Slider represents an endemic subspecies, *Trachemys stejnegeri vicina*. Photograph by Robert Powell.



Very little is known about the endemic Hispaniolan snake, *Ialtris dorsalis* (photograph courtesy of R.E. Glor).



The density of the Rhinoceros Iguana population in the exhibit is possible only because of its complex design, which provides visually distinct areas for territorial males.
Photographs by Robert Powell.



director of research at ZooDom, the Dominican National Zoo, for some years and, more recently, has served as director of the National Environmental Policies Reform Project and the National Biodiversity Strategy and Action Plan of the DR and as co-chair of the IUCN/SSC West Indian Iguana Specialist Group (now the Iguana Specialist Group). Dr. Ottenwalder was instrumental in designing the exhibits for sea turtles, Greater Flamingos (the Dominican population of which has shown recent signs of recovery), hicotecas (West Indian Slider Turtles that are threatened by human exploitation and hybridization with the increasingly common Red-eared Sliders that are appearing in the region), and American Crocodiles (the Hispaniolan populations of which are essentially limited to two saline lakes, one in Haiti and one in the DR). The jewel of the Park, however, is the exhibit devoted to Rhinoceros Iguanas.

Designed to provide interactive opportunities for Park visitors and to serve as an effective breeding facility for this endangered species, the exhibit exploits the local climate (to which the iguanas are obviously

well-adapted) by incorporating native vegetation while simultaneously providing adequate space for the establishment and defense of territories by male iguanas. The multi-tiered exhibit is built on a foundation of sand and gravel to allow adequate



(Above) An iguana exploiting the natural vegetation in the exhibit.
Photograph by Robert Powell.



(Left) Visitors viewing iguanas from a bridge high above the exhibit.
Photograph by Robert Powell.

Brief Notes on the Status of Hispaniolan Rhinoceros Iguanas, *Cyclura cornuta*

José Alberto Ottenwalder and Robert Powell

Rhinoceros Iguanas have a broad but disjunct distribution across Hispaniola. Populations in Parque Nacional Jaragua on the lower Barahona Peninsula and in Parque Nacional Isla Cabritos (and nearby shorelines of Lago Enriquillo) are stable and show signs of increasing in numbers. Protected status, the inaccessibility of much of the lower Barahona Peninsula, and education efforts directed primarily at the inhabitants of villages around Lago Enriquillo have apparently combined to produce this currently rosy picture.

Elsewhere the outlook is less bright. The status of Haitian populations has not been assessed recently. Most are probably in decline and many may have been extirpated as a consequence of continued human exploitation and habitat degradation attributable to a growing population engaged in subsistence agriculture and charcoal production. Combined with a lack of ability or interest on the part of the government to enforce existing laws, the future of those populations still remaining appears grim.

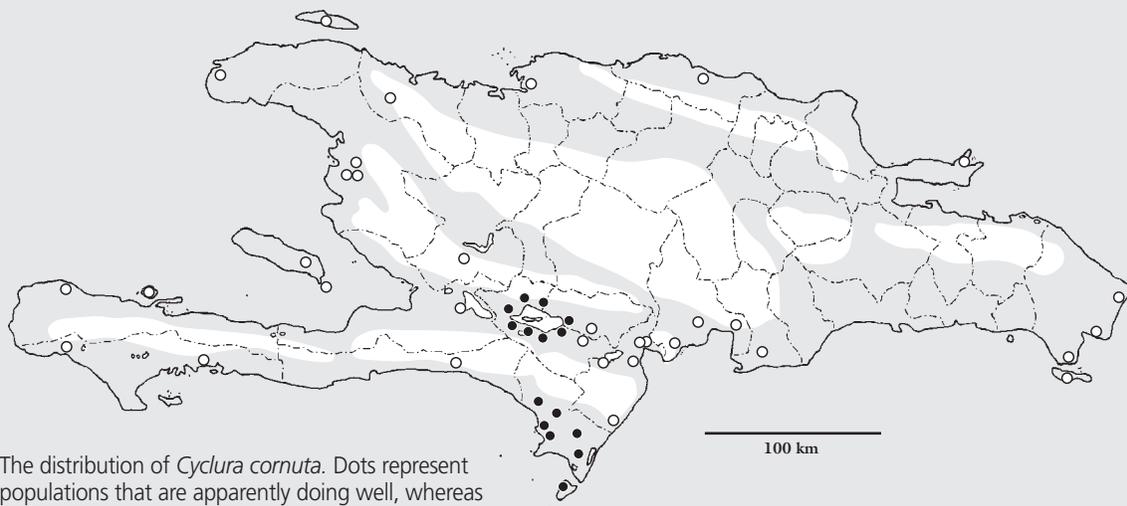
Isolated Dominican populations may be holding their own in portions of the Valle de Neiba and possibly in the drier regions of the Samaná Peninsula. However, the status of those found in the north near Monte Cristi and Puerto Plata and those in the eastern Dominican Republic range from being definitely in decline to having an undetermined status. Suitable

habitat in inaccessible regions of Parque Nacional del Este may support viable populations, but sightings there and elsewhere are rare and consist almost exclusively of large adults. If population densities are too low to facilitate sufficiently frequent contact (i.e., breeding) to sustain numbers, those populations are in danger of extirpation when the few remaining adults die.

Recent evidence showing two distinct genetic haplotypes among Dominican Rhinoceros Iguanas and indications that one of these may reflect the eastern populations emphasize emphatically the need to study and preserve these isolated populations, populations that might represent a unique genetic heritage.

