



# DA<sub>r</sub>W<sub>i</sub>N in TCI

DEVELOPING BIODIVERSITY MANAGEMENT CAPACITY  
AROUND THE RAMSAR SITE IN THE TURKS & CAICOS ISLANDS

October 2001 Newsletter No. 2 and 3



CABI Bioscience  
A division of CAB International

## The Darwin Project – Moving Forward

The Darwin Project in TCI continues to make progress towards its goal, collecting valuable biodiversity data to be used in a management plan for the terrestrial habitats of the Ramsar Site centred on Middle Caicos. Initial surveys have been conducted for bats, birds, insects, herpetiles (reptiles and amphibians), and higher plants. Extensive work has also been done, “ground-truthing” the distribution of plant communities, towards the production of a reliable habitat map of the study area. Specialists in the five groups of study organisms have visited, and intend to return for further work in the coming months. Bryan Manco (the Turks & Caicos National Trust Darwin Project Officer) has played a vital role, coordinating the work of visiting scientists, carrying out substantial amounts of field-work, and liaising with the many project stakeholders and those involved in related activities.

Participating specialists include Dr Fred Burton, who has been analysing and ground-truthing satellite images for the habitat map, as well as identifying plants and collecting herbarium specimens. Dr Gerald “Stinger” Guala collected specimens to add to the project herbarium collections, one duplicate of which will be returned to TCI when proper storage facilities are available. Kathleen Wood has also been of great help in the identification of many important plant species. Dr Oliver Cheesman and Dr Roger Booth surveyed and collected insect specimens, concentrating on butterflies and beetles. Again, it is intended that a set of reference specimens be returned to TCI when they can be safely stored and curated. Dr Tony Hutson and Tim McCarthy carried out an intensive study of Middle Caicos bats. They recorded five species, four of which were previously known from TCI and were found roosting in the Conch Bar Caves. The fifth species, the Red Bat *Lasiurus borealis*, was an entirely new record for the Turks & Caicos. Dr Mike Pienkowski and Ann Pienkowski devised and tested a method for monitoring bird populations. They found that the woodlands provided important breeding sites for characteristic local birds, and vital wintering areas for some North American breeding populations, including the threatened Kirkland’s Warblers. The Turks & Caicos Islands’ Chief Justice, Richard Ground, joined the Darwin researchers to photograph the birds of Middle Caicos. Dr Glenn Gerber and Tandora Grant have started to document the diversity of reptiles and amphibians of Middle and North Caicos, and hope to produce a field guide to Turks & Caicos herpetiles. A number of species of lizard and snake have been identified so far, along with two species of frog (both introduced to the islands from elsewhere).

During the specialists’ visits, others interested in developing skills have been invited to join in activities on Middle Caicos. Among the first to take advantage of this were the local elementary school on Middle Caicos and the British West Indies Collegiate from Providenciales. From the latter, the biology teacher and her students got a chance to explore Middle Caicos and participate in plant collecting, insect sampling and work with bats. The project has also been able to share its experiences with other TCI research teams, at a meeting held by the Department of Environmental and Coastal Resources (DECR)

on South Caicos. Presenters included the DECR, Coastal Resources Management Project, and School for Field Studies. The Darwin Project is currently the only project dedicated to studies of the terrestrial biota of TCI.



Roger Booth explains the joys of entomology to visitors from the British West Indies Collegiate

Shortly after publication of the previous newsletter, the Darwin Project vehicle collapsed, and for some time the project was without transportation. However, thanks to community connections throughout Middle Caicos, the work of the project was able to continue! The TCI Government decided that the roads of Middle Caicos were too taxing for the used vehicle that they had previously provided, and kindly obtained a brand-new Darwin Project vehicle, which arrived in summer 2001. This has made access to important areas of Middle and North Caicos more practicable. The transfer of the property of the Vera Hamilton Primary School in Bambarra to the National Trust has provided us with a location in which to base future work. Plans for funding and design are currently underway to equip this site with a visitors’ centre and lodgings for project staff.

