DARWIN ANEGADA

The Newsletter of the Darwin Initiative Assessment of the Coastal Biodiversity of Anegada, BVI.

<http://www.seaturtle.org/mtrg/projects/anegada/> Issue 3, January 2005

Welcome to the 3rd Edition of the *Darwin Anegada* newsletter. The project has been a tremendous success over the past year and we are confident that this will continue into the future. In this issue of the newsletter, we update you on all that has been happening with the project and have in-depth features on the bird banding workshop that was carried out in early December, our latest botanical successes and a special piece on the endemic Anegada Rock Iguana by Kelly Bradley from Dallas Zoo.

Since the last newsletter we have had 3 intensive periods of fieldwork: in July, September and November/ December mainly concentrating on the continuing monitoring of Anegada's birds and turtles. The bird monitoring carries on adding new species to the island list and there was a notable increase in the variety and number of species using the island during September, the main month for migration. The current bird list can be viewed on the project website. To date, we have recorded 95 different bird species on Anegada and 30 of these have been recorded breeding. Some recent sightings of colour banded Ruddy Turnstones, *Arenaria interpres* and Sanderlings, *Calidris alba*, have shown that birds from as far away as Delaware Bay in the USA, a journey of 1550 miles, are making Anegada their home for the winter.

The marine turtle nesting season began in early July and continued through to early September with a total of 43 nesting activities recorded. Of these, 13 were nests (7 green turtle and 6 hawksbill). The hawksbill turtles laid an average clutch of 143 eggs and an average 95% of eggs hatched, whereas the green turtles laid an average clutch of 131 eggs with somewhat lower success of 61%. The nesting figures are minimum estimates as there was no project presence on Anegada during August. In addition to monitoring nesting activity, the in-water sea turtle work has been progressing at a fantastic rate with 137 hawksbill and 74 green turtles being caught, measured, tagged and released.

Initial results from genetic analyses indicate that for green turtles there may be links with nesting populations as far away as Ascension Island, Costa Rica, Mexico, USA and Venezuela. For hawksbills turtles there may be links with nesting populations in Anguilla, Antigua, Barbados, Brazil, Cuba, Montserrat, Puerto Rico, and the Turks and Caicos Islands. More details on this will appear once analysis is complete.

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Jim White (Anegada Community), Andy McGowan (Darwin Research Fellow) and Damon Wheatley (Anegada Community) studying hawksbill turtles in the waters of Anegada.

Bird Banding Programme Established

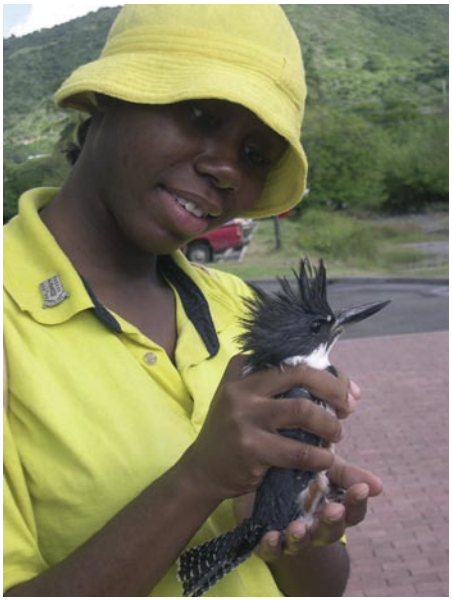
The Darwin Initiative project on Anegada has launched a new bird banding program that will serve all the BVI. The new scheme involves capturing birds and placing a uniquely numbered band on the leg of each bird and recording information, such as age and sex. Each band bears the address of the BVI Conservation and Fisheries Department and so anyone finding a banded bird can help by reporting its whereabouts and fate. In time, this will provide insights into the biology and movements of the bird populations in the BVI and may allow any changes in bird numbers to be detected.

As part of the launch we hosted the third of the Darwin Initiative workshops, "*An introduction to bird banding*", which included project staff from the Anegada community, BVI CFD, BVI National Parks Trust, H. Lavity Stoutt Community College, and Island Resources Foundation. The workshop started with three days at the Marine Science Center at the H. Lavity Stoutt Community College and consisted of practical and classroom sessions before relocating to Anegada for two days of intensive bird banding.

