

## CEPF SMALL GRANT FINAL PROJECT COMPLETION REPORT

<b>Organization Legal Name:</b>	Landcare Research New Zealand Ltd
<b>Project Title:</b>	Catalogue and Distributional Database for the Fijian Land Snail Fauna – LC1249
<b>Date of Report:</b>	March 2013
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**CEPF Region:** Micronesia/Polynesia

**Project Coverage:** Fiji Islands

**Strategic Direction:** 2, Strengthen the conservation status and management of key biodiversity areas

The availability of a comprehensive Catalogue and distributional Database will build awareness about the Fijian land snail fauna and facilitate participation of local leaders and community members in the implementation of protection and recovery plans for threatened land snail species and priority sites. CEPF and IUCN have identified land snails as a key faunal group in the Oceania Region (inclusive of The Polynesia-Micronesia Hotspot), in recognition of the high level of unique diversity and in recognition of the high extinction record of land snails on oceanic islands. The Fijian land snail fauna is among the most diverse in the region encompassing Melanesia, Micronesia and Polynesia, with approximately 220 indigenous species, of which 77% are endemic to the country.

**Grant Amount:** \$20,000

**Project Dates:** 1 March 2012 to 31 March 2013

**Implementation Partners for this Project (please explain the level of involvement for each partner):**

This project was implemented by Landcare Research.

The Catalogue and Database on the land snail fauna of Fiji developed in this project represents the product of over 150 years inventory and taxonomic research in the Fiji islands. Implementation of this project would not have been possible without the *in-kind* contributions from several institutions internationally, that provided specimens on loan for imaging, provided images, and provided access to collection databases. The institutions that have contributed include:

- Muséum National d'Histoire Naturelle, Paris, France
- Bernice P. Bishop Museum, Honolulu, Hawaii, USA
- Academy of Natural Sciences, Philadelphia, Pennsylvania, U.S.A.
- Field Museum of Natural History, Chicago, Illinois, USA
- Museum of Comparative Zoology, Harvard University, Cambridge, Massachusetts, U.S.A.
- National Museum of Natural History, Washington D.C., U.S.A.
- The Natural History Museum, London, U.K.
- National Museum of Wales, Cardiff, U.K.
- Forschungsinstitut und Naturmuseum Senckenberg, Frankfurt-am-Main, Germany
- Zoologisches Museum der Universität, Zürich, Switzerland
- Museum of New Zealand Te Papa Tongarewa, Wellington, New Zealand
- Auckland Institute and Museum, Auckland, New Zealand
- University of the South Pacific (USP)
- Global Biological Information Facility

Additionally, for this project both Landcare Research and Muséum National d'Histoire Naturelle provided resources (telecommunications, postage, computing and software, premises and equipment) as *in kind* contributions.

## Conservation Impacts

***Please explain/describe how your project has contributed to the implementation of the CEPF ecosystem profile.***

This project strategically developed a Catalogue and distributional Database of the Fijian land snail fauna.

Species checklists, identification guides, and distributional databases are all critical resources that underpin informed conservation planning and action. IUCN Red List assessments of extinction vulnerabilities, on which CEPF has established species and site priorities, are based on expert knowledge of species taxonomy, ecology and distribution. Further, the effective implementation of conservation actions around these and other priorities are critically dependent on robust identification of the threatened species by conservation scientists and lay people working in the field. Additionally, broadening these conservation actions to address and monitor wider community benefits requires identification of other components of biodiversity associated locally with the focal threatened species and Key Biodiversity Sites (KBS).

***Please summarize the overall results/impact of your project against the expected results detailed in the approved proposal.***

The project had three principal contracted outputs:

**1. Publication and distribution of a *Catalogue of the Land Snails of Fiji***

The production of the Catalogue has run largely on schedule, and as contracted, the Catalogue is due to submission to ZooKeys for publication in April/May 2013. ZooKeys is an open access journal and thus the Catalogue will be freely available. A Link to the journals web page will be provided on the Fiji Terrestrial Molluscs webpage (see below). Additionally, copies of the Catalogue will be distributed in.pdf format to key stakeholders.

**2. Compilation and distribution of a distributional *Database of the Land Snails of Fiji***

The compilation of the Database has been completed on schedule, and as contracted will be distributed to key stakeholders in April/May 2013.

**3. Development of a *Fiji Terrestrial Molluscs webpage***

Hosted by Landcare Research, the Fiji Terrestrial Molluscs webpage has been developed as a vehicle for sharing information on Fijian land snails, including access to the Catalogue and Database developed with CEPF funding, and access to other resources on Fijian land snails.

