



June 2006

# Montserrat Centre Hills Project

## *OTEP Funds Legislative Review Process*

The Centre Hills Project (CHP) has been granted £21,690 from the UK Overseas Territories Environment Programme (OTEP), which is sponsored by DFID and FCO. The grant supports the development of legislation enabling effective management of biodiversity in Montserrat.

The process includes four components: 1.) review of existing local, regional, and international legislation; 2.) consultation with stakeholders to identify gaps in existing frameworks and to advise policy change, 3.) revision of environmental legislation to meet needs identified, and 4.)

outreach to raise awareness of the need for legislative review and to solicit participation in the consultative process.

The legal review process is a critical component of the Centre Hills Project as there is a great need to protect public and private interests with regard to the environment. Existing legislation pre-dates the volcanic crisis. It does not consider recent data which relates to human interests such as agriculture, and ecological interests such as species and habitats of special concern.

Existing legislation does not include best practices recommended by regional and international environmental

agreements under which Montserrat is obligated.

The Caribbean Natural Resources Institute has been contracted to assist with the public consultation process. Members of the general public, natural resource managers, landowners, persons involved in tourism and agriculture, community groups, and businesses will be invited to take part in the process of advising decision-makers about environmental management priorities.

The legal review and drafting will be carried out by Mrs. Christine Toppin-Allahar, an environmental lawyer also based in Trinidad.

## *“Ash in de Air” - Impacts on the Centre Hills*

A prime example of the fragility of the Centre Hills ecosystem was brought into focus when the Soufriere Hills volcano reminded the island's residents that it is still very much active.

During the early hours of May 20th, most of the 90 million cubic meters of pulverized dome material that spewed up to 55,000 feet into the air was deposited on the eastern and southern slopes of the Centre Hills. Significant heat and gas from nearby pyroclastic flows

also affected the area.

The heavy ash decimated the forest, breaking branches and in some cases suffocating feral livestock that roam the slopes. The ensuing ash fall on the evening of the 20<sup>th</sup> and 21<sup>st</sup> brought caustic acid rain, stripping the vegetation bare. What was once lush forest in the Corbett Spring area was razed as if a nuclear bomb had been detonated in its midst.

Forestry and CHP staff made  
*(continued on back page)*



*The national flower serves as a water source for Montserrat orioles and other animals, but ashfall clogs the flower's natural wells*

### Inside this issue

<i>OTEP grant</i>	1
<i>Impact of dome collapse</i>	1
<i>Ecological Research Update</i>	2
<i>News Briefs</i>	2
<i>September Planning Workshop</i>	3
<i>GSPC Regional Workshop</i>	3
<i>BBC Coverage in Montserrat</i>	4

### Milestones Jan-Jun 06

#### January

- Galiwasps sightings
- Reptile/amphibian surveys (9 weeks)
- Tourism and agriculture surveys launched

#### February

- Plant surveys
- GIS training
- Land ownership map completed
- BBC visit

#### March

- Project Steering Committee meeting
- General public survey launched

#### April

- Ecological research launched
- Trail counters deployed
- Darwin Year 1 report submitted

#### May

- Global Strategy for Plant Conservation Workshop
- Plant surveys
- Website launched

#### June

- Bat surveys
- BirdLife Caribbean workshop, Puerto Rico



## *Ecological Research on Rats in the Forest*



*CHP Field Officers Jervaine Greenaway and Calvin "Blacka" Fenton monitoring bird populations in the forest*

Do rats have an impact on the forests ecosystem? Dr. Geoff Hilton, Senior Research Biologist for the Royal Society for the Protection of Birds, is of the opinion that the lowly rat may indeed have a substantial effect on the Centre Hills ecosystem beyond the predation of oriole nests.

To this end, Dr. Hilton, with input from DWCT, Kew, and CHP staff, have come up with an elaborate series of experiments and monitoring protocols to test this theory.

Three 11-hectare test areas have been demarcated. There is one experimental area with two control areas just north and south of it.

Within the experimental area, the frequency, size, and estimated populations of rats will be assessed by placing

tracking tunnels at strategic points. These tunnels will have an ink pad and paper to record the footprints (which makes for interesting art!) It has already been determined that both the black and brown rats live in the forest.

It is thought that the tender shoots are eaten by rats and could affect future growth patterns of certain species of plants. Rats are also known to eat bird eggs and chicks, as well as reptiles and amphibians.

