Background

Saint Lucia is a small tropical island in the Eastern Caribbean, much of it still forested, with tropical moist forests ("rainforest") in the more mountainous interior and tropical dry forest at lower elevations. The rainforests are well represented in a protected area system of Forest Reserves, but the dry forests – which contain at least as much biodiversity as the rainforests – have received much less protection or conservation management, despite being subject to much greater pressures from urban and tourist development, invasive alien predators, and clearance for agriculture.

The coastal settlement of Soufrière where alien iguanas are establishing a population (photo © M McPharlin)

Since the 1970's, the UK-based Durrell Wildlife Conservation Trust (Durrell) have been working with the Saint Lucia Ministry of Agriculture’s Forestry Department (SLFD) – the government agency charged with conserving Saint Lucia’s terrestrial biodiversity – on a number of long-term wildlife conservation projects. These have included work in the rainforests, on the Saint Lucia Amazon (Amazon versicolor), but primarily in dry forest and coastal regions on the White breasted thrasher (Ramphocinclus brachyurus), the Saint Lucia whiptail lizard (Cnemidophorus vanzoi), and the Saint Lucia iguana, currently classified as a population of the widespread Iguana iguana, but of uncertain taxonomic status.

As our programme of work expands, we aim to consolidate the gains from our work on the Saint Lucia Amazon and to develop a more integrated approach to dry forest conservation.

Monitoring a rat bait station for signs of non-native rat species re-invading an offshore island
Saint Lucia Programme – Volunteer opportunities in 2011-12

In the second half of 2010, volunteer activities will be focused on:

- Implementing control techniques for detecting and removing alien invasive iguanas (Iguana iguana) that have escaped into the wild in the South West of Saint Lucia and threaten the genetic integrity of Saint Lucia iguanas (in the North East of Saint Lucia) through hybridization and competition.

- Management of a translocated meta-population of Saint Lucia whiptail lizards (Cnemidophorus vanzoi).

Visual searches for alien green iguanas

There may also be some opportunities for volunteers to work on the following, though this will depend on progress in these projects:

- Baseline research on community-based sustainable resin tapping from lansan (Protium attenuatum), a globally threatened tree species endemic to the Eastern Caribbean.

- A status re-assessment of the Saint Lucia racer, a Saint Lucian endemic that is possibly the rarest snake species in the world.

Individual activities are covered in more detail below; they are predominantly field-based. Our priorities for the second half of 2011-12 are the first two activities outlined above (alien iguanas and whiptail lizards); the others (lansan and the racer) are yet to be confirmed.

We need to manage these projects adaptively, and may need to reschedule activities as we go along, or develop additional activities.

We are not offering high-priced volunteer opportunities for people who want activities ‘laid on’ for them or a ‘conservation holiday’. We are looking for a job of work to be done and will cover successful applicants in-country subsistence (accommodation and basic food and consumables). Working hours are typically long, and usually for 6 days per week with one day off. But the opportunity to live and work in a tropical country on real conservation projects will be more than compensation for the right candidates.

The safety and welfare of everybody working on our projects is very important to us. We are looking for applicants who understand this is a priority and are sensitive to the range of issues it covers, and who will respond positively to our need for operating procedures that deal with these issues.
Volunteer activities in 2011-12:

Alien green iguana control

In early 2008 we confirmed that non-Saint Lucian green iguanas had escaped and bred in the southwest of the island. These animals will interbreed with Saint Lucia iguanas if the come into contact with them and the Saint Lucia iguanas will lose the genetic uniqueness they have. Currently they are geographically separate in different parts of the island, but as the alien iguanas are now known to have bred, we cannot rely on that situation continuing. Durrell and SLFD regard this as a high priority threat to Saint Lucia’s biodiversity that needs to urgently addressed.

Following a pilot study of detection and capture techniques in 2009, Durrell started collaborating with the Saint Lucia Ministry of Agriculture in 2010 on a four year project to eradicate the establishing population of alien iguanas. This work involves lengthy visual searches over a wide area combined with live capture of alien iguanas (using cage traps and snares as well as pole nooses) for subsequent euthanasia. Euthanasia is carried out by Ministry of Agriculture vets but applicants need to be prepared to assist by holding captured iguanas in captivity until the vets arrive and handling iguanas for the vets.