Darwin Project research on the bats in Conch Bar Caves National Park has caught the attention of the Ministry of Natural Resources, who are currently working with the National Trust to establish a supervisory and management plan for this national park. Darwin Project work has also benefited the Crossing Place Trail project on Middle Caicos, the Wades Green Plantation project on North Caicos, the Little Water Cay Rock Iguana Nature Reserve, and the Cheshire Hall Plantation project on Providenciales.

As the second phase of field research approaches, we are drawing closer to the end goal of the project. This is the creation of a draft management plan for the study area, highlighting the fragile ecosystems that could be lost without careful forethought and planning. The management plan will, however, also open opportunities for eco-tourism, sustainable use of natural resources, and will be supported by a database of the species and habitats of the land around the Ramsar site.

## Bat Surveys

Over 100 bat species occur in the Caribbean, including many endemic to particular islands or groups of islands. Although the Turks & Caicos have some good caves, the small, remote, low lying character of the islands, and their lack of forest vegetation, limits the number of bat species found here. In January 2001, Dr Tony Hutson, a leading bat expert from the UK, and Tim McCarthy from the Carnegie Museum of Natural History in Pittsburgh conducted surveys of the bats on Middle Caicos. Known caves and other likely roost sites were visited, to record numbers and behaviour of the different species.



**Conch Bar Caves – home to at least 4 species of bat**

Four species were found in caves (one of them also occurs in small rock shelters and houses). Of these, the Big-eared Bat *Macrotus waterhousii* feeds on large insects, such as cockroaches and katydids and even the giant Erebus moth; the bat lives singly or in small groups near the entrance to the caves or in disused houses. The Buffy Flower Bat *Erophylla sezekorni* and Leach's Long-tongued Bat *Monophyllus redmani* form larger groups deeper into the cave, and both have long noses and tongues to feed on nectar from flowers; both species will also eat pollen and some insects. The fourth cave species, the Cuban Fruit-eating Bat *Brachyphylla nana* feeds mainly on fruit. The

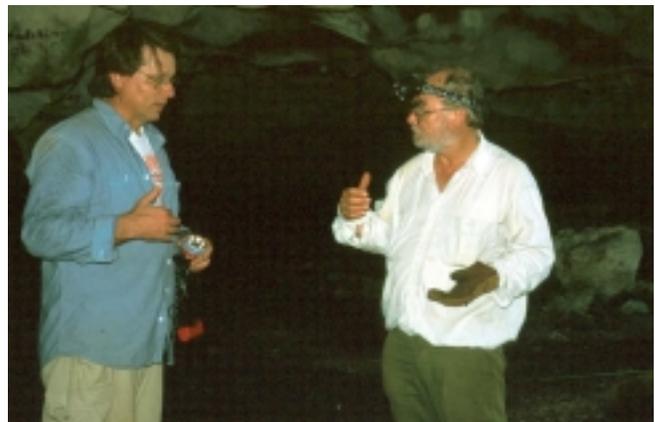


**Brian Manco explains the biology of bats at the Middle Caicos elementary school**

latter three species are all endemic to the Caribbean and are probably very important for the pollination and seed dispersal of many plants. The fruit-eating bat has quite a restricted range and the large colony on Middle Caicos marks the northern limit of its distribution. These bats have been recorded in TCI before, but a fifth species (initially heard on a bat detector, and finally trapped with a mist-net) proved to be a new record for the

islands: the Red Bat *Lasiurus borealis*. This species feeds on small insects. Four further species have been recorded from TCI, two from fossil material, and two from Providenciales (a widespread species seen there in the 1970s, and a single record of a well-known North American migrant).

The visit by the bat specialists provided equipment and literature to help further work on the islands. Also, Tony Hutson and Bryan Manco visited the elementary school, where they showed the children a live bat, and explained about the biology of these fascinating animals. Tony also demonstrated the bat detector, which transfers the high-pitched echolocation calls of bats into sounds audible to humans, and played recordings of typical bat calls. The people of Middle Caicos are interested in their bats, and rather like having them around (perhaps because some species feed on the local mosquitoes and biting midges!). Many tourists also visit the Conch Bar Caves and see the bats. Here is a possible source of conservation concern. It is important that the tourists and their guides have the opportunity to appreciate the bats, but also recognise the bats' sensitivity to disturbance. Monitoring the bat populations on the island will help to identify changes that arise from human activity or natural causes, and a conservation code for cave visits has been drafted.