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The distribution of *Cyclura cornuta*. Dots represent populations that are apparently doing well, whereas circles represent populations in decline or the status of which is undetermined. Light areas mark mountain ranges.



Hatchling Rhinoceros Iguanas. *Photograph by Robert Powell.*

drainage even if hurricanes should strike the region. The tiers provide an interactive zone where visitors can brush by the largely uninterested iguanas that rapidly adapted to the human “invaders” of their territories, areas that are visually distinct to allow the territorial males to maintain separate domains, and refuges where the iguanas can escape human activity and go about the business of eating, breeding, or nesting. Only native soils were used, both to support the largely natural vegetation and to ensure nesting success. Artificial burrows and nesting sites are provided — and are used extensively, but the iguanas also have honeycombed the exhibit with their own excavations.

Visitors may view the exhibit from its periphery, from an elevated bridge over the compound, or by taking a guided tour through the lower, interactive zone. Signs provide insights into the species’ biology and address conservation concerns. During tours, visitors are introduced to individual iguanas and to iguana behavior and natural history while being exposed to a message fostering conservation — a message that is all the more likely to be meaningful, if only because its impact is enhanced immeasurably by the presence of too many iguanas to count.

The resident iguana population was established when animals were acquired from ZooDom and released into the exhibit. With only two exceptions (rescued animals of unknown origin), all of



Strategically placed logs provide the iguanas with ready access to the higher tiers. *Photograph by Robert Powell.*

the specimens visitors see are either original acquisitions or their descendants. The iguanas took to the compound like the proverbial duck to water. Seasonal breeding activity was initiated almost immediately after introduction and the iguanas have yet to stop.

Eggs are removed from the exhibit and incubated on site. Hatchlings are held in a separate enclosure not open to visitors, but are transferred to a smaller exhibit each year to make room for new arrivals. In 2001, two-year old animals in the smaller compound bred, nested, and produced eggs. That such young animals breed successfully is testament to the Park’s capabilities. Combining an ideal climate, a diet based largely on local

Species Profile: *Leiocephalus personatus*

Curly-tailed Lizards of the genus *Leiocephalus* are found only in the West Indies and have recently been assigned to their own family, the *Leiocephalidae*. Curly-tails range from the Cayman, Bahama, and Turks and Caicos islands to Cuba and Hispaniola. An extinct species is known from Martinique in the Lesser Antilles. Species range in size from the diminutive *L. semilineatus* of Hispaniola (maximum known snout-vent length = 53 mm) to *L. carinatus* of Cuba, the Bahamas, and the Cayman Islands and *L. melanochlorus* of Haiti (maximum SVL = 130 mm). The common name is derived from the fact that, when perching, these lizards curl their tails either vertically or horizontally, depending on the species. The reason for this unusual behavior is unknown, but suggestions have included using the moving tail to lure food, communicating with conspecifics, or confusing a potential predator. No real evidence supports any of these hypotheses.

Leiocephalus personatus is widely distributed in mesic regions of Hispaniola. Size is moderate (maximum male SVL = 86 mm). Twelve subspecies have been described in what is most likely a species complex, with *L. p. mentalis* found along the easternmost coast of the Dominican Republic in the vicinity of Manatí Park. Like others in the complex, males of this species have dark face masks (that vary in intensity by subspecies) and lack ventral markings. In contrast, the females are characterized by many dark gray to black dots on the throat and belly. The most striking feature of lizards in these eastern Hispaniolan populations is the brilliantly bright yellow chin and throat of males. Like tail-curling, no one knows for sure if this color serves any purpose, but species recognition and intraspecific communication are the most likely explanations.

Along the eastern Dominican coast, these lizards are very common along beach dunes, using driftwood or debris as elevated perches for basking or surveying territories. Curly-tails are quite wary and resist a

close approach. When frightened, they seek shelter under cover of rocks, logs, or flotsam. On our recent trip, the first individual we collected had sought sanctuary in an old tennis shoe, effectively trapping itself, and rendering capture as easy as picking up a piece of trash.

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Male (top) and female *Leiocephalus personatus mentalis* from Juanillo, La Altagracia Province, Dominican Republic. Note the very distinct face mask and bright chin and throat of the male, and the spotted chest and curled tail of the female. Photographs by Robert Powell.

plants, and excellent husbandry supervised by Dr. Ottenwalder, the iguanas of all ages are thriving. One comment heard during our visit was that, “Not only is the iguana exhibit by far the best exhibit in the park, it’s a virtual iguana factory.”

Although the Park is a commercial enterprise, the offspring are not for sale. Instead, they will become part of a captive gene pool that will function as a source of these animals for educational and research facilities and for head-started animals to supplement depleted natural populations.

By providing visitors, tourists and Dominican nationals alike, with an opportunity to learn more about their threatened natural heritage, the Park functions as an educational resource served up on a tasty platter, one designed to leave a pleasant taste and a permanent impression — and one that will hopefully help to alleviate the plight to which the natural populations of many of the Park’s res-

idents are currently subjected. Manatí Park is an exemplary model that many zoos and theme parks, especially in developing nations, should emulate.



Dr. José Alberto Ottenwalder in the hatchling enclosure.
Photograph by Robert Powell.