Volunteers will also be involved in processing euthanized iguanas, for example taking measurements and harvesting DNA samples from alien iguanas to allow for genetic surveillance of the native population to detect hybridization.

This work will be physically demanding, in the steep, dramatic terrain of the Soufriere crater, and will be carried out during Saint Lucia’s wet and dry seasons.
There are also, inevitably, a lot of sensitivities surrounding this issue as the native Saint Lucia iguana is a high priority conservation target for Saint Lucia. The SLFD will be using awareness campaigns to respond to these sensitivities and volunteers may be asked to participate in these too. In addition, we use questionnaires to the public to help locate and delineate the spread of alien iguanas.

By September we plan to have a few alien iguanas fitted with radio transmitters and volunteers will assist in radio tracking them in an attempt to learn more about which areas they are using and, hopefully, lead us to other iguanas.

All this is labour-intensive and time consuming work, and care is needed to standardize search efforts and collect data so that as much valuable information as possible can be extracted from this effort.

In early 2011, we trialled the use of a tracker dog to locate iguanas and we hope to develop this method further in early 2012. The dogs will be the property of SLFD. However, volunteers may be asked to look after these animals at times, sometimes for extended periods of several days or weeks. Because of this, we are looking for applicants who are comfortable around dogs and happy to look after them in the volunteer accommodation.

**Conservation management of the Saint Lucia whiptail lizard**

This endemic lizard (Endangered, IUCN red list) is now restricted to a meta-population on only 2 small offshore islands (each home to a distinct lineage), plus translocated populations on two more offshore islands. In early 2008, Durrell and SLFD developed a Species Action Plan to maximize genetic diversity in this meta-population. A population survey in 2008 of one of the two source populations estimates its size to be just 15 lizards!
A ‘genetic rescue’ to capture some of the alleles from this lineage in a mixed-lineage satellite population on one of the offshore island was initiated in 2009 and volunteers will work with SLFD to help monitor the fates of the founder individuals in this population.

Maria Minor island off southern Saint Lucia

Maintaining the rat-free status of these offshore islands is an important part of our strategy and also has benefits for other native plant and animal species at these sites. It involves the regular checking and re-baiting of bait stations on the islands is critical to the success of our attempts to save this species. Volunteers will assist with routine bait station checking and ecological surveys to monitor the positive impacts of restoring these offshore ecosystems following the removal of rats.

Recording whiptail lizard morphometrics

In addition, there may be other site management activities associated with this project such as monitoring of human activity (e.g. garbage levels) and installing signage. We would also like to develop further awareness raising in Saint Lucia on the importance of these sites for conservation. We may repeat some 2005 baseline vegetation and reptile surveys on Dennery Island, the next offshore island on which we plan to establish another satellite population of whiptails.

Optional: Status assessment of the Saint Lucia racer

Another inhabitant of one of Saint Lucia’s offshore islands is the Saint Lucia racer. This non-venomous snake, *Liophis ornatus* (Endangered, IUCN red list), is likely one of the rarest – if not the rarest – snakes in the world, being found only on the tiny offshore Maria island and very rarely seen. So rarely seen, in fact, that we still need a status assessment.

Saint Lucia racer

This is likely to be a tough job with few snake sightings and we are contracting two herpetologists to lead this activity. There may also be opportunities for volunteers to assist the survey team with their work.

We are hoping to revise the red list status of the Saint Lucia racer and gather information to plan the recovery of this very fragile population. We suspect that the status of this species will need to be elevated to Critically Endangered.
Optional: Sustainable Management of the Lansan Tree

*Protium attenuatum* is a Lesser Antillean endemic in danger of extinction. Currently listed by IUCN as Data Deficient, this rainforest tree has reportedly been depleted across most of its restricted range in the Eastern Caribbean.

In keeping with a strategy of promoting the sustainable use of forest resources, SLFD have developed a project with Fauna & Flora International and Durrell to find ways of sustainably harvesting lansan resin. At present, many trees are over-harvested and succumbing to fungal and termite infestations. The project is being led by SLFD’s Assistant Chief Forest Officer Adams Toussaint.

Over the last year, Durrell volunteers have been assisting SLFD with the first phase of this project which is now drawing to a close. There may, however, be some opportunities to help with less intensive, longer-term monitoring of the impacts of the treatments we piloted in the first phase.

