



*Darwin Initiative for the Survival of Species*

## **Falkland Islands Invertebrates Conservation Project (13/022)**

*Annual Report 2004-05 (1 September 04 – 31 March 05)*



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### **1. Darwin Project Information**

<i>Project Ref. Number</i>	<i>13/022</i>
<i>Project Title</i>	<i>Falkland Islands Invertebrates Conservation Project</i>
<i>Country(ies)</i>	<i>Falkland Islands</i>
<i>UK Contractor</i>	<i>Falklands Conservation UK</i>
<i>Partner Organisation(s)</i>	<i>Falklands Conservation FI</i>
<i>Darwin Grant Value</i>	<i>£115,173</i>
<i>Start/End dates</i>	<i>1 September 2004 – 31 August 2007</i>
<i>Reporting period (1 Apr 200x to 31 Mar 200y) and report number (1,2,3..)</i>	<i>1 September 2004 – 31 March 2005 Report Number 1</i>
<i>Project website</i>	<i>www.falklandsconservation.com</i>
<i>Author(s), date</i>	<i>Ann Brown &amp; Dr A Jones</i>

### **2. Project Background**

This Project will undertake a systematic survey of the invertebrates of the Falkland Islands. The Falkland Islands have not yet adopted the CBD, but are actively working towards this goal. The Project will greatly assist this process by providing basic data on invertebrates. It will significantly advance identification of key components of the Islands' biological diversity and set up a system to monitor invertebrate populations and identify those in need of protection (ARTICLE 7). Through recognition of areas of invertebrate importance, management advice, and recommendations for legal protection, it will play an important part in implementation of ARTICLE 8. The Invertebrates Collection will be a local facility for reference/research (ARTICLE 9). A conservation manual and specialist advice will inform decision-making and measures to minimise impact on Falklands wildlife (ARTICLE 10). It will produce scientific papers, and provide technical training for identification. (ARTICLE 12). It will raise the profile of invertebrate knowledge through media promotion and information on the web (ARTICLE 13). The Project falls within the CBD thematic work programme on marine and coastal biodiversity.

### **3. Project Purpose and Outputs**

This Project will undertake a systematic survey of the invertebrates of the Falkland Islands. It will be the first time that this has been done. The main outputs as highlighted in the logical frame work are:

1. Important invertebrate habitats and rare/threatened species, identified for protection.
2. A Falklands Invertebrates Conservation Plan agreed.
3. Resources produced to enable identification and long term monitoring.
4. 15 Falkland Islands residents trained in basic invertebrate identification techniques and curation of the Collection.

With respect to realisation of these outputs the following progress has been made:

1. Major habitat types of the Falkland Islands have been surveyed in order to identify rare or potentially threatened species. Preliminary results highlight the importance of tussac and higher altitude habitats. This work is still in its early stages.
2. Initial consultation paper on management practice and monitoring submitted to Falklands Conservation.
3. Photographic database of insects initiated. Simple keys constructed for morphospecies identification.
4. 12 Falkland Islands residents completed the first of three two week courses in basic invertebrate taxonomy and were awarded their certificates.

There has been no change to the proposed operational plan for this Project. However, as a result of the late start (September 2004) the timetable has been set back 5 months. In addition, and also as a result of the later than expected onset of this project, the academic base in the UK has been moved from the University of Wales Bangor (UWB), to Cambridge University. The reason for this change is that the project officer (Dr A. Jones) is now affiliated with the University Museum of Zoology Cambridge (UMZC). Both UWB and UMZC are happy with this arrangement and have provided written statements confirming their positions. This change in situation will have no effect on the project budget or timetable, and will benefit the project in that the taxonomic collections of the UMZC will be available for consultation and reference.

#### **4. Progress**

The Project began on 1<sup>st</sup> September 2004 and this is the first Annual Report to be submitted.

Project funding began 5 months later than stated in the original Application timetable. Yet despite this late start, the Project has already achieved most of the key milestones expected by March 2005. These comprise initial taxonomic analysis of samples, establishment of a 'Falklands Invertebrates Advisory Group', the construction of an invertebrates database, and completion of the first field season. Due to the delayed start of the project the booklet '*Insects of the Falkland Islands*' was launched prior to Project commencement. In addition, whilst a promotional display has been produced and exhibited, it was not possible to use this in the Falkland Islands for Farmers Week as this also took place prior to the start of the Project. Finally, the invertebrates section of the FC web site has not been fully developed as expected, due to a major redesign and re-structuring of the site.

