

WIISG REPORT

Jamaican Iguana Recovery Program

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The Jamaican iguana recovery program has remained a high priority for the West Indian Iguana Specialist Group (WIISG) since its inception in 1997. For the fifth time over the past four years, small groups of head-started Jamaican iguanas, *Cyclura collei*, have been released into their native habitat in the Hellshire Hills. As part of a strategy designed to restore the depleted wild population of iguanas, an ongoing series of experimental releases are underway in an effort to determine not only if iguanas reared in captivity since hatching can survive in the wild, but moreover, whether they can integrate into the natural breeding population. Since 1996, 26 young iguanas, hatched in the wild from 1991 - 1993 and then raised at the Hope Zoo in Kingston, have been released, all equipped with radio transmitters for monitoring. These releases have been cooperative endeavors between the University of West Indies (UWI), the Hope Zoo, the Natural Resources Conservation Authority (NRCA) and the Fort Worth Zoo. Funding from a core group of U.S. zoos has supported these releases, includ-

ing substantial grants from the American Zoo and Aquarium Association (AZA) and the Zoological Society of San Diego. The WIISG continues to provide logistical support to both the Hope Zoo headstarting effort and the field research program.

The Jamaican iguana was rediscovered in 1990 after being considered extinct for nearly half a century. A remnant population was found clinging to existence in the rugged and remote limestone forests of the Hellshire Hills along Jamaica's southeastern coast. Two active nest sites were also discovered and, given adequate protection, now provide a yearly source of hatchlings for headstart. This population exists today in a roughly 100 km² ecosystem which is being degraded and compressed as a result of charcoal burning. This factor, coupled with high juvenile mortality due to mongoose and cat predation, have brought the Jamaican iguana perilously close to the brink of extinction. Today, this species is considered to be one of the most critically endangered reptiles in the world. However, recent events provide cause for optimism.

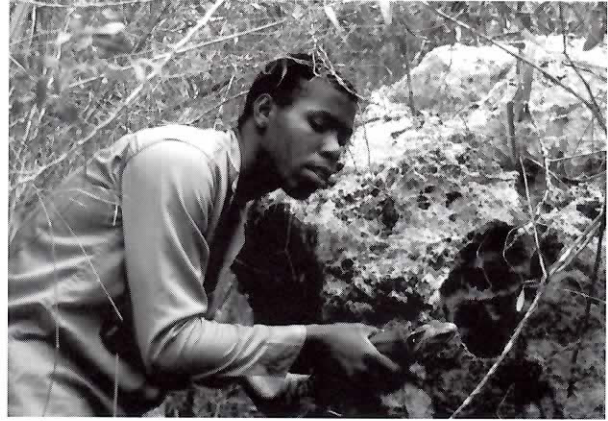
In April 1999, the Hellshire Hills, along with a significant portion of southeastern coastal Jamaica known as the Portland Bight (which includes the Goat Islands, Portland Ridge, Braziletto Mountains, and encompasses all marine areas out to the 200 meter depth contour) received official protection under a management agreement with a local NGO, the Caribbean Coastal Area Management (CCAM) Foundation. The Portland Bight Protected Area has a total area of



Cyclura collei wearing custom radio tracking vest. Photograph: Joe Wasilewski



Delano Lewis preparing to release an iguana (*C. collei*) after changing the batteries on the transmitter. Photograph: Joe Wasilewski



Delano with *C. collei*. Photograph: Joe Wasilewski



A trapped mongoose, humanely captured in the Hellshire Hills. Photograph: Joe Wasilewski

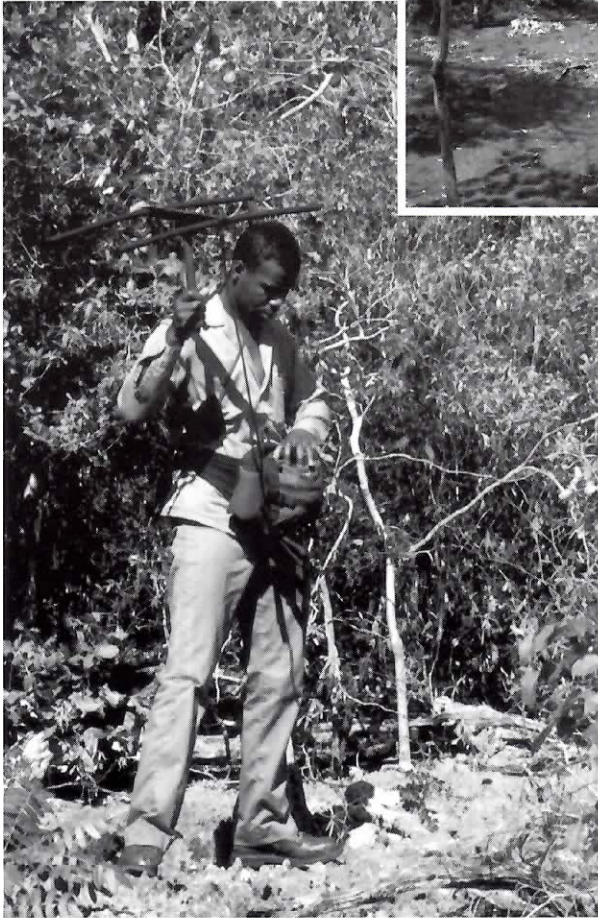
724 mi² (1876 km²) making it Jamaica's largest protected area so far. With the Hellshire Hills having finally been granted protection, attention can now be directed to Great Goat Island, part of the iguana's former range. Under CCAM's management plan, the Goat Islands are slated for tourism, including a field station with boats. The plan also includes restoring the iguana population to the island and the time appears right to begin developing plans to establish this as an iguana sanctuary.