**Tim McCarthy and Tony Hutson deep in Conch Bar Caves**

Tony Hutson and Tim McCarthy will visit Middle Caicos again towards the end of 2001. They want more information on the food and foraging of the various species, and there are still some roost sites to survey (with the potential of finding new species). Methods of monitoring bat populations also need to be refined, and the needs of bats written into the conservation management plan that the Darwin Project is developing.

A quarter of the world's bat species are listed as threatened and a further quarter are close to slipping into one of the threatened categories. One of the Middle Caicos species fits into the latter category. Tony Hutson found it very refreshing to be on an island where there did not seem to be any serious conservation threats at present. But it may not always be so; the high level of development on Providenciales has probably already had a significant impact on the bats there. We hope that the islanders will remain aware of the value and conservation needs of bats, and that future development and other human activities will allow a healthy and varied bat population to thrive on the islands.

## Bird Surveys

Birds move around more freely than most animals. It is often thought that they can go somewhere else if something goes wrong with their habitat in a particular place. However, recent ecological studies indicate that bird populations survive only because the birds have a network of habitats available to them – nowhere is surplus to their requirements. Fieldwork on wetland birds before and during the Darwin Project has shown that the TCI study area is very important to waterbirds and that usage is very variable. This variability is seasonal and year-to-year, and probably relates largely to weather conditions. It is important that human intervention does not make things yet more complicated. Consider the vulnerable West Indian Whistling Duck. The project has raised local interest in this important and secretive bird, and several valuable breeding observations have been made by local residents and project staff. However, one breeding site was made unavailable this season because someone burnt the vegetation where the bird nests.



**Bird survey on the salina flats of Middle Caicos**

Whilst the importance of the wetlands is increasingly well known, the dry woodlands had not been noted for their wildlife. To assess the true value of this habitat, Mike Pienkowski of the UK Overseas Territories Conservation Forum and Ann Pienkowski undertook some intensive fieldwork in April 2001, with Bryan Manco. It is now clear that birds here make themselves obvious only in the one or two hours just after dawn and at certain times of year. The study has found that these woodlands support important breeding populations of characteristic local birds, some widespread but others found in no or few other places (such as the Bahamas, Cuba or

Hispaniola); these include Thick-billed Vireo, Bahama Woodstar Hummingbird, Greater Antillean Bullfinch and Cuban Crow.



**The Thick-billed Vireo, one of the special secretive birds of TCI, may appear out of the woodland to inspect visitors**

In addition to these, the woodlands are vital wintering areas for some North American breeding populations. These birds may also be more obvious in April-May than at other times, because they spend a lot of time feeding to fuel their migrations to their breeding grounds. Among the most important finds during the recent fieldwork were several Kirkland's Warblers. This is one of the most threatened bird species of the region, the world population consisting of only about 3000 individuals. They breed only in a restricted habitat in one part of Michigan, USA and spend the non-breeding season in largely unknown locations in the Bahamas and TCI.

It is now clear that the woodland on Middle Caicos is important to the survival of this species and for the continued well-being of many others. Indeed, it is likely that the scrublands and woodlands throughout TCI are of much more importance to wildlife than generally realised. All too often they are regarded as wastelands, but we should be very careful how these areas are treated during the Islands' development.

Woodland birds in the tropics are amongst the most difficult to survey. Despite this, the Darwin Project wants to develop methods that will be easy for others to use in the future. Therefore, apart from undertaking basic surveys, work is in progress to develop monitoring techniques. In this way, anyone should be able to keep a watchful eye and ear on the wildlife for which the islands are uniquely important. Richard Ground's new photographic bird guide for TCI, published by the Turks & Caicos National Trust, will be an important aid to such work. The project was pleased to co-operate with the production of this book, which will fulfil another of the project objectives.