The exhibit for young iguanas, where iguanas bred successfully in their second year. *Photograph by Robert Powell.*

The International Iguana Society: The Early Years

Robert Ehrig

Founding the Society

In 1989, Robert Ehrig approached John Iverson, Thomas Wiewandt, and Albert Schwartz, who, at that time, were considered the world's leading experts on West Indian iguanas. All agreed that an organization specializing in conservation and information devoted entirely to iguanas was appropriate. Richard Montanucci, a *Phrynosoma* (Horned Lizard) expert and a biology professor at Clemson University, agreed to participate in such an organization and edit a possible publication. David Blair, also interested in iguanas, agreed to help. Ehrig, a land manager for the Nature Conservancy, convinced Ross Burnaman, an attorney working for the Wilderness Society, to help with setting up a not-for-profit corporation in the state of Florida. On 2 August 1990, the International Iguana Society (IIS) became a legal entity. Most of the initial board members were either iguana experts or Florida conservationists. All of the above, except Schwartz, served on the

board and David Ehrlich, a veterinarian, agreed to become treasurer. Ehrig provided start-up funds, and in August 1990, convinced Wayne Hill to donate a table at the first Reptile Expo in Orlando. The Society grew by about twenty five members during the two days of the show.

The Indianapolis Zoo Connection

Julian Duval, an original IIS board member, was Director of the Indianapolis Zoo. In the late 1980s and early 1990s, this was the only zoo that had worked much with *Cyclura*. In fact, both *C. nubila* and *C. cornuta* had bred successfully at the Zoo. Today, Indianapolis is still the only zoo to have bred *C. n. lewisi*. In addition, two *C. ricordii* were hatched there (*IT*, Vol. 3(2)). Jeff Lemm, a talented photographer, and Bill Christy were early Indy friends of the IIS. Bill Christie would later go on to study *C. ricordii* in the Dominican Republic on behalf of the Indianapolis Zoo. Gordon Burghardt also was friendly and helpful to the early IIS, and still serves on the Advisory Board.

Conferences

In 1993, the IIS held its first conference in the Florida Keys with Tom Wiewandt as the keynote speaker. Over seventy people attended the program at the Hidden Harbor Turtle Hospital. A second conference was held in 1994 in the Florida Keys with John Iverson as the keynote speaker.

In 1995, the IIS held its first international conference in the Bahamas at the Bahamian Field Station



Robert Ehrig shows a spiny-tailed iguana (*Ctenosaura pectinata*) to kids and their moms at the first IIS public meeting on Big Pine Key in 1991. Photograph by Laurel Ehrlich.



Richard Montanucci during the *Cyclura rileyi* Research Expedition, Exuma Islands, May 1993. Fifty iguanas were captured, measured, weighed, and released at the exact spot where they were captured. Photograph by Richard Moyroud.

on San Salvador (*IT*, Vol. 4(4)). A contingent of over thirty attendees heard talks by a large group of experts and helped Bill Hayes by supplying “herds” of field assistants investigating *C. rileyi* on all but one of the islands in San Salvador where they occur. The IIS had helped train and was responsible for bringing together many of the people who would conduct research and start conservation projects for iguanas throughout the region.

The Iguana Times

The *Iguana Times* has become the publication from which both the academic and the hobbyist would get much of their iguana-related information. Thirty-six issues have been published to date, and the journal remains the single largest source of information on iguanas of all kinds. The *Iguana Times* has always featured and stressed the impor-



Participants in the first IIS Conference, Bahia Honda State Park, Sandspur Beach, Florida Keys. *IIS* photograph.

tance of active conservation. Habitat protection and enforcement of protective laws were foremost priorities in efforts to assure the protection and survival of these magnificent creatures.

For many years, the IIS was basically the only clearinghouse for iguana information. The Society was distributing free iguana care sheets at herp meetings and expos. By 1995, when we stopped counting, we had distributed over 16,000 sheets. The IIS also supported several iguana rescue groups. The largest was run for many years by Deborah Neufeld, the first female IIS Board member, and Jan Truse in Kissimmee, Florida. They found homes for over 250 iguanas and encouraged new owners to become IIS members. By 1994, IIS membership was close to seven hundred.

A LEGACY OF CONSERVATION PROJECTS

Jamaican Iguanas

In 1990, Ehrig traveled twice to the Hellshire Hills in Jamaica to assist with the conservation project being developed for the newly rediscovered Jamaican Iguana, *Cyclura collei* (*IT*, Vol. 1(1)). Ehrig showed Edwin Duffus, the hog hunter who had made the initial “rediscovery,” how he tracked iguanas from droppings and an occasional tail drag. The IIS also identified the first of two nesting areas. By the following fall, Edwin Duffus had not been hired by the Jamaican Iguana Project. The IIS donated funds to employ him for a short time. He also was paid for his trips into Hellshire with Ehrig and company. This was at a time when Dr. Peter Vogel of the University of the West Indies was just beginning his impressive research on the Jamaican Iguana, which continues today.



Finca Cyclura was the office and home base of the IIS during the first five years of the organization's existence. It also served as the home of numerous Rock Iguanas (*Cyclura* spp.) in spacious habitat enclosures and a few individuals that had the run of the place. In the early 1990s, scores of "iguanaphiles" visited Finca Cyclura. In 1993, Wendy Townsend spent several days getting to know the residents. Her favorite was a Rhinoceros Iguana (*Cyclura cornuta*) named Mao. This session also led to the Society's first t-shirt ad. Photograph by Robert Ehrig.

Cayman Island Iguanas

In 1991 representatives from the Cayman National Trust visited the Nature Conservancy in the Florida Keys. The Conservancy had received some donated land on Cayman Brac that was transferred to the Trust. That parcel has since become the center of a nature reserve. During a visit to Grand Cayman in April 1991, Ehrig helped to evaluate the Salinas Reserve, which is owned by the Trust (*IT*, Vol. 1(4)). During this visit, Ehrig examined all seven of the *Cyclura nubila lewisi* that were in captivity at the time. A deal was brokered with an attraction that held the only captive female on the island. A private individual traded a male to the attraction for the female, which was transferred to the Trust in hopes of establishing an effective breeding facility. Subsequently, the IIS facilitated the acquisition of the first wild caught female by the Trust. Sara became the best breeder the project has ever had.