The year 1999 also brought remarkable nesting results. At least 16 females nested this year and 104 hatchlings are known to have emerged, both record numbers since the project began in 1991. All but six of these were tagged and released to the wild. Efforts next year will be aimed at determining if any of the headstarted female iguanas are contributing to the breeding population. For the first time in the field project's nine-year history, several juvenile (1–2 year old) iguanas were captured,

suggesting that young iguanas are benefiting from the predator removal program undertaken by UWI staff to systematically trap mongoose, cats and rats from the core iguana areas.

The iguana release program has not been without its problems over the years, primarily related to radiotransmitter loss. A vest-type attachment was found to be optimal for securing transmitters, but finding a material that would withstand the rugged Hellshire Hills environment presented a major challenge. One of the predominant features of this ecosystem is the sharp limestone karst that forms crevices and retreats favored by iguanas. Generally, the vests would break down over several months and the transmitters would be shed, thus precluding the accumulation of any long-term monitoring data. The most that could be concluded was that the iguanas survived the short term following release, utilized the habitat in terms of locating food and refugia, and appeared

Below: Delano Lewis radio-tracking a *C. collei* in the Hellshire Hills.
 Photograph: Joe Wasilewski



Left: *C. collei* nest site, one of two discovered in the Hellshire Hills.
 Photograph: Joe Wasilewski



Above: Hope Zoo's iguana head start cages. Photograph: Joe Wasilewski

to acclimate well. Due to its durability, Cordura was considered the best material for these vests, however, it is not form-fitting and must be secured with elastic straps.

A breakthrough occurred in 1999 when a designer with the Nike Corporation learned of this dilemma and offered to help. Damon Clegg of Nike's All Conditions Gear Footwear Design Department began fabricating vests with a stretch Cordura material that was both rugged and form-fitting. Equipped with what we believe will be the prototype iguana vest (bearing the Nike trademark swoosh), six iguanas were released in November 1999 and are being successfully tracked. The current field team of Dr. Byron Wilson, predator control specialist, and student Delano Lewis, both affiliates of Dr. Peter Vogel of the Life Sciences

Department of UWI, are monitoring the iguanas daily and making visual sightings at least weekly. Especially encouraging are the recapture data that are beginning to accumulate. Interestingly, iguanas from previous years' releases are beginning to turn up in mongoose traps. In their daily rounds checking trap lines, the field crew has recorded 20 iguana captures (about ten individuals including several headstarts) in live traps, providing much-needed long-term survival data for the first time. With help from Nike, the team hopes to gather more specific information on dispersal and habitat utilization.

For their role in the project, Nike has received a considerable amount of positive press and public relations value. The story was carried by the Associated Press (AP) wire and featured in several major newspapers. Sports Illustrated magazine and National Public Radio (NPR) also covered Nike's involvement. The goal of the WIISG is to expand Nike's role in future release projects, not only in Jamaica but in Grand Cayman and the British Virgin Islands as well. Ultimately, we hope that Nike will become an official corporate sponsor for the WIISG and continue to work with the group as we strive to advance the developing science of reintroduction technology.

Left: The larger of the two nest sites in the Hellshire Hills used by the Jamaican iguana. Photograph: Joe Wasilewski

Below: *C. collei* after being released, showing no ill effects after the capture. Photograph: Joe Wasilewski



Sunset over the Hellshire Hills. Photograph: Joe Wasilewski

The Nike Corporation has already proven to be a caring and reliable partner, not only designing and manufacturing iguana wear, but also replacing vests and reimbursing the iguana project for a shipment lost in a customs warehouse fire in Jamaica. With Nike's continued support, we look forward to seeing more "fashion-savvy" iguanas bearing the trademark Nike swoosh in the coming years.



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