TCI is usually grouped with the Bahamas as an "endemic bird area" (holding species which occur nowhere else). However, TCI also shares the Cuban Crow only with Cuba. During his work for the Darwin project, Bryan Manco has sighted yet more species otherwise restricted to Cuba. This, and the newly recognised importance of the Middle Caicos dry woodlands, shows that there are still discoveries to be made, even in relation to a well-studied group like the birds.

## Insect Surveys

The variety of insect life is astonishing. Of all the different animal and plant species known to science, over half are insects, and many new species are yet to be discovered. Although it is often the troublesome ones, such as mosquitoes, that we notice, these represent only a fraction of the insect biodiversity that occurs in the varied habitats that surround us. Many insect species go completely unnoticed, but provide essential ecological services. Plants often rely on insects for pollination, and many of the other animals surveyed by the Darwin Project would starve without a healthy supply of insects for food. Some insects, like the butterflies, are undeniably beautiful in their own right.



**The Gulf Fritillary is amongst the most commonly encountered butterflies in TCI**

In January 2001, Dr Oliver Cheesman from CABI Bioscience returned to Middle Caicos to collect records of the island's insects, particularly butterflies. He was joined by Dr Roger Booth from the Natural History Museum in London, who started work on the islands' beetles. Although the butterflies of TCI have attracted the attention of a small number of entomologists in the past, the islands' beetle fauna is almost completely unstudied. To add to the challenge, there are probably more species of beetle here than of any other kind of insect. Roger Booth has now collected a wide range of specimens, and is working towards identifying them. Amongst the ladybird (ladybug) beetles, which are Roger's particular speciality, he has found a number of species with differing behaviours and patterns of distribution. These include *Cycloneda sanguinea*, a



***Cyclargus thomasi clenchi* is one of the lyceanid butterflies (blues and hairstreaks) found on Middle Caicos**

predator of aphids, which is very widespread in the New World at present, although taxonomic work may split it into more than one species. Another is *Diomus roseicollis*, which probably feeds on scale insects, and shows a typically Caribbean distribution, from southern Florida, through the West Indies to Trinidad and South America. A third species, *Psyllobora schwarzi*, which probably feeds on mildews and other moulds, is more narrowly distributed, known from Cuba, Hispaniola, the Bahamas, Grand Cayman and South Caicos – making it one of the few beetles previously recorded from TCI.



**As its name suggests, when it comes to rest, the Turks Island Leaf Butterfly disguises itself as a dead leaf**

Like some beetles, butterflies have a very close ecological relationship with flowering plants, and adults can often be seen flying from flower to flower, feeding on nectar. The caterpillars from which these butterflies develop also rely on plants for food, generally feeding on the foliage. The caterpillars of a particular butterfly may be able to feed only on the leaves of a single species of plant. If this particular plant is lost from the environment, then the butterfly will not be able to survive. Around 50 different butterflies have been recorded from the Turks & Caicos Islands. Some are common here and elsewhere in the region, like the Gulf Fritillary *Agraulis vanillae insularis*. The caterpillars of this abundant, striking, fiery orange butterfly feed on species of the Passion Flower *Passiflora*. Other members of the local butterfly fauna are much more restricted in their distribution, known only from the Turks & Caicos and a few southern Bahamian islands. For example, *Memphis intermedia intermedia*, which some people call the Turks Island Leaf Butterfly. This name comes from the leaf-like appearance of the butterfly when it comes to rest, hanging upside down from twigs. This butterfly is particularly attracted to the smell of fermenting fruit, and will even fly down to investigate recently emptied beer bottles! The Turks & Caicos Islands may even possess endemic butterflies, forms that occur nowhere else. *Strymon acis leucosticha*, for example, has only been recorded from these islands, but is very abundant along parts of the north coast of Middle Caicos. It is a relative of *Cyclargus thomasi clenchi*, another butterfly found on Middle Caicos, which is pictured here feeding from a flower.