The following is a summary of the projects achievements since September 2004. From September to December we reviewed the known data, planned the first field season and purchased the required equipment. The first field season ran from January to the end of March. During this period the Project Officer was in the Falkland Islands carrying out survey work utilising a variety of techniques including: Malaise traps, moth traps, pitfall traps, Tullgren funnel extraction, and a variety of hand collecting methods. Numerous sites were surveyed across the following five islands: Steeple Jason, Grand Jason, Carcass Island, East Falkland and Pleasant Island. The material collected will provide the basis for taxonomic work to be carried out during the remainder of 2005. While we cannot yet give accurate estimates for the number of species recorded, over 3000 sample vials (each containing between 1 up to 100's of individuals) have been returned to the UK for analyses. Also during March we ran the first of three planned training courses in invertebrate taxonomy and survey work. The course lasted for two weeks, the first being classroom based and the second being practical work carried out in the field. The course attracted 15 participants, of which 12 completed the course and were awarded certificates. These individuals are now able to carryout basic invertebrate monitoring work and species identification within the Falkland Islands.

## Future Work Plan

The work plan for the next 6 months is as follows:

- Continue taxonomic analysis leading to the submission of at least two papers to peer-reviewed journals.
- Production of a 'schools invertebrates identification pack'
- Invertebrates section on FC web site launched

## 5. Partnerships

There has been regular contact and consultation with the Falkland Islands (Stanley) operations base of Falklands Conservation. Logistical support and office facilities were provided for the 2 month field work visit and efforts were made to successfully incorporate fieldwork into other programmes enabling remote sites to be visited. A new Director took over at Falklands Conservation from 1<sup>st</sup> April 2005. No problems are envisaged from this change. The new Director took part in the Invertebrates Training Course.

The Project Officer has liaised with the Falkland Islands Government Environment Planning Department and in particular held a number of productive meetings with the Conservation Strategy Officer.

The Project has provided taxonomic material for researchers in several countries. At present these include England, Scotland, Canada, Norway and Switzerland, and it is hoped that more links will be forged during 2005,

## 6. Impact and Sustainability

Every opportunity has been made to raise the profile of the Project using local Falkland media sources. These include two radio interviews, three articles in the local press and two lessons at the Community School. In addition posters about the project are being displayed in the Jetty Visitor Centre, Stanley. The effect of this promotion was evident from the demand for places on the Invertebrates Taxonomy Course (5 planned, 15 took part).

The training course itself has laid the foundation to increase capacity in management and protection of invertebrates biodiversity in the Falklands. It is envisaged that the expertise provided by this and future training courses will allow for the long term monitoring of invertebrate populations by Falkland Islanders. This is part of building a satisfactory exit strategy.

## 7. Outputs, Outcomes and Dissemination

### ***Outputs not or partly achieved***

The small guide *Insects of the Falkland Islands* was launched prior to the start of this Project. Invertebrates web section not yet on line due to restructuring of host site.

### ***Additional outputs achieved***

In collaboration with Natural History Museum 4 separate genes in over 40 Falkland Island beetle species have been sequenced and phylogenies resolved. Thus, creating a genetic database of beetle biodiversity.



## **9. Monitoring, Evaluation and Lessons**

Methods of monitoring and evaluating the Project are described below:

4. Fortnightly project meetings with Project Leader to assess progress and manage programme.
5. Bi-annual review reports are produced. The first of these sets out five stages in maximising successful conservation of invertebrate species for the Falklands. This is being applied to prioritise and fine-tune project methodologies.
6. An annual report is presented to the Trustees of Falklands Conservation and major activities included in the Director's quarterly report.

The purpose of this Project is to maximise the capacity of the Falkland Islands to conserve native invertebrate biodiversity. Stage One of this process is to compile a list of the species present. The outputs of the Project so far have been designed with this in mind. The success of field surveys and taxonomic analysis is indicated by the number of species recorded and identified. We are monitoring and measuring this progress through continual enumeration of data collected and being worked on. While we cannot yet give estimates for the number of species recorded during the first field season, over 3000 sample vials (each containing between 1 up to 100's of individuals) have been returned to the UK for analyses.

Lessons learned:

Training course: Additional training materials will be provided for future courses – lecture notes, diagrams, keys.

Fieldwork: As more data has been collected, variation in habitat biodiversity has been revealed. This will allow us to concentrate on more important areas in subsequent field seasons - for example tussac grasslands have been shown to be particularly rich in native insect species.