Bahamian Iguanas

In June and August 1991, the IIS traveled to North Andros after receiving word that some iguanas might still be on the island (*IT*, Vol. 1(6)). Several surveys established the fact that popula-



Gloria Estefan, internationally known entertainer, meets Chuck, a working Cuban Iguana (*Cyclura nubila*). The Cuban singer gave the IIS permission to use this photograph on the back cover of the *IT* (Vol. 5(2)). Photograph by Joe Wasilewski.

tions of iguanas were extant, and that miles and miles of suitable habitat remained. Subsequently, throughout the early 1990s, the IIS conducted vegetation surveys on 14 Bahamian islands that either supported iguana populations or had done so in the past. These investigations established that iguanas were responsible for enhancing their own habitat.

The IIS has installed six signs in the Bahamas to inform the boating public that iguanas are protected and that they are herbivorous. The signs in the Allen's Cays in the northern Exumas were installed ten years ago (*IT*, Vol. 1(5)). They have been viewed by tens of thousands of visiting boaters. The signs on Green Cay in the San Salvador complex, home to *C. rileyi*, are in both English and French (the language of most of the visitors from the nearby Club Med). These were installed in 1995. The signs cost about US \$230.



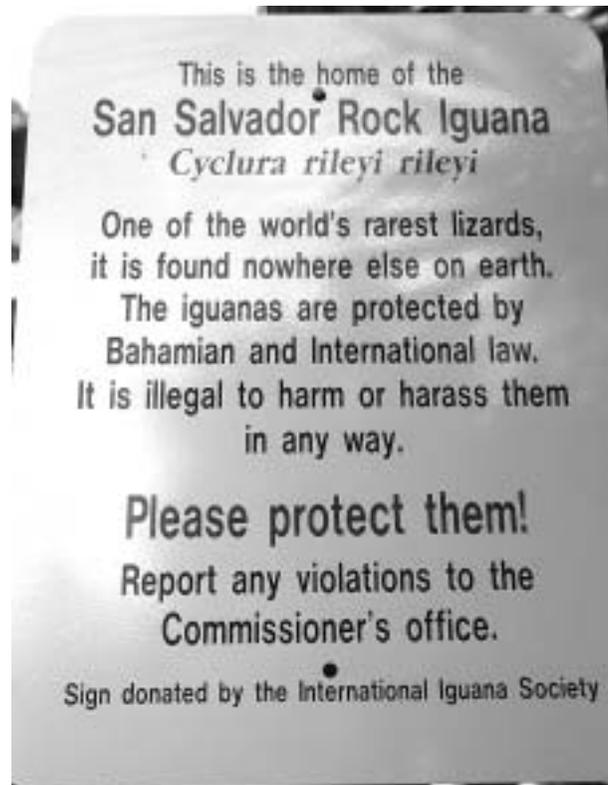
Iguana sign on the Allen's Cays, Exuma Islands, Bahamas.
 Photograph by Robert Ehrig.

All were installed on heavy steel posts in 80+ pounds of cement. The logistics of these installations were complicated, primarily due to the difficulties associated with transporting materials and fresh water in small boats. IIS volunteers did all of the work. The signs were expected to last a decade or more and, based on public responses, have proven to be good investments.

In 1993, Ron Harrod, a former pilot, photographer, and captain of a 38-foot trawler, the *VSV Essence*, provided the IIS with a navy for a good part of that year. The IIS initiated the first study of a *C. rileyi* population in the Exumas in late May and conducted a number of iguana habitat surveys (*IT*, Vol. 4(2)). During this time, bipedal jousting by young males was observed and recorded; this is a behavior that had never been seen before — or since. A survey of the *C. cyclura figginsi* introduced Chuck Knapp, now an IIS Advisory Board member, to iguana fieldwork (*IT*, Vol. 4(3)).



Marcie Ehrig with an iguana sign on the Allen's Cays, Exuma Islands, Bahamas, March 1992. In the early years, Marcie maintained the membership roster, mailed the *Iguana Times*, sold t-shirts, and proof-read IIS publications — she also cooked some very fine food for participants in the first two IIS conferences. Photograph by L. Aurenhammer.



English language sign on Green Cay, San Salvador, Bahamas. Photograph by Joe Wasilewski.



Left: San Salvador iguana, *Cyclura rileyi*. Photograph by Rena Burch.



Above: Bipedal jousting by young male *Cyclura rileyi*. Photograph by Richard Moyroud.



Above: Richard Moyroud holds a *Cyclura rileyi* during the May 1993 research expedition aboard the "Essence," Exuma Islands, Bahamas. Photograph by Robert Ehrig.



A badly emaciated rhinoceros iguana, *Cyclura cornuta*, confiscated from a South Florida reptile dealer during a U.S. Fish & Wildlife raid. This animal survived, as did 12 others adopted by IIS volunteers cooperating with authorities that helped put an end to rampant smuggling of *Cyclura* into the U.S. IIS photograph.

On Mayaguana, in the far eastern Bahamas, the IIS has offered US \$1000 to build a goat coral for residents in order to facilitate the removal of goats from Booby Cay and enhance the likelihood of survival of *C. carinata bartschi* (*IT*, Vol. 6(1)). That story continues today.