More insect surveys are planned for the early months of 2002, in conjunction with further studies of other groups of animals and plants, and more work towards the draft management plan.

## Plant Surveys



***Bourreria ovata*, sometimes known as Strong Back. © G.F. Guala 2001**

Plants represent some of the most important species in terrestrial ecosystems, “feeding” on sunlight by photosynthesis, and providing sustenance to the many organisms that feed on their leaves, roots, seeds and flowers. They also provide the structures in which many animals nest, hide from predators, or wait in ambush for their prey. The plant life of the Turks & Caicos is being surveyed under the Darwin Project, thanks to the efforts of our collaborators from the Fairchild Tropical

Gardens (FTG) in Florida and other botanical specialists. Overall, the vegetation in TCI is similar to that found on the islands of the Bahamas, and is dominated by low-growing shrubs and trees. The search is on to document plants of particular interest around the Darwin Project study area. Some of the plants collected by the Darwin Project team can now be seen on the Fairchild Tropical Gardens web site (<http://www.virtualherbarium.org/lf/tci/tci.html>). These include the specimens pictured here, amongst many others.

In January 2001, Gerald “Stinger” Guala, the Keeper of the Herbarium at FTG, visited Middle Caicos and collected a range of plant specimens. Stinger recalls “I think that I forced Bryan Manco to summon all of his buddhist serenity when I caught a plant press on fire in his kitchen, and refused to throw water on it for fear of ruining the specimens.” This is typical of Stinger’s dedication to his cause. Fred Burton from the Cayman Islands



**Stinger and Bryan prepare specimens using a plant press – a great way to re-cycle old newspapers**

has also collected systematically a range of plant specimens during his visits to Middle Caicos to classify the vegetation communities, and Kathleen Wood from Providenciales has provided valuable help in identifying local plant species. Early in 2002, we hope to enlist the botanical skills of Jimi Sadle from

FTG, who specialises in orchids, as the plant survey work continues.

Amongst the plants recorded so far are tree species such as the Bahama Pine *Pinus caribea* var. *bahamensis* and Strong Back *Bourreria ovata*, and climbing plants including *Jacquemontia havanensis* and *Centrosema virginianum*. Amongst the ground flora are species such as Yellow Flower *Turnera ulmifolia* and Freda Bush *Rivina humilis*, both of which are said to have medicinal properties that make them useful components of a tonic, with particular value in the treatment of stomach ailments.



**Taking time off from bat surveys, Tony Hutson studies the orchid *Encyclia hodgeana*. © G.F. Guala 2001**

In parallel with plant survey work, Turks & Caicos National Trust Staff has been working hard to assist Bryan Manco in the Native Plant Nursery initiative. This centres on the propagation of native plants, and plants of traditional usage, for sale and distribution throughout TCI. Fundraising events were held on Providenciales and Grand Turk on Earth Day weekend, and the



**Climbing plants include *Jacquemontia havanensis*. © G.F. Guala 2001**

Grand Turk plant sale was particularly successful. The construction of a small temporary shade (made of local materials) was recently completed, and a large supply of used pots has been located. Plants are doing very well and more species are being propagated every week. Native plants of interest amongst those being cultivated are Frangipani *Plumeria*, Gumbo Limbo *Bursera*, Mahogany *Swietenia*, Necklace Pod *Sophora* and Geiger Tree *Cordia*. Plants of important cultural usage which are being grown include Burn Plant *Aloe*, Indian Almond *Termenalia*, Seville Orange *Citrus*, and Guinep *Melicoccus*. The National Trust plans to present trees to all schools throughout the islands for schoolyard plantings, and future sales will help to support the on-going propagation work.

