

The Grand Cayman Blue Iguana Recovery Program and the "Team Blue" 2005

By John Binns

Introduction.

The three Cayman Islands lie south of Cuba and west of Jamaica, in the northwest Caribbean Sea. Grand Cayman is the largest and most populous of the islands, 22 miles long by 7 miles wide, notable for its mangroves, extensive coral reefs, and sizable tracts of dry forest and xeric scrubland. Thriving native parrots and West-Indian Whistling Duck can be seen in the eastern districts, where the last remaining Grand Cayman Blue Iguanas are stepping back from the brink of extinction with the help of an ambitious and dynamic conservation program. The islands of Cayman Brac and Little Cayman support another native iguana, the Sister Isles Rock Iguana. Both islands are also graced with nesting sea birds, notably a small but easily visited colony of Brown Boobies on the spectacular cliff tops of Cayman Brac, and an immense breeding colony of Red-footed Boobies in the Booby Pond Nature Reserve on Little Cayman. The flora and fauna of the Cayman Islands are the product of about 3 million years of evolution, a fascinating natural heritage that becomes apparent mainly to those few who venture beyond the standard vacation fare of sun and sand.



The Blue Iguana Recovery Program operates under the auspices of the National Trust for the Cayman Islands, a non-profit organization with a mandate to protect natural environments and historic places. International partners of the Blue Iguana Recovery Program include Durrell Wildlife Conservation Trust, the International Reptile Conservation Foundation and the International Iguana Foundation. The original effort to save the Blue Iguana began in 1990. However, the results of a population survey in 2001 that determined there were only 10 to 25 wild Blue Iguanas left in existence energized international concern. A 2002 workshop conducted on Grand Cayman by the IUCN Iguana Specialist Group led to the creation of the Blue Iguana Recovery Program. Since that time, the program has

developed wide-ranging initiatives, including expansion of the captive breeding facility, and head-starting, to address restoration of the wild population. Other activities include field research, public awareness and education, and a variety of efforts to promote the program. Although positive steps have been taken to save this species, the struggle to provide the funds for carrying on daily activities continues to plague the program and the challenges ahead are significant.

In 2004, captive breeding success produced a record 80 Blue Iguana eggs, but also necessitated the construction of a sufficient number of cages in time for the hatching. The International Reptile Conservation Foundation, in cooperation with the Blue Iguana Recovery Program responded to the challenge by establishing a team of international participants to spearhead the construction and

help generate the funds necessary for materials. The group was dubbed "Team Blue". The original Team Blue members produced 104 4x4x2 juvenile and 30 hatchling cages, made needed repairs to the facility and performed a host of other tasks all within a record three-week period. Since that time, Team Blue has become an integral part of the recovery program's efforts.

Team Blue 2005

The Team Blue 2005 participants were divided into smaller teams and joined a small group of local staff and international volunteers for two to three weeks of intense but deeply rewarding field work to support the Grand Cayman Blue Iguana Recovery Program. This noble creature is unique to the island of Grand Cayman, and is the most critically endangered of all the world's iguanas! Teams focused on three critical field conservation projects in the spring and summer of 2005: searching for the nesting sites of the last truly wild Blue Iguanas; monitoring breeding in young released Blue Iguanas in the Salina Reserve, and collecting eggs for incubation from wild and captive nests in the QE II Botanic Park. Often they found themselves participating in more than one of these activities, and had the opportunity to join Blue Iguana wardens caring for the captive breeding and head-starting facility, which currently houses about 200 Blue Iguanas.

Hands-on fieldwork required to save the Grand Cayman Blue Iguana involves demanding activities in an exceptionally harsh environment. The iguanas live mainly in dry, rocky scrubland where humans face challenges from the searing summer sunshine, humid heat, fierce jagged rocks, and a barrier of vegetation including spiny and poisonous plants. After weeks in close communion with some of Cayman's wildest places, the rewards for the cuts, scratches, bruises and wrecked boots come in camaraderie and the feeling of connection and accomplishment as Team members take meaningful steps towards saving one of the world's most endangered species.



Work on three field projects ran concurrently from late March through the end of June 2005, with a changing team of volunteers (in addition to in-country staff) ranging to a maximum of about six at one time. Individual participants were asked to commit to a minimum of 14 full days so that there was time for each one to become familiar with equipment and techniques, and then to contribute significantly to the work.

The Last Wild Blues

Fewer than 25 wild Blue Iguanas were believed to survive from Grand Cayman's original, wild iguana population. A single site was identified where a few wild Blue Iguana hatchlings would appear each year, but their parents were unknown and the nesting grounds have never been found. The hatchlings seem to remain in the area for a year or two, but then they disappear: possibly killed by dogs or cats, or dispersing to unknown areas.