**Activities: the other stuff**

Durrell’s presence in Saint Lucia is small and without any extensive support staff. Volunteers will be expected to work as a team, mucking in with whatever activities are necessary. These will vary from the mundane (like doing the weekly shopping for your supplies, keeping the programme’s land rover clean and running, and so on) to the less than glamorous (entering field data into a computer – tedious at times, but essential every week).

That’s in addition, of course, to getting out into the field in a largely benign tropical environment and working with a range of rare and endangered species. ‘Largely’ benign because, as with any fieldwork, there are risks and volunteers need to take responsibility for their own and others’ safety. One notable risk peculiar to Saint Lucia, is the endemic and venomous fer-de-lance snake (*Bothrops caribbaeus*). This snake does occur in many of the areas we work in but is elusive (and nocturnal) and seems to be rare; certainly it is very rarely seen in practice. And, as with anywhere in the world, personal security is an issue that has to be taken seriously. We have standard operating procedures that must be observed to provide safe working conditions.

We need to manage this programme adaptively. One week you may be assigned to one activity, the next week another. We don’t aim to give you buffet of activities to choose from, but we do aim to give you some real-life work experience doing conservation, with the highs and lows that entails.
Accommodation will be shared (a rented apartment) and, for some of the time, may involve camping (you bring your own tent and sleeping materials). Basic food and supplies (toiletries etc) will be supplied, but they will be pretty basic – enough to keep you clean, healthy and well fed.

All of Durrell’s work on Saint Lucia to date has involved close collaboration with our project partners, SLFD, and volunteers will be working alongside SLFD staff as well as with staff employed from local communities around some of the sites we work at. It is also of great importance to us to try to communicate the reasons for doing this work to the many local people that are encountered day by day, and volunteers will need to be comfortable talking about and explaining what they’re doing to naturally curious members of the public, as well as sometimes participating in presentations to schools and communities or appearing on the local radio or TV.

Finally, other conservation management activities may come on-stream in 2010, depending on resources. Two target species for Durrell and the Forestry Department are the Saint Lucia nightjar and the Saint Lucia racer, possibly the world’s rarest snake.

**Applying to volunteer**

Ideally, applicants will have a background in biological sciences (preferably at graduate level) and experience of working in the tropics. However, similar prior experience, a determination to work hard, under sometimes uncomfortable or frustrating conditions, combined with good physical fitness and careful attention to data recording are the most important attributes we look for. Volunteers will work alongside SLFD staff and local communities around our field sites. You need to be aware of your surroundings and take all due care for your, and others’, safety. You need to be physically fit and able to stay focused on work that may become repetitive. You also need to devote care to the accurate recording and filing (in spreadsheets) of data. And you need to be ready to adapt to unforeseen circumstances with initiative but in a safe manner.
Some of the work may involve camping under pretty basic conditions. Much of the work will involve driving, often on poor or very poor roads (we have a land rover). At other times, volunteers will use public transport (mini-vans) to travel to field sites.

We need you to cover your flight, vaccinations and personal equipment but we will cover your insurance and in-country costs for basic subsistence and accommodation. Personal equipment needs are basic (work clothes, good boots, reliable watch, torch, etc) but we do ask you to bring your own tent and sleeping mat.

We are currently looking for four volunteers to each commit to six months in Saint Lucia, starting in early September 2011 (there may be some flexibility over when in September)

This is the ideal opportunity for someone looking for practical conservation experience working with some of the world’s most threatened species. However this is also fulltime work that requires the volunteer to be independent and self-motivated, but get on well with other team members. Working hours are typically long, and usually for 6 days per week with one day off. But the opportunity to live and work in a tropical country on real conservation projects will be more than compensation for this for the right candidates.

If you wish to apply, please contact:

matthew.morton@durrell.org submitting a 2 page CV (resumé) and a cover letter, together with email contact details for two references. The selection process will involve short-listing and a phone interview for the short listed candidates with our Eastern Caribbean Programme Manager, Matthew Morton.

Computer literacy and an ability to communicate in spoken and written English are requirements, but we welcome and encourage applications from candidates in any country.

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Durrell Wildlife Conservation Trust