At the first of the classroom sessions Dr Andy McGowan (MTRG) introduced himself and Dr Stuart Sharp (Univ. Sheffield) as the workshop co-ordinators and outlined the workshop programme for the week ahead. This was followed by a short bird identification quiz in order to gauge just how good the bird ID skills of the participants were. Stuart then followed the quiz with a talk on "Knowing your Birds". In the afternoon, Andy gave a presentation titled "What, Why and How of bird banding".The group then moved out of the classroom into the grounds of the Marine Science Centre for the final session of the day where Andy and Stuart gave a practical demonstration of setting up mist nets and actually catching birds.

Day 2 of the workshop began at 5.00am when Andy, Stuart and Dr Geoff Hilton (RSPB) set up 7 mist nets around the Marine Science Centre. Despite the weather working against the team most of the morning, a total of 9 birds of 6 different species were caught. These included a rather stunning male Prairie Warbler, the first record of this species for the college, and an impressive Belted Kingfisher. All of the participants handled and banded at least one bird. Stuart finished day 2 of the workshop with a talk on "Feather moult and how to use it for ageing birds".

Day 3 of the workshop began again at 5.00am when Andy, Stuart and Geoff opened up the mist nets. Despite bad weather, a respectable 13 birds of 6 different species were caught. This proved to be a better day with regards to ageing and sexing as a mixture of different age and sex birds of the same species were caught. Geoff then rounded off day 3 with an excellent presentation on "Bird banding and its use in conservation". Geoff presented many different case studies from around the globe, emphasising how bird banding had been used to address questions of demography, bird movements, habitat use, determining species and species specific diets, all of which can have an impact on conservation decisions.



Abbi Christopher of BVI Conservation and Fisheries Department, gets to grips with a Belted Kingfisher.

Dr Stuart Sharp, University of Sheffield, goes through the tricky process of extracting a bird from the fine mesh nets with some of the workshop participants.

All the workshop participants then relocated to Anegada for a further 2 days of intensive bird catching and banding. Day 4 and 5 of the workshop were spent mist netting and banding birds. The highlights of the two days total of 21 caught birds were 4 Caribbean Elaenias and 6 Common Ground Doves, 2 Zenaida Doves and 2 Northern Mockingbirds.

After a very hard but enjoyable week a total of 32 birds of 6 different species were caught and banded and a further 25 birds of 6 more species had to be let go as the correct band sizes were not available. Photos will be hosted on the Darwin Photo Library and more comprehensively in a workshop CD that is in production and will include workshop images, Powerpoint presentations and some bird calls.

Anegada is a Hit at Chelsea

The highlight of the horticulture calendar in the UK, and arguably the World, is the annual Chelsea Flower Show held in the grounds of the Royal Hospital in the heart of London. As well as providing a showcase for garden designers, growers and the international horticulture community, there is a large 'Life Long Learning' Section within the main floral marquee. Here, universities, botanic gardens and other educational institutions have the opportunity of showcasing their scientific, conservation and educational activities of interest and relevance to the horticulture community and visiting public. Around 160,000 people visit the Chelsea Flower Show each year and we thought this was too good an opportunity to miss bringing our work in the BVI to a much broader audience.

In collaboration with colleagues from the Eden Foundation (www.edenproject.com), we applied to the UK Government's Department for Environment, Food and Rural Affairs (Defra) with a proposal to highlight two plant conservation projects funded by their Darwin Initiative Programme. Defra liked the proposal and generously agreed to fund the whole exhibit and we developed *Treasured Islands*, an exhibit showcasing the botanical riches and conservation activities in two groups of tropical islands– the British Virgin Islands and the Seychelles.

During the last botanical field expedition to BVI in February 2004, Barrie Blewett and Pat Griggs from Kew and photographic artist, Angela Easterling, joined us in preparation for the Chelsea exhibit. Angela created photograms of a range of Anegadian plants, including the critically endangered *Acacia anegadensis* (poke-me-boy), *Metastelma anegadense* (wire-wist) and *Cordia rupicola* (black sage). Angela has developed a technique of exposing pressed plant specimens on special types of photographic paper to bright sunlight. The resulting photograms capture an essence of the living plant and produce very beautiful images. Several of the images were featured in the Chelsea exhibit alongside herbarium specimens and seeds collected by the team. The Eden designers built a wooden boat which formed the centre piece of the exhibition. Visitors were invited on board to view the exhibits, live plants and read the interpretation materials which told the story of modern day plant hunters and the methods used by conservationists to protect threatened species and fragile habitats.

