

## The Rufford Small Grants Foundation

### Final Report

---

Congratulations on the completion of your project that was supported by The Rufford Small Grants Foundation.

We ask all grant recipients to complete a Final Report Form that helps us to gauge the success of our grant giving. We understand that projects often do not follow the predicted course but knowledge of your experiences is valuable to us and others who may be undertaking similar work. Please be as honest as you can in answering the questions – remember that negative experiences are just as valuable as positive ones if they help others to learn from them.

Please complete the form in English and be as clear and concise as you can. We will ask for further information if required. If you have any other materials produced by the project, particularly a few relevant photographs, please send these to us separately.

Please submit your final report to [jane@rufford.org](mailto:jane@rufford.org).

Thank you for your help.

**Josh Cole, Grants Director**

---

<b>Grant Recipient Details</b>	
<b>Your name</b>	Kevel C Lindsay
<b>Project title</b>	The Conservation of the Ferns of Antigua and Barbuda and their Forest Habitats
<b>RSG reference</b>	9586-1
<b>Reporting period</b>	April 2011 to April 2012
<b>Amount of grant</b>	£5,960
<b>Your email address</b>	<a href="mailto:Kcl927@yahoo.com">Kcl927@yahoo.com</a>
<b>Date of this report</b>	April 09, 2012

1. Please indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.

Objective	Not achieved	Partially achieved	Fully achieved	Comments
To survey and determine the status of the ferns of the country and highlight species of critical concern.			Yes	<p>The RSG funding has allowed this project to undertake a number of field surveys and assessments, and to amass a considerable photo database on the species of pteridophytes, issues, landscapes and habitats, numbering between 10,000 and 12,000 images (database is still being assembled). Since June 2011, Kevel Lindsay and volunteers have undertaken about 31 days of field surveys in Antigua and Barbuda. During the last 12 months, about 30 new species records have been added to the country's pteridophyte list, thereby increasing the total number by nearly a third.</p> <p>Many of these species (including other plants, events, issues, landscape features and habitats) have been GPSed, and these coordinates have been provided to local GIS systems. It should be cautioned, however, that many of these species are rare and therefore, Mr. Lindsay and partners in Antigua are being very careful to keep these locations confidential to prevent collectors and other potential harm away from them.</p> <p>In addition, some six of the previously recorded species remain elusive (these species are: <i>Microgramma piloselloides</i>, <i>Thelypteris x rolandii</i>, <i>Pteridium caudatum</i>, <i>Asplenium barbadense</i>, <i>Adiantum lucidum</i> and <i>Nephrolepis rivularis</i>). Mr. Lindsay plans to undertake a field survey in Antigua in June 2012 to locate these species. However, it is possible that they are now locally extinct.</p>
To increase the awareness of the value of native ferns and conserve and protect their habitats.		Yes		<p>Several articles have been published on the project, both locally and regionally, and a project website has been established. In addition, a document entitled: <b><i>Protecting Native Pteridophytes in Antigua, Barbuda and Redonda: A Conservation Perspective</i></b> has been completed. This document provides an analysis of the issues and threats facing</p>

				the species and their habitats and examines ways to improve the plight of these plants. The document will be made available as a free PDF download via the project website: <a href="http://www.eagantigua.org/page525.html">http://www.eagantigua.org/page525.html</a>
To produce a National Red List of ferns.			Yes	A regional Red List of the country's pteridophytes has been completed. The document: <i>The Regional Red List of Pteridophytes of Antigua, Barbuda and Redonda</i> , will be available on the project website as a free PDF download.

**2. Please explain any unforeseen difficulties that arose during the project and how these were tackled (if relevant).**

There were no major obstacles and difficulties that impeded the project, though it was always a balancing act when scheduling field work to occur during the annual hurricane and rainy seasons, which run from June to November each year. This, coincidentally, is the best time of the year to study ferns since most prefer humid and moist conditions. The passage of storms and heavy rains limited optimal field survey periods and access to many locations on Antigua. This was overcome by conducting field visits early in the rainy season and during the dry season, which also gave a much greater perspective on the conditions for plant species, habitats and issues (including threats and adverse impacts), including annual wildfires.

