CRITICAL ECOSYSTEM PARTNERSHIP FUND

# CEPF Final Project Completion Report

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| **Organization Legal Name:** | The University of the South Pacific |
| **Project Title:** | Rapid Biodiversity Assessment of the Guadalcanal Watersheds |
| **Grant Number:** | 64282 |
| **CEPF Region:** | East Melanesian Islands |
| **Strategic Direction:** | 1 Empower local communities to protect and manage globally significant biodiversity at priority Key Biodiversity Areas under-served by current conservation efforts |
| **Grant Amount:** | $170,000.00 |
| **Project Dates:** | April 01, 2014 - June 30, 2016 |
| **Date of Report:** | August 28, 2018 |

## Implementation Partners

List each partner and explain how they were involved in the project

- **American Museum of Natural History (AMNH) – AMNH were involved in project design and the logistical planning of the expedition. Under a separate CEPF project (64276) AMNH were engaged in social assessment work that helped to guide the participation of the Uluna-Sutahuri community in the expedition planning and implementation. AMNH also contributed taxonomic expertise for carrying out the ornithological component of the biodiversity assessment.**
- **Solomon Island Community Conservation Partnership (SICCP) – The SICCP was given a sub-grant under the project for coordinating the planning and preparation activities in advance of the expedition. This included stakeholder consultations, and a reconnaissance expedition to the survey area to finalise the base camp location. The SICCP also coordinated the post-expedition press conference and school awareness-raising activities, and arranged for media coverage of the pre-expedition customary gift-exchange (chupu). Members of the SICCP advisory board participated in the expedition as part of the freshwater and herpetofauna survey teams.**

## Conservation Impacts

Summarize the overall impact of your project, describing how your project has contributed to the implementation of the CEPF ecosystem profile

**Expedition overview**

**The expedition was one of the largest biological expeditions ever conducted in the Pacific Islands. The full team comprised 54 people, 20 of whom are members of the Uluna-Sutahuri tribe, the traditional landowners of the area. Three customary elders of the tribe participated in the expedition, and other members of the tribe joined the team in the capacity of guides and support staff.**

**The scientific team was multidisciplinary, comprising 34 scientists, across seven principal taxonomic groups: plants, mammals, birds, insects, fish, reptiles and amphibians. Amongst the plant scientists there were specialists in orchids, ferns and mosses as well as those who were generalist botanists.**

**The team was in the field for a total of 11 days. The main base camp for the expedition was located at Valevahalo, with smaller, satellite camps at Chupukama and Haviha. Specimen collections were carried out at elevations from approximately 650-1300m.**

**Specimen collection and biodiversity assessmetn was carriedout for the following taxonomic groups:**

- **herpetofauna (amphibians and reptiles)**
- **birds**
- **mammals (bats and rats)**
- **fish**
- **eels**
- **freshwater invertebrates**
- **ants**
- **1damselflies and dragonflies**
- **angiosperms (flowering plants)**
- **pteridophytes (ferns and lycophytes)**
- **bryophytes (mosses, hornworts and liverworts)**

**Undescribed species**

**Across all the taxonomic groups there were a large number of specimens collected that could potentially represent undescribed species. The verification of these is ongoing, as specimens have to be compared to existing collections, and then determinations made as to their status.**

**The undescribed and potentially new species that were collected during the expedition include:**

- **Two species of frog**
- **Two species of lizard**
- **One species of Odonata**
- **Approximately 30 species of orchid**
- **Early indications are that a large number of ants and other terrestrial and freshwater invertebrates will also be undescribed species**

**The collection of a male specimen of the Guadalcanal Moustached Kingfisher (*Actenoides bougainvillea excelsus*) has provided conclusive evidence that it a different species from its congener in Bougainville.**

**Range extensions**

**For some species, this expedition was the first official documentation of their presence in the Solomon Islands, or on the island of Guadalcanal. Contributions to species range and distributions were made for the following taxa:**

- **The Solomon Islands blind snake (*Acutotyphlops solomonis*), was previously known only from Bougainville.**

- **Three species of Odonates are new records for Guadalcanal (and possibly for the Solomon Islands)**
- **10 ferns species newly recorded for Guadalcanal, and 3 species newly recorded for the Solomon Islands. Elevational ranges were extended for 48 species of ferns.**

**Capacity Building**

**The expedition also afforded an important capacity-building opportunity. Early-career scientists and postgraduate students from the Solomon Islands and from Fiji partnered with experienced taxonomists from the region and from international institutions to carry out the sampling and collection of plant and animal specimens. The majority of these early-career scientists are graduates of USP.**

**The techniques and skills learned included specimen collection and processing, as well as identification. In the follow-up phase of the expedition, taxonomic group members have continued to stay in touch, and there has been collaboration in terms of writing up reports and in the ongoing process of identifying specimens.**