These last ancestral wild Blue Iguanas may hold ancient behavior patterns and a genetic heritage, which will inevitably be lost as their natural habitat is converted for human uses, and as they start to merge with the released population in the adjacent Salina Reserve. This year presented perhaps a last chance to learn about these iguanas and to secure their genetic heritage for future generations.

The team set a closely monitored network of cage traps hoping, over a period of a few weeks to capture a few reproductively mature wild iguanas. Each trapped iguana would be tagged, and radio tracked by triangulation until its home range and focal activity areas became apparent. With the approach of the breeding season, radio tagged iguanas would hopefully lead the team through the dense rocky scrubland to other iguanas, which would be trapped and tagged in turn and perhaps reveal their elusive nesting sites.

Weeks of intensive observation and trapping uncovered a small group of three young animals. Blood DNA samples have yet to reveal if these iguanas are truly wild or simply migrants from among the animals released in QEII Botanic Park. Tales of the truly enormous wild male, last seen in the area in the early 1990's will remain and the mystery will have to be solved another year.

A helping hand

For ten years small numbers of captive bred and head-started Blue Iguanas have been released annually into the QE II Botanic Park. Now approximately 30 free-roaming iguanas are occupying territories in and around the Park. In May these iguanas mated, and in June the females nested.

At the captive breeding facility, also in the QE II Botanic Park, breeding females came into season on the same schedule, so in June captive females were laying at the same time as the wild ones.

Captive nests are all routinely excavated so the eggs can be incubated under controlled conditions. This ensures a high hatching success. Ideally all the nests of the free-roaming females in the Park are excavated so that the eggs can be incubated and the hatchlings safeguarded from natural and alien predators for their first two years.

The team closely monitors the Park's free roaming females starting on 12 May, which is the earliest recorded egg laying date; egg laying starts to peak in late May and continues throughout June. Daily patrols and focal animal monitoring were used to spot each female nesting. Nests were carefully excavated in the late evening, nighttime or very early morning, so they could be recovered before the female returned to guard the site. The eggs are now lodged in the project incubators, where they will develop until hatching in August and September.



Left to hatch naturally, half the eggs would dry up, be flooded out or lost to predators. The surviving hatchlings would run a gauntlet of native snakes and introduced rats and feral cats, with very little chance of surviving to adulthood. With helping hands, nearly every egg laid can be raised to a two-year-old iguana, safe to release back to the wild. This is the key technique, which drives rapid population recovery for the Blues!

A new beginning

In December 2004, the Blue Iguana Recovery Program took a landmark step from small-scale work in the QE II Botanic Park, to significant population recovery in the wild. Twenty-three young Blue Iguanas were released into the National Trust's Salina Reserve, a remote protected wilderness area with no public access. Early signs are promising; with all but one of these iguanas becoming bonded to their release sites. The key question was, would these iguanas breed in the same area, or would the females attempt to migrate to the coast to nest?

The team briefly recaptured the females at the beginning of peak mating season, in late April. The iguanas were weighed and measured to assess how well they had grown since release, and radio transmitters were glued to each one so their movements could be monitored through the breeding season.

Team members observed mating patterns and tracked the females carefully during the six-week period between mating and nesting. Would they nest in the soil pockets of their release site? If the

iguanas nest successfully within the Reserve, the release can be deemed a provisional success, and the stage will be set for a second release of at least 60 more two-year olds into the Salina Reserve at the end of the year!

Climate and Physical Requirements

In order to join "Team Blue" participants have to be physically fit and have good balance. Working in both the Salina Reserve and the wild iguana areas involves walking off-trail on Cayman's notorious "Cliffrock" – an exceptionally sharp and dangerous variant of West-Indian limestone karst terrain. Even with suitable boots and clothing, team members still headed home with cuts, scratches and bruises. Monitoring nesting in the QE II Botanic Park is somewhat less demanding, but still requires significant walking, some off-trail. All sites have the toxic plant "Maiden Plum" (*Comocladia dentata*), which can cause severe skin allergies and those already sensitive to Poison Oak or Poison Ivy, have to take special precautions since Maiden Plum is related but capable of causing even more severe symptoms.

The work just completed took place during the West Indian summer, with sweltering daytime temperatures in the mid 90's, humidity well over 90%, and occasional tropical downpours. Mosquitoes and sand flies are annoying at times, especially at dawn and dusk.

As July 2005 arrived, the tasks for Team Blue 2005 came to an end. This year's egg collection was the largest on record; there are now 91 eggs in the incubators! The shocker for this year has been the results of studies of the last wild Blues, in the deep interior of Grand Cayman's east end. The main study site revealed three young adults (two males and one female), but none of the animals that had been seen there during the 2001 surveys.