**3. Briefly describe the three most important outcomes of your project.**

The important outcomes were many, but the three most significant were:

- Development of the Conservation Perspective and the IUCN Regional Red List of Pteridophytes;
- Increasing the national list of pteridophytes from around 55 to around 86 species and counting;
- Obtaining additional support to help produce a pteridophyte atlas and educational book, which the RSG has supported through field work and research.

**4. Briefly describe the involvement of local communities and how they have benefitted from the project (if relevant).**

Local community involvement occurred through a number of ways:

- The project approach itself has been designed to tap into local stakeholder interests. The project's Principal Investigator, Mr. Kevel Lindsay, worked closely with the Environmental Awareness Group (EAG) to develop the project's approach and to have the organisation as the central and primary partner in overseeing the project's outputs and outcomes. The EAG is the largest and oldest environmental non-government organisation in Antigua and Barbuda, and as such, has a relatively long history of working with local communities, groups, individuals, the Government of Antigua and Barbuda, and with regional and international interests. This history of collaborative enterprise has created strong local and international networks. It is this ready network collective that Mr. Lindsay believed would

prove most rewarding for the long-term success of the project by allowing the dissemination and sharing of results, with not only internal EAG projects, but also with other local initiatives and efforts. The project's results are being made available through the EAG website, and are also being shared with the Government of Antigua and Barbuda—some data will be available to the Environment Division's Environmental Information Management and Advisory System (EIMAS), a GIS and information database that houses natural resources, spatial and human resources data;

- Volunteer support from individuals. Field assistance and local knowledge from Antiguan and Barbudans were solicited via local media and word of mouth. Individuals from various backgrounds were asked to join in project activities whenever possible, and a number of individuals joined Mr Lindsay out in the field during survey work;
- Working with partner agencies and institutions, including soliciting feedback, review and comments on the draft Regional Red List of Pteridophytes and on the Conservation Perspective;
- Key personnel's ideas and support were sought on a number of issues, including access to sites, locations of species, identifying training needs and on issues and concerns. The support from the Forestry Division in the Ministry of Agriculture was especially important and significant, and lead staff came out on field surveys on a number of occasions;
- Working with key local personnel, individuals and institutions for ideas about follow-up work and ideas to move the project forward, and how this project could be a vehicle for future biodiversity conservation efforts, including protected areas, policies and restoration work; and
- Mr. Lindsay is also working along with other projects and initiatives to share his experience, knowledge and data whenever it may prove useful and beneficial to scientific research and to conservation efforts. An example of this is the invitation of Mr. Lindsay to collaborate with researchers from Hunter College, New York, local Antiguan archaeologist, Dr. Reginald Murphy, and other scientists from Canada and the United States, who are taking core samples from throughout the island of Barbuda, investigating cave environments, study archaeological and paleontological remains, in order to understand climatic, weather, environmental, human and ecological change that has occurred on the island before man arrived, the last Ice Age, and up to historical times. The information generated from this project, and the approach used, is being shared with local Barbuda students and officials, the local Secondary School students and the wider population. Plans are being put in place to share this information and the experience with Antigua students and to disseminate it to the wider community through the EAG.

## **5. Are there any plans to continue this work?**

Yes, very much so. Mr. Lindsay intends to undertake additional fieldwork activities in Antigua in June 2012 to locate six species of ferns that have so far eluded observation, and to take additional GPS coordinates/locations.

In late 2011, the project received additional support to develop an Atlas and Guide for the pteridophytes of Antigua, Barbuda and Redonda. Partial funding for this is being provided by the Mohammed Bin Zayed Species Conservation Fund (MBZSCF). A draft of the Atlas and Guide is expected to be available by the end of 2012.

In addition to Atlas and Guide, Mr Lindsay is working on plans to develop in situ conservation efforts for the rare plants of Antigua, Barbuda and Redonda. This would include many of the islands' pteridophyte species. The effort would include the development a rare plants nursery, identifying

and mapping critical habitats in need of ecological restoration, and a programme to include local communities in education, awareness, training, and by providing home gardens with some plants, to ensure the long-term sustainability of rare plant populations and the protection of their habitats.

#### 6. How do you plan to share the results of your work with others?

The results of the project are being shared through the EAG website, the EAG partners and collaborators and their projects and the local media (newspapers, newsletters, meetings and radio), and in addition, some information is being shared with the Environmental Information Management and Advisory System (EIMAS).