Smuggled Iguanas

At the end of 1993, several unscrupulous Florida reptile dealers were offering smuggled *C. rileyi* and *C. cyclura figginsi* for sale. The IIS called this sad fact to the attention of the reptile community and urged them not to buy these illegal animals (*IT*, Vol. 3(1)). The IIS was the first and, for a very long time, the only herp organization to publicize the plight of the critically endangered *Cyclura* that were being smuggled. The IIS also made both Bahamian and U.S. authorities aware of the problem. This IIS action caused smuggled iguanas to become a commodity with an extremely small market. In addition, many herpers became aware of the tremendous damage to which wild populations were being subjected.

Financial Support

The IIS gave early financial support to the Utila Iguana Program to fund an iguana warden when *Ctenosaura bakeri* was given legal protection. The Iguana Verde project in Costa Rica has also received support.

The IIS has lobbied governmental agencies and non-governmental organizations for help in enhancing the chances for survival of many species. The IIS also has provided incentives and rewards to individuals who help protect iguanas. The Society gave its first Conservation award to Mr. Edwin Duffus of the Jamaican Iguana Project for his many years of service protecting the Jamaican Iguana. Edwin received \$100 and a Dolly Parton tape to play during many lonely nights in the Hellshire Hills.



Married to an Iguanophile

Michael B. Gutman, MD, PhD
West Hartford, CT

The kitchen radio was playing “Sheherazade” the night we operated on Bradbury. A year before we adopted him, Bradbury the Green Iguana had been taken to a clinic for treatment of a broken leg and the veterinarian had set the leg backwards! Emaciation and advanced metabolic bone disease left him “slithering” rather than walking, and he appeared even more awkward with his leg flopping backwards. Bradbury also had a substantial growth in his neck that appeared to be increasing in size. That evening, we extracted a grayish mass weighing about 40 g. A surreal scene, but not at all uncommon in our rather unusual household.

I am an emergency physician, who in another time might have been a simple country doctor. Instead, I work in a busy inner-city hospital ministering to victims of HIV, gunshot wounds, and sexual assault, or patients trying to die from heart attacks or emphysema. I sometimes ask myself why I don’t lead a more conventional life, especially when I consider the already prodigious challenges of my chosen vocation.

My wife, AJ, is better known to readers of the *Iguana Times* as the secretary of the International Iguana Society. To me, she is both a soul mate and a challenge, a woman who is driven by her reptophilia. While I often complain about my wife’s inclinations and the resultant impositions on my family and my life, I must admit that I was the author of the strange life we live.

I met AJ in London, Ontario, where I attended University. Our second date began with a motorcycle ride to Niagara Falls and has yet to end. Through two human “hatchlings,” five different cities, and eight

different houses, AJ kept our home impeccably, licked my wounds when the inequities of dealing with the less savory elements of my profession inflicted damage, and nurtured our children. We finally arrived in West Hartford, Connecticut where we acquired our first iguana, a birthday present for AJ. She had always been fascinated with animals and had kept a small menagerie for years. Although these pets were part of our life, they were not the center of our world — but that changed when trouble hit the Gutman household.

Both children were now at school and AJ spent her days maintaining the house. I felt that she was descending into a deep depression and that she needed a goal in her life. This was the logotherapy approach to depression (logotherapy, a school of thought articulated by Holocaust survivor, Dr. Victor Frankel, states that the key to psychological health is having a sense of purpose). AJ took me at my word — but what that goal and purpose would be I could hardly have imagined.

To cheer her and amuse ourselves, we acquired several more Green Iguanas, two of which were rescued animals. The wife of a colleague, a photojournalist, was intrigued by our animals and asked to take some pictures for a newspaper article. Thus AJ was featured rather prominently in the *Northeast Magazine*, a weekend supplement to the



These two animals are both at least three years old and severely stunted. Flitwick (left) has scarring on his underside from severe hotrock burns, but has adult proportions and no apparent skeletal deformities. Velikovskiy (right) retains very juvenile proportions and has a deformed jaw, a healed spinal fracture and obvious fibrous osteodystrophy of the rear limbs. Photograph by Carole Saucier.

local newspaper. During the interview, the author asked AJ what she foresaw for herself and the iguanas five years into the future. My guileless AJ told him that she hoped to establish a proper iguana sanctuary for abused and unwanted animals. The author not only published her dreams but our phone number. Our phone hasn't stopped ringing since.



Bradbury has recovered well from his surgery and is thriving despite multiple disabilities. *Photograph by Carole Saucier.*

Little did AJ or I realize the dimensions of the abused and abandoned iguana problem. Huge numbers of cute, six-inch-long Green Iguanas are bought every year in pet stores for \$5–20. However, when they reach three feet or become aggressive, all but a small minority of owners grow weary of them, and seek to dispose of the green monsters. The Society for Protection of Cruelty to Animals includes only “warm-blooded” vertebrates in its mandate. Veterinarians charge around \$60 to euthanize them.

We started filling our house with these wayward creatures. Many were ill and had been abused. Both of us became educated in their care and treatment, AJ much more than I. Once the veterinary bills started to mount, however, I bought a textbook on reptilian medicine and surgery. To cut costs (but also because I liked the challenge), I began performing the surgical procedures. We became quite adept at fixing prolapsed cloacae, incising and draining abscesses, and suturing lacerations.