Quadrats will be set up in both the experimental and control areas to determine the regeneration rates of plants. Pitfall traps to collect insects have been laid out to determine the prevalence of insects. Line-transects will be used to monitor reptile and amphibian populations, though

mountain chickens will be monitored separately along ghauts. Nesting birds will be monitored by extensive visual observation.

Finally, some rats will be trapped and dissected to determine seasonal feeding patterns of rats. Genetic samples will also be taken.

It is hoped that the findings of this two-year experiment will provide convincing data to illustrate the extent of the rat problem in the Centre Hills. This knowledge will be used to advise local authorities in the development of a management strategy to address the problem, potentially crafting an effective rat control programme which may include targeted parts of the Centre Hills and possibly some farming areas as well.

## *News Briefs*

### **GIS Work**

The CHP has secured the services of a global information systems (GIS) volunteer who will spend a month in Montserrat this summer. Local staff and partners will benefit from shadowing the highly qualified expert in both field data collection and office-based data analysis and map production.

All footpaths within the Centre Hills will be documented using this accurate digital technology, as well as the extent of agriculture and other human activity. GIS and its extensive mapping capacity is a useful tool in environmental planning.

## *News Briefs*

### **Galliwasp found**



The critically endangered endemic Montserrat galliwasplizard was sighted several times during surveys led by the Durrell Wildlife Conservation Trust from January to March. The rare and elusive galliwasplizard is known only around the Cassava Ghaut area, and has been sighted only a few times over the past decade.

## *News Briefs*

### **Trail counters deployed**

Three infrared trail counters, purchased from the Canadian-based TRAFx, have been installed along three trails in the Centre Hills. The devices, camouflaged and hidden from view by CHP staff, monitor foot traffic in certain areas, which will help planners to determine trail use and therefore trail maintenance and interpretation needs.



### **Website launched**

At long last, the CHP's website is up and running! The site was developed in collaboration with the Montserrat-based web development company, MyEnovations.

Information is available about the project, sponsors, and partners; links to relevant sites; photo gallery; documents available for download; and contact information.

If there is something else that you would like to see on the website, please email a staff member with your suggestions and/or comments!

[www.malhe.gov.ms/centrehills](http://www.malhe.gov.ms/centrehills)

## September Planning Workshop Takes Shape

The CHP partners and staff will be hosting a management planning workshop from September 12-15, 2006 to be held at the Montserrat National Trust in Olveston. Everyone in Montserrat is invited to participate, particularly those with special interests in Centre Hills - including natural resource managers, farmers, tour guides and taxi drivers, land owners, educators, and others. The aim of the workshop is to develop

the outline of a management plan for the Centre Hills, specifically to:

- Present results and evaluate lessons learned from socioeconomic and biological assessments conducted in Project Year 1
- Develop a common vision and management objectives for the Centre Hills
- Identify actions needed to achieve the objectives

- Establish an implementation framework for agency cooperation

The CHP plans to engage an external consultant to facilitate the workshop, thereby freeing up all local partners to participate more fully.

Residents of Montserrat will hear more about the workshop in the coming months, and everyone will be actively encouraged to take part.

**The overall goal of the September planning workshop is to begin the development of a Centre Hills management plan, which is derived through public consultation and which takes into consideration the interests of both people and wildlife.**

## Montserrat Hosts Regional Plant Workshop

From May 14-19, Montserrat and the CHP were fortunate to host a major regional forum to discuss the Global Strategy for Plant Conservation (GSPC). The workshop was funded by the UK's Department of Environment, Food, and Rural Affairs (Defra).

The workshop brought together delegates from around the Caribbean, including Bermuda, Jamaica, Cayman Islands, Belize, St. Kitts, Antigua, Dominica, St. Lucia, Tobago, Trinidad, and the host Montserrat.

Addresses were given by H.E. the Governor, Mrs. Deborah Barnes-Jones; Mrs. Annie Dyer-Howe, Minister of Agriculture, Lands, Housing, and Environment; and that Ministry's Permanent Secretary, Mr. Eugene Skeritt.

The GSPC is an initiative from the Convention on Biological Diversity (CBD). It sets out specific targets that participating countries around the world have agreed to meet by 2010. The ultimate long

term objective of the GSPC is to halt the loss of plant diversity. The five main objectives are to understand and document plant diversity, conserve plant diversity, use plant diversity sustainably, promote education and awareness about plant diversity, and build capacity for the conservation of plant diversity.