Treasured Islands excited lots of interest amongst visitors to the Chelsea Flower Show and it was surprising how many visitors had been on holiday to BVI, the Seychelles or both! It certainly raised awareness of our plant conservation activities and the team involved were pleased when the Chelsea judges awarded the exhibit a silver medal. More details can be viewed at <www.kew.org/education/kewatchelsea.html>.

Elliot Morley, Minister for the Environment, is one of the many visitors to the exhibit.

Pat Griggs, Angela Easterling and Barrie Blewett inspect the photogram of kidney guava (Tecoma stans).

The award winning exhibit at Chelsea Flower Show.

Angela's images will also be used to raise the profile of our project work as we plan for an exhibition to be opened in Summer 2005 at Wakehurst Place, site of Kew's Millennium Seed Bank which now holds in trust seeds of several BVI plants that have been collected and sent to the UK as part of our current field work. Seed collections sent to Wakehurst Place are cleaned, dried and sealed in glass jars. Half of each seed lot is returned to BVI where it is housed in the Darwin Initiative Seed Bank established in the JR O' Neal Botanic Garden as part of this project. This provides a conservation insurance policy against possible loss of these species in the wild.

Anegada Rock Iguana Project

Anegada is home to one of the most endangered lizards in the world, the Anegada rock iguana (*Cyclura pinguis*). Rock iguanas are a unique group of lizards native to most of the islands in the Caribbean, but should not be confused with their cousins the green iguana, an introduced species. Due to habitat loss, and the introduction of non-native mammals, the Anegada rock iguana population has greatly declined since the 1970's. Currently, there are approximately two-hundred remaining on the island.

The only native mammal species on Anegada are bats, but during the colonial period in the 1700's settlers brought many new mammals with them. Today there are cattle, donkeys, goats, cats, dogs, and rats. Though the iguanas compete with the free-ranging livestock, the feral cat population on Anegada poses a more immediate threat to the survival of the iguana. Each fall, feral cats kill many of the newly hatched iguanas, consequently, very few hatchlings survive to adulthood. The current population of iguanas on Anegada is comprised almost entirely of aging adults. To help bolster the wild population until feral animals can be controlled, the IUCN Iguana Specialist Group (ISG) along with the British Virgin Islands National Parks Trust (BVINPT) began a headstart program for the iguana on Anegada in 1997.

Each summer during the nesting season, researchers locate as many iguana nests as possible. Later in the fall, the BVINPT collect the hatchlings and transfer them to a holding facility on Anegada. The iguanas are then raised in a safe environment. To date more than a hundred iguanas have been brought into the headstart facility.

In October of 2003, the ISG released the first twenty-four headstarted iguanas back into the wild. It is not known exactly how big an iguana needs to be in order to survive cat predation. In order to find out, iguanas of several different sizes were released to study their survival rates. Each animal was fitted with a radio transmitter to allow the iguanas to be monitored as they settled into life in the wild. Kelly Bradley from the Dallas Zoo and Glenn Gerber from the San Diego Zoo will be tracking the iguanas during their first two years.

To date, the iguana re-introduction program has been very successful with few losses. We are hopeful that several of the females released last year will lay eggs this summer. The headstart program will truly be a success if the captive-reared iguanas integrate with the wild population and contribute reproductively. The BVINPT will repeat the 2003 release this October, when another twenty-four iguanas with radio transmitters will be released. Kelly and Glenn will continue to track both groups of iguanas until the batteries in the transmitters die.

The iguanas are an important and unique part of Anegada natural history. Hopefully with the help of the people of the BVI, the iguana will enjoy a long co-existence with the people on Anegada.

Kelly Bradley
(Dallas Zoo)

Emerging iguana hatchling, Anegada. Photo: K. Bradley.

Can You Help?

As part of the project, local Anegadians are employed and assist in monitoring and research. Already the willingness to be involved has outstripped available resources and we are appealing for more support. There is unlimited work to be done and your help is most appreciated.

For more information or to become a supporter of the project please visit our web site or see contact details below. All donations will be acknowledged on our web site and in future issues of the newsletter. Through our partnership with US Based 501c(3) registered non-profit conservation organisation SEATURTLE.ORG we are able to accept donations online. 100% of all monies donated will be spent directly on the biodiversity of Anegada.

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PDF of this newsletter available at:

http://www.seaturtle.org/mtrg/projects/anegada/

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