## Herpetile Surveys



This aptly-named **Curly Tail** is endemic to TCI, and can often be seen on Middle Caicos

Dr Glenn Gerber and Tandora Grant of the San Diego Zoo's Centre for the Reproduction of Endangered Species carried out herpetile (reptile and amphibian) surveys on Middle and North Caicos in November 2000. Fortunately, the survey period for these specialists' work on the Darwin Project included several cooler and rainy days, which provided the ideal conditions for many important finds. Glenn and Tandora were able to locate a number of snakes and lizards (reptiles), as well as two species of frog (amphibians). Marine turtles were not included in the survey. Amongst the lizards identified by Glenn and Tandora from their survey work were Caicos Islands endemics, the Curly Tail *Leiocephalus psammodomus*, the Turks & Caicos Rock Iguana *Cyclura carinata*, and the Caicos Islands Reef Gecko *Sphaerodactylus caicosensis*. Also recorded were endemic races of the Turks & Caicos Bark Anole *Anolis scriptus scriptus* and the Mabuya Skink *Mabouya mabouya sloanei*. An endemic gecko reported from an earlier survey has yet to be re-discovered.

Both the amphibians found are recent introductions, the Cuban Treefrog *Osteopilus septentrionalis* and a Greenhouse Frog *Eleutheroedon planirostris planirostris*. Several other introductions were recorded from Providenciales.

Glenn and Tandora also recorded three species of snake: the Bahaman Rainbow Boa *Epicrates chrysogaster chrysogaster*; the Caicos Islands Trope Boa *Tropidophis greenwayii greenwayii*; and a blind, burrowing worm snake (possibly an endemic). As in many parts of the world, snakes are amongst the most feared and least respected of all animals in the Caicos Islands. With powerful religious symbolism and widespread misconceptions ("common knowledge") providing much of

what people know about snakes in these islands, it is no wonder that snakes are often killed as soon as they are seen. Several interesting tales about snakes are common here, probably the most misleading being that they are poisonous. This is not the case with the TCI fauna - two of the three species documented are constrictors, and the third is a minuscule termite-eating worm snake. While the Biblical association of snakes with evil is common around the world, other beliefs are less widespread. There is one snake story unique to this region that is worthy of mention. It is said that a cat can kill a snake by allowing the snake to wrap around its body - the cat then inflates its body, and breaks the snake into pieces! No one has apparently ever seen this happening. . .



TCI supports a unique form of the Bark Anole, seen here resting on the sign which spells out the names of the three settlements on Middle Caicos

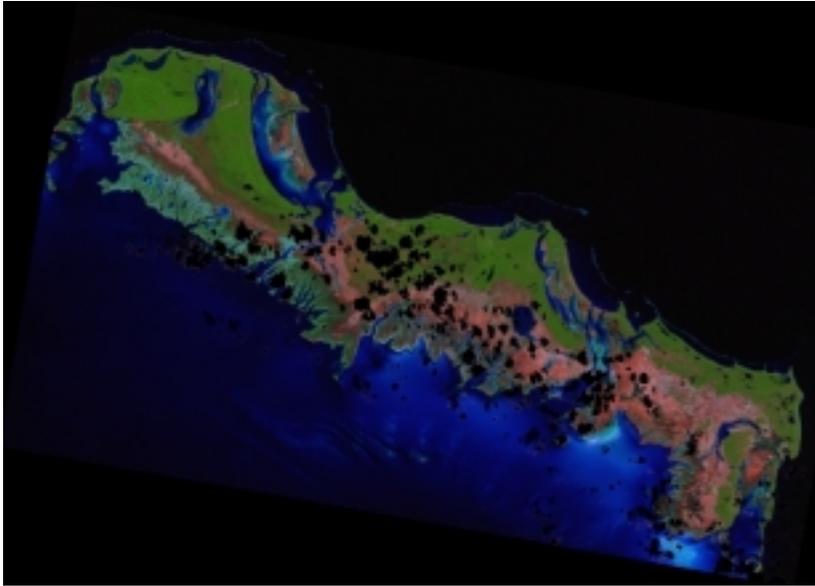
Occasionally, Bryan Manco in his role as Darwin Project Officer is called out to collect "nuisance" snakes, and sometimes, braver people will bring them to the Project headquarters in a bucket. Currently, the Project keeps one Rainbow Boa for educational purposes, using it in classroom presentations throughout the islands. Children who have not yet had the chance to develop a fear and disdain for snakes are given the opportunity to learn about these animals and other reptiles while meeting this special classroom visitor. The snake is a very well-liked guest in the classroom; when Bryan meets children in the villages, their first question is often "...when will you bring the snake back to school!?" With the help of this special animal, the students get a chance to learn about the creatures that share their island home, and how to live happily along side them.