The benefits of the Catalogue and Database will be enduring. The Catalogue and Database will continue to be pivotal resources for researchers and conservation personnel working on the Fijian land snail fauna. Specifically, provisional checklists and catalogue, prototype distributional database, and the expertise afforded by Gary Barker and Philippe Bouchet, have been key resources in CEPF supported projects on *Placostylus* lead by Dr Gilianne Brodie at USP. In the CEPF project '**Documentation of Fiji's Introduced and Endemic Land Snail Fauna**', these resources have provided critical taxonomic and ecological formation, aiding identification of species, providing historical distributional data as a basis for design of robust faunal surveys, and prioritizing species for active management both in biosecurity (exotic species) and conservation (native species) contexts. Similarly, these resources have been the foundation on which the CEPF project '**Conservation, Systematics and Cultural Connections of Fiji's Endemic *Placostylus* Land Snails**' was developed, in providing the necessary taxonomic, ecological, and historical distributional information. What is more, the identification guidelines being developed in the catalogue will underpin taxonomic decisions and thus provide a sound basis to phylogenetic and ecological postgraduate studies by Ms Lia Bogitini supported by CEPF in the latter project. It is envisaged that these studies will lead to a systematic revision of Fijian *Placostylus*, a task that has long been recognised as urgently needed to fully and properly evaluate the conservation status and priorities of these snails.

**The IUCN Oceania Species Programme** includes work supported by CEPF to assess the conservation status for three taxonomic groups – Reptiles, Freshwater Fishes and Land snails. Project personnel and collaborators at USP have had a significant role in this project in providing Red List assessments for Fijian land snails. These assessments have been heavily reliant on the taxonomic, ecological and distributional information contained in the Catalogue and Database. Indeed, the taxonomic information assembled during development of the Catalogue (including nomenclatural determination of valid names, synonymies, etc) has been the basis for recognizing species for assessment; and the ecological information (as such habitat requirements) has been pivotal, alongside the distributional Database, to estimating species' ranges and species' vulnerabilities to extinction. The Catalogue and Database will facilitate ongoing Red List assessments of Fijian land snails by IUCN and their expert advisors. IUCN Oceania's long term aim "of improving information on the Red List is to empower people and governments to effectively utilise this knowledge in order to guide conservation decision-making and planning, raise awareness of threatened species and promote the integration of biodiversity conservation and sustainable development in the region" will in the case of the Fijian land snails be heavily reliant on the Catalogue and Database.

Many of the Fijian land snail groups have not been revised by taxonomists in the past 100-150 years and in the face of numerous species, complex synonymies, evolving standards in taxonomy, the catalogue provides a critical resource given the increasing interest by government policy staff and conservation agencies in invertebrate biodiversity. Many of the native species involved have not previously been adequately described or illustrated and thus not readily identified without recourse to museum type specimens. Conservation management activities are of course critically dependent on accurate identification and the Catalogue with its high quality illustrations and species diagnoses will service this need.

***Please provide the following information where relevant:***

**Hectares Protected:** Not applicable

**Species Conserved:** Not applicable

**Corridors Created:** Not applicable

***Describe the success or challenges of the project toward achieving its short-term and long-term impact objectives.***

Collections of Fijian land snails, spanning 150 years of collection effort and including all type specimens of described species, are held in Museums and other institutes outside Fiji. These collections represent a wealth of information on the identity, historical distributions and ecology of Fijian species. That these collections and associated information are not readily accessible to local communities working in Fiji has been a major barrier to development of local capability and capacity. The Catalogue and Database developed in this project will overcome this barrier and empower both improved appreciation and conservation capability in local communities, both scientific and lay.

That the collections of Fijian land snails are widely dispersed in institutions throughout the world has been a major challenge to compilation of the Catalogue and Database within the timeframe of the project funding. The project would not have been completed without the in-kind contributions from many Museums and other institutions around the world.

***Were there any unexpected impacts (positive or negative)?***

No

## Lessons Learned

***Describe any lessons learned during the design and implementation of the project, as well as any related to organizational development and capacity building. Consider lessons that would inform projects designed or implemented by your organization or others, as well as lessons that might be considered by the global conservation community.***

***Project Design Process: (aspects of the project design that contributed to its success/shortcomings)***

The compilation of the Catalogue and Database represent the end product of 150 years of scientific collection-based research in Fiji and some 30 years of study of the Fijian fauna by the project's leader Gary Barker. The CEPF grant was the pivotal resourcing needed to bring the Catalogue and Database to completion, but it should be recognised that the foundational work for both span many prior years.