Planned Long-term Impacts - 3+ years (as stated in the approved proposal)

| Impact Description | Impact Summary |
|---|---|
| Conservation of the biodiversity of the Guadalcanal Watersheds Key Biodiversity Area (KBA) Cross-sectoral application of the project results to Solomon Island national development strategies and legislation. | The biodiversity assessment carried out under this project was a small but vital component of these long-term impacts. The scientific information that was captured from the multi-taxa surveys is still in the early stages, but over time, the findings will be part of the scientific foundation upon which conservation planning for the Guadalcanal Watersheds can be developed. |

Planned Short-term Impacts - 1 to 3 years (as stated in the approved proposal)

| Impact Description | Impact Summary |
|---|---|
| Project outputs will inform conservation planning in the Guadalcanal Watersheds KBA. Project outputs will contribute to monitoring of impacts and threats to biodiversity in the Guadalcanal Watersheds KBA. Project outputs will inform action strategy for conservation of threatened species in the Guadalcanal Watersheds KBA. Taxonomic capacity within Solomon Island and Pacific region will be strengthened. Network between international specialists and Solomon Island taxonomists will be broadened and strengthened. Greater local and global awareness of the value of Guadalcanal's biodiversity | The expedition results confirmed the high-biodiversity of the area across a range of taxa, and the presence of a large number of undescribed species has highlighted the importance of conservation of this montane region. The rapid assessment approach focuses primarily on specimen collection for the purposes of species presence/absence data collection. This species-centric information can potentially help to inform conservation planning, contribute to monitoring of impacts and threats, and inform strategies for threatened species conservation for the Guadalcanal Watersheds KBA as a whole, but only when consolidated with more data from a greater number of sites and habitats across the entire KBA area. The surveys covered a very small geographic area of the entire Guadalcanal Watersheds KBA. Project outputs in terms of information will therefore need to be taken in geographical context. The expedition brought together taxonomic experts from around the globe, and enabled early-career scientists |

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| | and students from the Solomon Islands and the Pacific region to work closely both in the field and in follow-up collaborations. This network has been successfully strengthened and sustained as a result of the project. |

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

**Successes:**
**The composition of the team of taxonomic experts was a major factor in the success of the project. Because the expedition was so unique, and the opportunity to do work in Guadalcanal is so rare, there was a great deal of excitement generated amongst the scientific community and it was possible to overcome scheduling conflicts and difficulties to assemble a wide range of experts across different taxa with previous experience in Melanesia, and the appropriate commitment to capacity building and sustaining long-term collaboration.**

**Challenges:**
**The Guadalcanal Watersheds KBA covers a large area (376, 146 hectares). Within the scope of this project only a very small area of the KBA was surveyed. Whilst spreading the team out over 3 camps enabled the surveying of different elevational ranges, the biodiversity assessed is not representative of the entire KBA.**
**With USP based in Fiji, and the project being implemented in the Solomon Islands, a significant amount of organization and planning had to be done remotely. This slowed down the rate at which decisions could be made, and meant a greater investment into the planning process.**

Were there any unexpected impacts (positive or negative)?

## Project Components and Products/Deliverables

Describe the results from each product/deliverable:

| Component | | Deliverable | | |
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| # | Description | # | Description | Results for Deliverable |
| 1 | Improved knowledge of the diversity of flora and fauna in the Guadalcanal watersheds. | 1.2 | Comprehensive checklist of all species in each taxonomic group assessed. | The extent to which identifications and checklists have been compiled vary according to the taxonomic group. For those taxa which are already fairly well-described for the Solomon Islands (namely the vertebrates: birds, fish, mammals and herpetofauna), species checklists have been compiled. For others, such as the plants, preliminary checklists have been made, based on initial identification in the field at the time of collection. These preliminary checklists will be updated with confirmed identifications after more work in the herbaria, and consultation with specialists. The invertebrates (both terrestrial and freshwater) and the bryophytes are extremely diverse and there is far less published material in terms of field guides, species lists or floras for these taxa in the Solomon Islands. The compilation of species checklists for these groups is therefore still in the very early stages, and will take several years to compile. It is anticipated that these groups will have a significant number of as yet undescribed species. |
| 1 | Improved knowledge of the diversity of flora and fauna in the Guadalcanal watersheds. | 1.3 | Updated conservation status for Red Listed species, including those classified as Data Deficient. | None of these have been updated at the current time, but will be as and when individual taxonomic teams have finalized identifications and have sufficient data from their collections to do so. For the Odonata (damselfies and dragonflies), 10 out of the 25 Red Listed species were documented during the expedition. The status of 3 data deficient species will be updated based on the expedition findings. |
| 1 | Improved knowledge of the diversity of flora and fauna in the Guadalcanal watersheds. | 1.4 | Overall survey report summarizing methodologies and main findings. | The overall survey report is still in draft form, awaiting additional information from some of the taxonomic groups. |
| 2 | Strengthened capacity of local taxonomic expertise in the | 2.1 | Report on the participation and capacity building of | Current/recent postgraduate students:<br>• Robson Hevalao – freshwater vertebrates (ex-USP)<br>• Iulah Pitamama – entomology (USP) |