## Darwin Project: Related Activities – Bambarra School Buildings and Property Acquired

Earlier this year, the TCI Government granted to the Turks & Caicos National Trust a long-term lease on the former Vera Hamilton Primary School in Bambarra, Middle Caicos. The property consists of a large, open area near the heart of Bambarra Settlement, and several buildings. The largest of these is the school house, which consists of two large adjacent rooms, each of about 80m<sup>2</sup>. Architectural plans are currently being drawn up, and funds for the renovation of the buildings are being sought. The District Commissioner's Office recently renovated the basketball court within the grounds of the former school, a first step in returning the property to being a centre for community activities.

It is intended that much of the property will be used as an interpretive visitors' centre and a research base. Included in the grounds will be a botanical garden of native plants and plants of cultural importance. A working "field" or garden, is also planned for the site. One of the school building's rooms will be renovated as a visitors' centre and research station. Exhibit areas will hold cultural, historical, and natural history displays. This area will also include an office and space for herbarium and insect collections, as well as a research room available for visiting scientists and students. The other half of the school will be used as lodgings for visiting scientists, students, and National Trust staff and affiliates.

## Producing a Habitat Map



An accurate map showing the distribution of different habitats and ecosystems within a site is fundamental to effective management planning. Fred Burton is leading on the production of such a map for the Turks & Caicos Islands Darwin Project. The starting point is a satellite image, on which the false-colour composite here is based. There is a great deal of information in the image, and the first step is to analyse and classify this. Then the distribution of plant communities and habitats needs to be checked in the field, a process known as “ground-truthing”. Further analyses towards a final version of the map are nearly complete, and we plan a much fuller article on this aspect of the project in the next issue of *DARWiN in TCI*.

**Satellite images are a valuable tool for mapping natural areas**

## Darwin Project: Related Activities – Encouraging Traditional Crafts

For many years, Middle Caicos residents benefited from trade with Haiti by using locally produced sloops. The sloops carried dried conch and fish out through the reef cuts, over the Caicos Bank, and then to Cap Haitien. They returned loaded with produce, seeds, household goods, and livestock. While no trade sloops are currently in use on Middle Caicos, smaller versions of these boats are still built today, using traditional methods and many traditional materials.



**Mr Headly Forbes, one of the few remaining boat builders on Middle Caicos**

Mr. Headly Forbes of Bambarra is pictured here, building a sloop's skeleton from West Indian Mahogany *Swietenia mahogani* and Locust *Lysiloma latisiliquum*. Because of the extreme hardness of the wood, Mahogany is used for the outer

keel, and the natural zig-zags in the branch form of Locust can be used to create strong, curved ribs. *Lysiloma* trees need not be felled to harvest the contorted branches, as the trees do not grow much higher than twenty feet. An experienced boat builder can produce a perfectly formed rib from a raw, crooked branch of *Lysiloma* in a matter of minutes, first using a hatchet, then a hand plane. While the lightest of the local woods were once used to cover the ribs, imported, untreated white pine planks are the preferred material for the boats' hulls now. Once the single



**The skeleton of a traditionally built sloop**

mast is fixed in place, the few remaining boat builders enjoy using bright colours to paint their boats. Every August, a festival is held in Middle Caicos (the “M.C. Expo”) which features a sloop race. A regatta in South Caicos also attracts the boat builders and sailors. Some people also practice this craft on a much smaller scale, building model boats for decoration or sale.

Sloop building is one example of the many crafts that are being lost in the Turks & Caicos Islands. The Turks & Caicos National Trust are working on ways to encourage recruitment of new craftspeople for the boats so that this skill will not be lost forever.