#### 7. Timescale: Over what period was the RSG used? How does this compare to the anticipated or actual length of the project?

The RSG has contributed 12 months out of the estimated 36 months of the life of this project. The draft pteridophyte Atlas and Guide document is expected to be available by the end of 2012 and a final version by the spring of 2013. Mr. Lindsay and the EAG are currently exploring opportunities to fund the project into 2013 to 2014.

#### 8. Budget: Please provide a breakdown of budgeted versus actual expenditure and the reasons for any differences. All figures should be in £ sterling, indicating the local exchange rate used.

Item	Budgeted Amount	Actual Amount	Difference	Comments
Fieldwork	640	621	19	The number of days spent on fieldwork was adjusted and Mr. Lindsay contributed some days without fees to the project.
International Airfares	475	552	-77	This difference is attributed to the seasonal variation in costs (summer versus winter) and increasing airfares.
Local Airfares	175	33	142	Only one trip to Barbuda has so far been undertaken and, therefore, this line item was not fully expended.
Accommodation	648	46	602	Much of the costs for accommodation were contributed to the project by Kevel Lindsay and his family in Antigua. In Barbuda, Mr. Lindsay spent two nights.
Per diem	320	511	-191	The original budgeted amount was readjusted to provide funds from the Printing line item to support this.
Local travel	900	1,125	-225	Local travel included car fuel, car rental and insurance, local taxes and related travel expenses. Increasing fuel costs and vehicle rental remains a concern for project execution and development, and this helped to contribute to the higher actual expenses than initially budgeted.

Writing of Red List and Conservation Perspective	1,375	1,941	-566	Adjustments were made in a revised budget to allow some re-allocation of funds from the Printing, materials and Local Guide Line items.
Printing	560	0	560	It was decided to reduce the burden of actual printed documents by making copies available through the EAG website and via emails. The funds from this line item were then re-allocated local and international travel, the writing of the Red List and Conservation Perspective and the per diem.
Equipment	250	229	21	This line item also includes supplies (supplies include batteries and other incidental items necessary for fieldwork).
Materials	150	9	141	As with the Printing line item, some of these funds were made available for other project costs, since it was anticipated that much of the funds initially budgeted for this may not be expended by April 2012.
Local Guide	420	23	397	
Taxis	0	66	-66	This line item was not originally separated out in the original budget, but all taxi expenses were for travel in New York to and from the airport, so therefore, it was separated out from local travel.
<b>TOTAL</b>	<b>£5,913</b>	<b>£5,155</b>	<b>£758</b>	

**Notes:** The project budgets are often outlined in US Dollars as a matter of convenience. The exchange rate used is to convert from USD to Pound Sterling is 1 US\$ = £0.62100. This exchange rate was used and is preferred because it is what the project budget was originally based on.

### 9. Looking ahead, what do you feel are the important next steps?

In June 2012, Mr. Lindsay intends to undertake a final trip to Antigua to locate the six species of ferns that have so far eluded observation. He will also see to take photos of species, issues and landscapes for the upcoming Atlas and Guide, and additional GPS coordinates.

Mr. Lindsay will continue to work on the Atlas and Guide, which is being funded by the Mohammed Bin Zayed Species Conservation Fund (MBZSCF), and a draft of the document is expected to be available by the end of 2012.

Only partial funding was received from the MBZSCF for producing the Atlas and Guide, and therefore, Mr. Lindsay will also continue efforts to obtain additional financial support to help print copies.

Beyond the Atlas and Guide, Mr. Lindsay plans to develop in situ conservation efforts for the rare pteridophyte species, and combine this initiative to form a rare native plant conservation programme, that will include the establishment of a rare plant nursery, identifying critical plant habitats that are in need of ecological restoration, and to work with local communities to ensure the long-term sustainability of rare plant populations and the protection of their habitats.

**10. Did you use the RSGF logo in any materials produced in relation to this project? Did the RSGF receive any publicity during the course of your work?**

The RSGF logo has been used in all reports, publications and articles.

**11. Any other comments?**

Remaining funds, the £757.87 will aid Mr. Lindsay with his June trip. Much of that trip will be funded by the MBZSCF, and from the support of additional project activities of the EAG.