Early on, on our kitchen table, I performed a Cesarean section on an egg-bound female that was also quite malnourished. It was quite a bizarre

“That’s not a Komodo Dragon, is it?” Grendel is actually a Blue-Tailed Monitor (*Varanus doreanus*) who enjoys basking in a companionable heap with the iguanas. *Photograph by Carole Saucier.*



Bronte is one of several animals in the house who are between 15 and 20 years old. *Photograph by Carole Saucier.*

scene as we sat down to dinner with AJ ventilating this poor animal with a pediatric bag valve as it recovered from the anesthetic. Unfortunately, although the animal regained consciousness and began to breathe spontaneously, we found her dead in her enclosure the next morning.

Bradbury, who recovered from surgery and is presently terrorizing the other iguanas, was only one of the many that were to follow. We experienced many successes and some failures. Phone calls about unwanted animals continued to come (in ever-increasing numbers), and our home began filling with Green Iguanas. First four, then 12, then 20, and then 30 iguanas of varying sizes were running around our house. To keep them warm and maintain their health, we installed a number of rather expensive UV heat lamps. As one might imagine, our electric bills are quite high.

These animals had to be fed and cleaned. Only Noah would appreciate the cleaning effort, but feeding is also a huge production that requires up to four hours each day. The bills, the effort, and the time invested continued to mount as ever more animals accumulated. Potential visitors with phobias about reptiles would politely, and sometimes not so politely, beg off any invitation. AJ would say, "Well, if they don't like the animals, they're not welcome."

My wife had been transformed into a driven animal rescuer who was making me crazy with the increasing frustrations and costs of her new passion. I begged her to stop adopting Green Iguanas. Ever agreeable, she instead started to acquire different species of iguanas, other lizards, birds, turtles, tortoises, and frogs. We now have two Prehensile-tailed Skinks living in the breadbox in our kitchen and tree frogs in the kitchen window. Eight assorted ctenosaurs, two Rhinoceros



Asimov was previously featured (*IT* 7(3)).
Photograph by Carole Saucier.



This group was temporarily displaced while UV-penetrable skylights were installed in their room; top to bottom: Hemingway, Bunny, Castro, Kahlo, and Dante. Photograph by Carole Saucier.



Neelix, a five-year old Rhinoceros Iguana (*Cyclura cornuta*), is a favorite with everyone who visits the Gutman house.
Photograph by Carole Saucier.

Iguanas, and three Cuban Iguanas coexist uneasily. Why at least two of each? One would suffer from loneliness, of course.

Among the shelled inhabitants of our home, we have a tiny Sulcata Tortoise with a deformed shell. What I wasn't told when we adopted the little fellow is that Sulcatas grow to 150 pounds. AJ claims that it would be unfair to keep him indoors as he grows — so we will eventually have to move



The Gutman kitchen table has served as an operating table for many a procedure. Here, Eurydice is having an abscess removed from her lower jaw. *Photographs by Carole Saucier.*

to Florida. I also discovered incidentally that Red Tegus can reach thirty pounds — after we adopted a second one (we had to take him; he had only one eye). And that slinky fellow with the darting tongue that patrols the house every morning couldn't really be a Komodo Dragon, could it?

Life with AJ, however, is not all iguana guano. She has become an important part of the International Iguana Society and regularly corresponds with people all over the world on iguana-related matters. She has just finished translating parts of a book series on the reptiles and amphibians of Central America from German to English. She also has been a behind-the-scenes guest at a number of important zoos — but, unlike Sharon Stone's husband, AJ comes away with her digits intact.

Although I am frustrated and at times just plain angry at how AJ's activities constrain my life, there is never a lack of adventure. The iguanas and I are truly blessed to have her on our side. 



The table is more commonly used for food preparation. Peanut, the Umbrella Cockatoo, ensures quality control as bowls are filled for all the herbivores. *Photograph by AJ Gutman.*



Iguanas of several species enjoy basking together in front of a specially installed UV-penetrable plexiglas pane; from left: Zelda, Voltaire, Guinevere, Merlin, Asimov, and Odessa. *Photograph by AJ Gutman.*

IGUANA SIGNS



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3

Some of our regular contributors have spotted iguana iconography in interesting settings...

1 Guantanamo Bay Naval Station, Cuba (photograph by Allison Alberts).

2 South Town, Little Cayman Island (photograph by John Binns).

3 Utila, Honduras (photograph by John Binns).

4 Little Cayman Island (photograph by John Binns).

5 Punta Cana International Airport, Dominican Republic (photograph by Robert Powell).

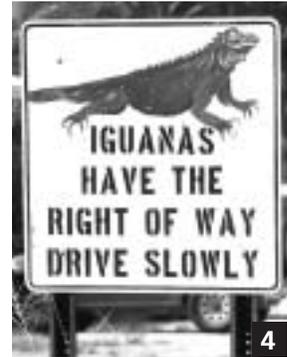
6 Cayman Airways cockpit — look carefully (photograph by John Binns).

7 South Town, Little Cayman Island (photograph by John Binns).

8 Iguana Research & Breeding Station, Utila, Honduras (photograph by John Binns).

9 Manati Park, Bávaro, Dominican Republic (photograph by Robert Powell).

10 Coast Guard Headquarters, Guantanamo Bay Naval Station, Cuba (photograph by Robert Powell).



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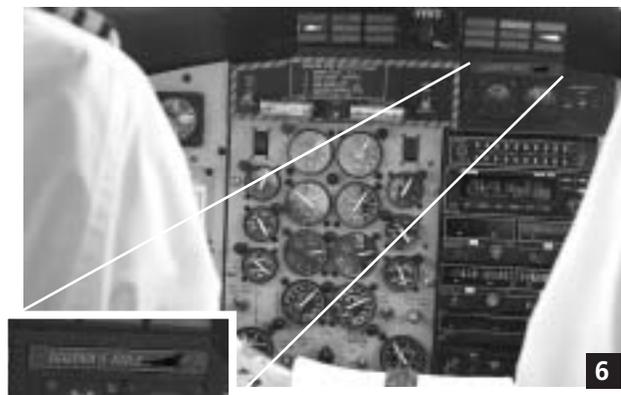
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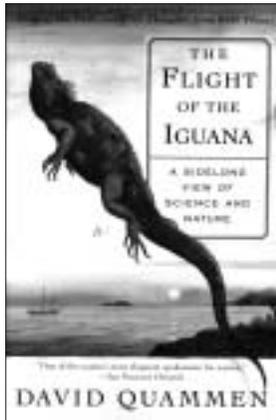
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BOOK REVIEW