## News from The Darwin Initiative

The UK Government's *Darwin Initiative for the Survival of Species* was launched at the 1992 'Earth Summit' in Rio. It supports research and training projects which apply British expertise to the conservation and sustainable use of biodiversity, and encourages a collaborative approach, matching British expertise with local institutions or communities in the host country. Guided by the principles of the Convention on Biological Diversity, the Darwin Initiative has already made, and continues to make, a real and lasting impact on the conservation and sustainable use of biodiversity worldwide.



In 2001, in its latest round of grants, the Darwin Initiative announced that 31 new projects had received a total of £3.5m funding, to study species as diverse as penguins, vultures, turtles and sea cucumbers. These projects will be based throughout the world, in countries including China, Colombia, Papua New Guinea, Cuba, South Africa and Morocco.

Further information on these projects, and other recent developments can be found on the new Darwin Initiative web-site ([www.nbu.ac.uk/darwin/index.htm](http://www.nbu.ac.uk/darwin/index.htm)).

## News from CABI Bioscience

*CABI Bioscience* is the research and training Division of CAB International (CABI), an international, not-for-profit organisation, which aims to improve human welfare worldwide through the dissemination, application and generation of scientific knowledge.



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Recently completed CABI Bioscience projects towards the conservation and sustainable utilisation of biodiversity in the Caribbean region include two Darwin Initiative projects. One of these delivered training in insect ecology, taxonomy and conservation in Guyana, whilst providing the local university with equipment and reference materials to support future involvement in entomological research and training. The other produced a computerised checklist of the fungi of the region, working with collaborators in Cuba, and developed strategies for the conservation of fungi, particularly in Cuba and Trinidad & Tobago. CABI's Caribbean and Latin America Regional Centre (CLARC) in Trinidad is also involved in other initiatives to raise awareness of and protect the biodiversity of the region, including the development of an Arthropod Studies Centre, based on CLARC's substantial and important insect collection.

Details of CABI's scientific research and training activities worldwide can be found on the new CABI Bioscience new web-site ([www.cabi-bioscience.org](http://www.cabi-bioscience.org)).

## News from UK Overseas Territories Conservation Forum

The UK Overseas Territories (UKOTs) are important parts of the UK. Although small in size, they are home to many animals and plants, some not found anywhere else in the world.

The UK Overseas Territories Conservation Forum works to help people in the Territories to conserve their biodiversity, unique species and ecosystems, as well as other aspects of our shared heritage. In addition to helping partners in UKOTs run projects like the TCI Darwin Project described in this newsletter, the Forum encourages exchange of expertise. The Proceedings of its recent international conference organised with the Gibraltar Ornithological & Natural History Society, supported by the Government of Gibraltar have just been published on the Forum's web-site ([www.ukotcf.org/conf2/default.htm](http://www.ukotcf.org/conf2/default.htm)). These proceedings include much guidance on ways of addressing various issues. With local partner organisations in Bermuda, the Forum is planning a conference there probably in early 2003. Details will be on the web-site ([www.ukotcf.org](http://www.ukotcf.org)).



To receive copies of the Forum's newsletters and to support the Forum's work, join the new Friends of the UK Overseas Territories. See the Forum's web-site or contact Frances Marks, Forum Co-ordinator, 15 Insall Road, Chipping Norton OX7 5LF, UK. Email: [fmarks@ukotcf.org](mailto:fmarks@ukotcf.org).

## News from Turks & Caicos National Trust

The Turks & Caicos National Trust is the only statutory, independent organisation in the Turks & Caicos Islands responsible for safeguarding the environmental, cultural and historical heritage of the islands for present and future generations. It is governed by an elected Council which includes representatives from all the inhabited islands in the TCI. The Trust works in partnership with the TCI government, local businesses, national and international conservation organisations, schools and the community and is a popular and respected organisation amongst local people.



The Trust is supported by membership fees, private sponsorship and project grants and fulfils its mission by implementing a range of sustainable projects and initiatives, some of which are revenue generating and used to finance new programmes. Details of the National Trust's various programmes and projects, forthcoming events, as well as information on membership, can be found on the Trust's new web-site ([www.tcimall.tc/nationaltrust](http://www.tcimall.tc/nationaltrust)).