## Progress Report against Logical Framework for Financial Year: 2003/2004

<i>Project summary</i>	<i>Measurable Indicators</i>	<i>Progress and Achievements April 2003-Mar 2004</i>	<i>Actions required/planned for next period</i>
<p><b>Goal:</b> To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve</p> <ul style="list-style-type: none"> <li>• The conservation of biological diversity,</li> <li>• The sustainable use of its components, and</li> <li>• The fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</li> </ul>			
<p><b>Purpose</b></p> <p>To advance the knowledge of Falkland Island invertebrates in order to provide for their protection and to develop sustainable policies to ensure their long term survival.</p>	<p>Key areas given statutory protection as nature reserves, national parks or sanctuaries.</p> <p>Key species on statutory list of protected species.</p> <p>Invertebrates included as part of the Falkland Islands' Biodiversity Action Plan</p> <p>Expertise established within the Islands to effect long term monitoring.</p>	None. Too early.	None
<p><b>Outputs</b></p>			
Important invertebrate habitats and rare/threatened species, identified for protection.	Database established recording invertebrate distribution and 'hot spots' of conservation importance. L Local Red Data List published.	Database established.	-
A Falklands Invertebrates Conservation Plan agreed.	Consultation on Plan under-taken and presented to Falkland Islands Govt.	-	-
Resources produced to enable identification and long term monitoring.	A Falkland Invertebrates Collection established and identification publications written.	Taxonomic work well underway. Collection begun. Publications in preparation	Identification of improved methods
15 Falkland Islands residents trained in basic invertebrate identification techniques/curation of the Collection.	Training Programme undertaken.	First training course completed. 12 Falkland Island residents graduated.	More training materials required for the course These will be made available next year

## ORIGINAL LOGFRAME

Project summary	Measurable indicators	Means of verification	Important assumptions
<p><b>Goal:</b></p> <p>To draw on expertise relevant to biodiversity from within the United Kingdom to work with local partners in countries rich in biodiversity but poor in resources to achieve</p> <ul style="list-style-type: none"> <li>• the conservation of biological diversity,</li> <li>• the sustainable use of its components, and</li> <li>• the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources</li> </ul>			
<p><b>Purpose</b></p> <p>To advance the knowledge of Falkland Island invertebrates in order to provide for their protection and to develop sustainable policies to ensure their long term survival.</p>	<p>Key areas given statutory protection as nature reserves, national parks or sanctuaries.</p> <p>Key species on statutory list of protected species.</p> <p>Invertebrates included as part of the Falkland Islands' Biodiversity Action Plan</p> <p>Expertise established within the Islands to effect long term monitoring.</p>	<p>Appropriate areas of invertebrate importance declared protected areas.</p> <p>Wildlife legislation amended to include key species.</p> <p>Biodiversity Action Plan published.</p> <p>Invertebrate Advisory Group set up.</p>	<p>Falkland Is. Government allocates adequate time and resources to effect declarations, amend legislation and produce Biodiversity Action Plan.</p> <p>Sufficient interest is generated about invertebrates to recruit, train, and maintain a long term interest by a number of Falkland residents.</p>
<p><b>Outputs</b></p> <p>Important invertebrate habitats and rare/threatened species, identified for protection.</p> <p>A Falklands Invertebrates Conservation Plan agreed.</p> <p>Resources produced to enable identification and long term monitoring.</p> <p>15 Falkland Islands residents trained in basic invertebrate identification techniques and curation of the Collection.</p>	<p>Database established recording invertebrate distribution and 'hot spots' of conservation importance. Local Red Data List published.</p> <p>Consultation on Plan undertaken and presented to Falkland Islands Govt.</p> <p>A Falkland Invertebrates Collection established and identification publications written.</p> <p>Training Programme undertaken.</p>	<p>Database operational and an invertebrate Local Red Data List published.</p> <p>Key species selected for legal listing.</p> <p>Conservation Plan accepted as part of Islands' Biodiversity Action Plan.</p> <p>Invertebrates Collection in place and available to public.</p> <p>15 or more Islanders actively contributing to invertebrates programme.</p>	<p>Sufficient data can be collected and processed over an adequate area of the Falkland Islands.</p> <p>Progress is made in drawing up structure and content for the Biodiversity Action Plan.</p> <p>A suitable place can be found for the Collection and publishers can be found for publications.</p> <p>Islanders are interested in learning more about Falkland Islands invertebrates.</p>
<p><b>Activities</b></p> <p>Fieldwork Programme</p> <p>Training</p> <p>Collections</p> <p>Publications</p> <p>Events/Publicity</p>	<p><b>Activity Milestones (Summary of Project Implementation Timetable)</b></p> <p>Three 2-month fieldwork seasons completed resulting in an invertebrates database established, distribution of species recorded, samples identified leading to taxonomic keys and descriptions of Pterygote insect fauna and a species check list and Red List produced for the Islands.</p> <p>15 Islanders take part in 3 training courses and support survey/collection work.</p> <p>Teacher training course held for Schools Invertebrates Pack</p> <p>Reference Collection established in Falkland Islands and available to the public.</p> <p>Dedicated Falklands collection donated to Natural History Museum.</p> <p>Schools Invertebrates Pack produced. Scientific papers published.</p> <p>Falklands Conservation Plan and Invertebrates Conservation Manual produced.</p> <p>Public launch of Project. 2 FI radio broadcasts per year. Display produced for Falkland events.</p> <p>Information to FI local press on regular basis. Report in annual 'Wildlife Conservation in the Falkland Islands'. Invertebrates web section on line. 5 articles/presentations outside the Islands.</p>		