Quammen, D. 1988. *The Flight of the Iguana: A Sidelong View of Science and Nature*. Touchstone, New York, NY (1st Touchstone ed., 1998). Softcover, \$14.



How could I resist a title like *The Flight of the Iguana*? — in spite or maybe because of the fact that I had more than an inkling of the event to which that rather intriguing caption referred. I have for several years co-taught with a colleague, whose specialty is English literature, a course entitled “Darwin and Literature,” learning in the process much about the reciprocal influence between Darwin and the writers of

his and subsequent times. I also re-read much of Darwin’s own work, including the often delightful account of his voyage around the world — in which he tells of repeatedly throwing a Marine Iguana into the ocean, only to have it time and time again return to his very feet, only to repeat the process. Darwin concluded that these lizards were stupid, but Quammen, recounting his own experiences with the iguanas of the Galápagos Islands, preferred to “see them as recklessly, lavishly, forgivingly trustful.” How can you not like the person with that point of view?

Quammen also wrote *Song of the Dodo*, which everyone with even the vaguest interest in conservation, particularly of animals on islands, should read. Unlike that book, however, *The Flight of the Iguana* is a collection of 29 essays originally written for and published as monthly columns under the title “Natural Acts” for *Outside* magazine. Although the author notes that he always intended for these to be collected in a single volume, like most anthologies, this one is a bit uneven — despite prevalent themes that permeate the individual contributions. In the author’s own words, these are “the surprising intricacies of the natural world ... and the human attitudes toward those intricacies.”

The accounts of often “unpopular beasts” he has “gathered ... for [our] contemplation, are the natural and true-born practitioners of life on this planet, the legitimate scions of organic evolution, as surely as are the white-tail deer or the parakeet or the puppy. If we ourselves can fathom them only in the context of carnival canvas and hootchy-kootchy music, the problem is probably our own.” Those of us who sincerely like reptiles and are at least tolerant of strange invertebrates might initially be inclined to take umbrage at the characterization of “our” creatures as “unpopular,” but a moment’s consideration of how most of humanity sees these beasts will remind us that we’re the exception rather than the rule. Consequently, these evocatively written essays will appeal to us while simultaneously serving to educate those who are less enlightened.

Building on the theme of education, Quammen says that: “Facts are important to the appreciation of nature, because ‘appreciation’ without comprehension is often a shallow and

sentimental whim...” and “[n]ot to wax portentous, but it seems to me that nothing bears more crucially upon the future of this planet than the seemingly simple matter of human attitudes toward nature.”

Undoubtedly because of my own prejudices, I most enjoyed the essays that dealt with reptiles (even indirectly), with island biogeography (a topic particularly favored by Quammen), and Darwin, who appears not only as the “thrower” of iguanas but as the painstakingly precise investigator looking into the role played by the lowly earthworm and, on several occasions, in the context of other tales focusing on topics as diverse as carnivorous plants and bird-eating snakes. I smiled over “The Miracle of the Geese,” remembering when Canada Geese were uncommon and seeing or hearing them was a rare treat. I admit to a bit of wicked delight while reading the chapter on “Nasty Habits,” which is subtitled “an African bedbug buggers the proof-by-design.” I enjoyed the tale of the Hauff family museum devoted to ichthyosaurs, not just because of the topic, but because I could relate to the patience exhibited by Herr Hauff as he tried to impress on a group of young people the importance of the Poseidon Shales (Quammen gently describes Hauff’s effort as “struggling amiably toward a compromise with the attention span of his audience [and] the scientific complexity of his subject”). I was fascinated by the account of “Street Trees.” Did you realize that dog urine is “contributed to the environments of New York’s streets at the rate of roughly 22,000 gallons a day[?] Small wonder that the life expectancy of a tree in Manhattan is only seven years. It’s not easy being green in that place.”

Although equally well-written, often provocative, and, for the most part, consistent with the educational theme, I liked less the essays that focused more on humans and their attitudes than on animals. The essay on cryptozoologists and their fascination for anomalies known more from legend than reality was the weakest link in the entire volume. The account of a Russian icebreaker saving a pod of whales left me cold in spite of the warm-fuzzy outcome. Three essays with a desert theme stressed both the inhospitable environment and the political entanglements of the 1980s, when official U.S. policy toward refugees depended more on whether the government in the country of their origin was currently favored (= anti-Communist) than the very real persecution from which people were fleeing. I enjoyed them (maybe because they tended to reinforce my own political leanings), but believe that they may have detracted from the book’s principal focus. One notable exception to my aversion to stories that stressed the human element was a most enjoyable account of the author’s “Swamp Odyssey.”

Why do I believe that readers of the *Iguana Times* should read this book? In part, that belief merely reflects the desire to share something I enjoyed, but it’s also an educator’s admiration for a volume that entertains so effectively while it surreptitiously teaches. Besides, how can anyone not be enthralled by the eloquence of an author who almost seamlessly mixes accounts of Walt Whitman’s poetry, fruit-eating piranhas, Heraclitean philosophy, environmental sex determination, William Faulkner, okapis, and holes? Is it an “iguana book?” No. Is it a book for folks who like iguanas? Most assuredly.