***Project Implementation: (aspects of the project execution that contributed to its success/shortcomings)***

The extensive knowledge of the project leader in the Fijian land snail fauna, and his good working relationships with museums with Pacific land snail collections, has been a critical success factor.

***Other lessons learned relevant to conservation community:***

**Additional Funding**

***Provide details of any additional donors who supported this project and any funding secured for the project as a result of the CEPF grant or success of the project.***

<b>Donor</b>	<b>Type of Funding*</b>	<b>Amount</b>	<b>Notes</b>
	A	Nil	
	B	Nil	
	C	Nil	

***\*Additional funding should be reported using the following categories:***

***A*** Project co-financing (Other donors contribute to the direct costs of this CEPF project)

***B*** Grantee and Partner leveraging (Other donors contribute to your organization or a partner organization as a direct result of successes with this CEPF project.)

***C*** Regional/Portfolio leveraging (Other donors make large investments in a region because of CEPF investment or successes related to this project.)

**Sustainability/Replicability**

***Summarize the success or challenge in achieving planned sustainability or replicability of project components or results.***

The Catalogue and Database produced in this project will be an enduring resource for all parties interested in the Fijian land snail fauna and those interested more generally in Fijian biodiversity. The Catalogue and Database enable identification and mapping of species, and facilitate quantitative analyses of endemism, spatial patterns and temporal trends in the land snail fauna. As such, the Catalogue and Database are pivotal resources for both policy development in relation to the Fiji fauna and for land snail components of locally-lead conservation projects within Fiji. Landcare Research will maintain internet-accessible electronic master copies of the Catalogue. The Catalogue and Database will be updated periodically to reflect taxonomic changes (inclusive of description of new species) and new distributional data being generated by further collaboration between Landcare Research and USP.

The Catalogue and Database have been produced to high standards, and may serve as a model for future work on other regional faunas.

*Summarize any unplanned sustainability or replicability achieved.*

### **Safeguard Policy Assessment**

*Provide a summary of the implementation of any required action toward the environmental and social safeguard policies within the project.*

Not applicable

### **Additional Comments/Recommendations**

### **Information Sharing and CEPF Policy**

CEPF is committed to transparent operations and to helping civil society groups share experiences, lessons learned, and results. Final project completion reports are made available on our Web site, [www.cepf.net](http://www.cepf.net), and publicized in our newsletter and other communications.

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## Performance Tracking Report Addendum

<b>CEPF Global Targets</b>				
<b>Catalogue and Distributional Database for the Fijian Land Snail Fauna (1 March 2012 to 31 March 2013)</b>				
<b>Provide a numerical amount and brief description of the results achieved by your grant. Please respond to only those questions that are relevant to your project.</b>				
<b>Project Results</b>	<b>Is this question relevant?</b>	<b>If yes, provide your numerical response for results achieved during the annual period.</b>	<b>Provide your numerical response for project from inception of CEPF support to date.</b>	<b>Describe the principal results achieved. (Attach annexes if necessary)</b>
1. Did your project strengthen management of a protected area guided by a sustainable management plan? Please indicate number of hectares improved.	No			Please also include name of the protected area(s). If more than one, please include the number of hectares strengthened for each one.
2. How many hectares of new and/or expanded protected areas did your project help establish through a legal declaration or community agreement?	Nil			Please also include name of the protected area. If more than one, please include the number of hectares strengthened for each one.
3. Did your project strengthen biodiversity conservation and/or natural resources management inside a key biodiversity area identified in the CEPF ecosystem profile? If so, please indicate how many hectares.	Yes			Gau Island. Information collated during development of the Catalogue and database enabled provision of timely expert advice on Fijian <i>Placostylus</i> taxonomy, distribution and ecology to CEPF project <i>Documentation of Fiji's Introduced and Endemic Land Snail Fauna</i> (Brodie, USP).
4. Did your project effectively introduce or strengthen biodiversity conservation in management practices outside protected areas? If so, please indicate how many hectares.	Yes			Rotuma Island, Cicia Island (Lau Group), Nakauvadra range, Nakorotubu (Viti Levu). Information collated during development of the Catalogue and database enabled provision of timely expert advice on Fijian land snail taxonomy, distribution and ecology to CEPF project <i>Documentation of Fiji's Introduced and Endemic Land Snail Fauna</i> (Brodie, USP). Draft database provided to key stakeholders (e.g. National Trust of Fiji; University of the South Pacific) supported conservation policy and project development.
5. If your project promotes the sustainable use of natural	No			

resources, how many local communities accrued tangible socioeconomic benefits? Please complete Table 1 below.				
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**If you answered yes to question 5, please complete the following table.**