Although Montserrat has not signed onto the CBD as yet, the core work of the Centre Hills Project served as an apt background to demonstrate how some of the targets of the GSPC are being met. However, there is much more that Montserrat could and should be doing. It is hoped that Montserrat will become a signatory to the CBD and the GSPC in the near future.

The Forum was ably facilitated by Dr. Colin Clubbe of the Royal Botanic Gardens - Kew, Stella Simiyu of Kenya who represents the CBD Secretariat and Botanic Gardens Conservation International (BGCI), Dr. Chris Cheffings

from the UK's Joint Nature Conservation Council, and Didier Dogley from the Seychelles, a small island nation which has already written and is implementing a GSPC strategy.

The delegates were given a tour of the Centre Hills and made aware of how quickly ecosystems could be lost, not only by the actions of man but by the ravages of nature, namely the Soufriere Hills volcano. This demonstrated how important it is to conserve some of the plant diversity "ex situ", that is outside of its natural habitat. It also drove home the point that there is a need to have protected areas to preserve fragile communities and conserve species *in situ*, i.e., within their natural habitats.

An added bonus to the workshop was having other visiting scientists from Kew Gardens available who were able to demonstrate the importance of herbarium and seed bank collections in plant conservation.



Rondeletia buxifolia, one of Montserrat's three known endemic plants – found nowhere else in the world except Montserrat - is a conservation priority



Workshop participants listen intently on a field visit to Fogarty Spring

## Montserrat to be Featured in BBC Series

A. McRobb, RBG-Kew



*The MNT's botanic garden will feature endemic and threatened*



*Ash cloud behind Jack Boy Hill  
May 20, 2006*



*CHP and Forestry staff making a  
somber walk through the decimated  
Corbett Springs area*

The BBC's popular television series "A Year at Kew" has recently come to Montserrat to cover plant-related activities of which CHP partners from the Royal Botanic Gardens, Kew are leading. In addition to looking at the day-to-day operations of the UK's premier botanic garden, the series is now looking also at global plant conservation efforts in which Kew staff are engaged.

The BBC team is focusing on both the *in-situ* forest plant conservation efforts taking place within the Centre Hills, as well as the *ex-situ* efforts of the Montserrat National Trust (MNT) botanic gardens development project. There are clear links between conservation of plants in their

natural habitat and the propagation of important plant species in botanic gardens for conservation of genetic diversity and to provide environmental education opportunities to the public.

The MNT is currently utilising OTEP funds to develop a botanic garden that will feature plants that have significance for their scientific, aesthetic, medicinal, economic, and educational value. This will include endemic and other native plants that are being surveyed as part of the Centre Hills Project.

A team from the BBC was in Montserrat in February to take footage of the early stages of the botanic garden

development at the MNT, as well as to film plant documentation efforts in the Centre Hills that are a part of the overall biodiversity assessment. They plan to return in September to review the progress of both activities.

In addition to the video portion of the "A Year at Kew" project, a book is being developed concurrently, and should be published later in the year. A writer visited Montserrat in April to gather supplementary information for the written piece, which will be complemented by photos taken by Kew staff photographer Andrew McRobb during his visit last November.

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an initial assessment of the damage on May 30<sup>th</sup>, walking across the island through the affected areas from Waterwork to Pelican Ghaut and were encouraged to see that despite all the vegetation loss, there were already signs of some significant regeneration. But it will be a while before the affected area becomes a healthy forest once again.

It was interesting that one of the only trees not to experience massive leaf-shedding was the *Casuarina*, an invasive tree that was once planted for erosion control throughout the tropics before scientists discovered the

negative impacts it has on native flora and fauna.

The ashfall will most certainly hamper the nesting opportunities for the Montserrat oriole and other birds. The mountain chickens are also affected as the ghauts, where they nest, were scoured clean by heavy mudflows. In fact, a mountain chicken bleeding from a gash in its leg was found on the banks of the Daley River. A listless and seemingly blind, ash-crusted green lizard was found in the Molyneux area. However, healthy orioles were spotted making nests near to the gigantic fig tree in Fairy Walk area.

The northern and western slopes of the Centre Hill, while still somewhat ashy, were not nearly as affected and experienced much less defoliation. This somewhat more promising prospect led to the decision by Scott Pedersen and his team from South Dakota State University to come and carry out their annual bat surveys in late June.

One of the mudflows took out major public supply water pipes leading from Killiecrankie Spring, reducing the island's supply by 75% for several days until temporary repairs could be made.

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