Robert Powell

LETTER FROM THE PRESIDENT

The past few years have taken me throughout the Caribbean to work with various species of Rock Iguanas. I have been stamped by Allen's Cays Iguanas (*Cyclura cyblura inornata*), had the privilege of releasing Jamaican Iguanas (*Cyclura collei*) in the Hellshire Hills, and have observed a female Andros Island Iguana (*Cyclura cyblura cyblura*) guard her termite mound nest.

The most difficult and emotional experience I have had in all this time was a week spent searching for the Grand Cayman Blue Iguana (*Cyclura nubila lewisi*). The *Iguana Times* has been publishing reports on this animal for a number of years (including one in our previous issue). This is arguably the most spectacular species in the genus *Cyclura*. It can reach five feet in length, and, under the proper conditions, its coloration is sky blue and its eyes are deep red.

In June 2002, Fred Burton, Alberto Jaramillo, Joel Friesch, and I began a second survey of the Island to cover areas where iguanas had been sighted previously. We also targeted areas containing suitable habitat, which had never been surveyed. Six ten-hour days were spent searching for iguanas or any sign of iguanas. Although Grand Cayman has up to a million visitors every year, Fred assured me that absolutely no one travels in the areas we were searching.

We surveyed working farms, along with historic (long abandoned) farms, pasture land, and recently bulldozed plots. The team also checked whatever pristine habitat remains on Grand Cayman. Many safety measures were implemented to avoid the kind of near-fatal accident that occurred during an earlier survey. Fred held daily briefings, and each member of

the team had a hand-held GPS and compass, along with a map of the survey area.

Most people have heard of Poison Ivy (*Toxicodendron radicans*), but who has heard of Maiden Plum (*Comocladia dentata*)? This noxious plant thrives in many of the areas we were to survey, and brushing against one makes Poison Ivy feel mild. Participants were advised to wear long sleeved shirts, long pants, and boots. Some areas consisted of razor sharp pinnacle rock, and other areas grew vegetation so thick that it would take thirty minutes to walk ten yards.

All of the harsh conditions would have been forgotten with the sighting of a single iguana.

However, no iguanas were seen in any habitat other than on roads and rock piles, and these animals were one- and two-year olds. Several sightings of tail drags and scat were also documented. On the down side, regardless of how far inland the team traveled, indications of dogs, cats, and rats were abundant. Rats destroy eggs, cats kill young iguanas, and dogs take sport in killing adult iguanas. Such condi-

tions do not bode well for the Blue Iguana.

Farm workers, when questioned, reported that iguanas used to be seen with regularity but had not been spotted for some time. One farmer raised our hopes when he reported a pair of adult iguanas residing in the area. This was a farm where two young animals were seen. The male iguana, he claimed, was the size of a donkey. We decided that it must have been a small donkey.

By the end of the week, we were painfully aware that we were working with a species that was functionally extinct in the wild. Although the captive population is producing offspring, no safe haven exists for their release. The only hope is to



Fred Burton and Alberto Jaramillo. Photograph by Joe Wasilewski

LETTER FROM THE PRESIDENT (*cont.*)



Two of the very few "wild" iguanas observed during our survey.
Photograph by Joe Wasilewski

purchase land to set aside for national parks and preserves. Once purchased, fences will need to be erected to exclude feral animals. An advantage of this system is that many other endemic plants and animals also need these natural areas in order to survive.

Don't think you are just one voice in conserving the remaining wildlife resources of the world. You can do a lot, and just by joining the IIS you have begun a positive process. Tell your friends and recruit more members for the sake of wildlife conservation.

Join us for our 2003 IIS conference in Utila, Honduras. You will have the honor of working with the extremely rare Utila Spiny-tailed Iguana (*Ctenosaura bakeri*). Join people of similar interests, along with experts in the field providing lectures on their work with many rare and endangered species of iguana.



Alberto and Joe. *Photograph by Fred Burton*

Joe Wasilewski
I.I.S. President

I.I.S. Bookstore

Photograph courtesy of Jayme Gordon



As a service to our members, a limited number of publications will be distributed through the I.I.S. Bookstore. The following publications are now available:

Green Iguana, The Ultimate Owner's Manual, by James W. Hatfield. 1996. **\$28.00** (including postage); **\$35.00** (nonmembers). Covers just about everything from birth to death of an iguana. 600+ pp. Limited quantities.

The Green Iguana Manual, by Philippe de Vosjoli. 1992. **\$7.00** (including postage); **\$8.75** (nonmembers).

Send check or money order (payable to International Iguana Society) **to:**

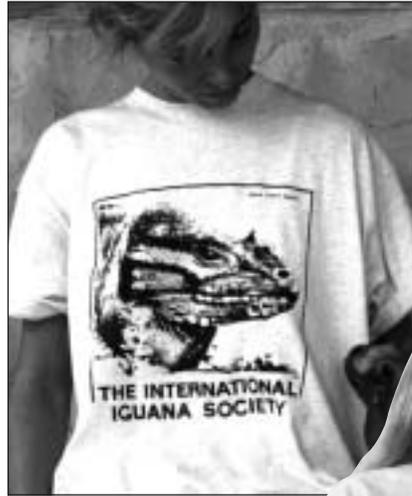
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A male *Cyclura cornuta* at Manati Park.
Photograph: Robert Powell