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| | Solomon Islands and the Pacific region | | Solomon Island and regional (Pacific Island) counterparts for each taxonomist group assessed throughout the project. | • Corzierrah Posala – mammals (USP)<br>• Joshua Kera – vascular plants (USP)<br>• Edgar Pollock – invertebrates and birds (ex-USP)<br>Early-career scientists:<br>• Lekima Copeland – freshwater vertebrates (USP)<br>• Bindiya Rashni – freshwater invertebrates (USP)<br>• Tokasaya Cakacaka – terrestrial insects (USP)<br>• Hilda Waqa-Sakiti – terrestrial insects (USP)<br>• Alivereti Naikatini – mammals (USP)<br>• Sarah Pene – ferns (USP)<br>• Geoffrey Mauriasi – birds and mammals (MECDM, SIG)<br>• Allen Ofea – herpetofauna (MECDM, SIG) |
| 2 | Strengthened capacity of local taxonomic expertise in the Solomon Islands and the Pacific region | 2.2 | Network established and maintained between international taxonomists and Solomon Island and Pacific counterparts, and this collaboration to be reported on in the project completion report. | • Scholarship opportunities: contact has been maintained between members of the scientific team for potential scholarship opportunities to enable further capacity building through postgraduate study: Joshua Kera (vascular plants) is currently a post grad student and for a Master thesis, Robson Hevalao (freshwater fish) to undertake a Master thesis, Alifereti Naikatini (mammals) for a PhD thesis, and Bindiya Rashni (freshwater invertebrates) for a PhD thesis.<br><br>• Pacific Conservation Biology – Special Edition. There are plans underway for USP to coordinate a special edition of PCB, with a focus on plant conservation. Members of the Guadalcanal expedition flora team have been approached to submit papers based on the expedition results. |
| 3 | Project managed to ensure that activities are carried out on-time and on-budget to deliver stated outputs. | 3.1 | Decisions from the logistics and planning meeting (June 2014) circulated to all participants. | Planning meetings were conducted in Honiara in June 2014 and June 2015, and the decisions from each were circulated to all participants. The Memorandum of Understanding was signed at the second planning meeting and distributed to all stakeholders. |
| 3 | Project managed to ensure that activities are carried out on-time and on-budget to deliver | 3.2 | Financial aquittals at 6-month reporting time and at project completion. | Financial acquittals have been submitted to CEPF at quarterly intervals. |

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| | stated outputs. | | | |
| 3 | Project managed to ensure that activities are carried out on-time and on-budget to deliver stated outputs. | 3.3 | Project progress report to CEPF after 6 months. | Project progress reports have been submitted to CEPF at 6-monthly intervals. |
| 3 | Project managed to ensure that activities are carried out on-time and on-budget to deliver stated outputs. | 3.4 | Outcomes of the project shared and discussed with all stakeholders at the project completion meeting (October 2015). | This has not been carried out yet, as it is necessary to resolve the current grievance issue first (explained under Safeguards section of this report). |
| 3 | Project managed to ensure that activities are carried out on-time and on-budget to deliver stated outputs. | 3.5 | Final project completion report at end of project (December 2015). | Final project completion report submitted to CEPF. |
| 3 | Project managed to ensure that activities are carried out on-time and on-budget to deliver stated outputs. | 3.6 | Compliance with CEPF Social Safeguard Policies monitored and reported to CEPF. | The project has ensured that its commitment to free, prior and informed consultation with stakeholder indigenous communities has been upheld at all stages of the planning and preparation for the expedition. Representatives of the Uluna-Sutahuri were included in the Expedition Planning Team which also comprised USP and its project partners AMNH and Solomon Islands Community Conservation Partnership (SICCP), as well as representatives from the Solomon Island government (Ministry of Environment and Ministry of Forestry). Prior to any fieldwork commencing, the Expedition Planning Team, including the Uluna-Sutahuri representatives, drafted a Memorandum of Agreement (MoA), the aim of which was to facilitate the mutually agreed upon goals of carrying out the inaugural biodiversity assessment of the Haiaja area. The MoA laid out in detail agreements between the Uluna-Sutahuri and USP for the implementation of the survey, including:<br>• expedition administration, permissions and |

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| | | | | logistics support, work<br>• Sequence, timing and scope of the expedition<br>• Tasks and support scheme for planning and implementation of the expedition<br>• Customary parameters, and<br>• Post expedition support and partnership<br>The MoA was signed at a stakeholder meeting in Honiara in June 2015. |
| 3 | Project managed to ensure that activities are carried out on-time and on-budget to deliver stated outputs. | 3.7 | Regular oversight and monitoring of the SICCP subgrant. | The SICCP subgrant was monitored and reported on during the 6-monthly reports. |
| 3 | Project managed to ensure that activities are carried out on-time and on-budget to deliver stated outputs. | 3.8 | Report on landholder consultation and traditional presentation ("tiagi") conducted under SICCP sub-grant. | The minutes of this meeting and have been circulated, and the developments since the meeting have been reported on to CEPF. |
| 3 | Project managed to ensure that activities are carried out on-time and on-budget to deliver stated outputs. | 3.9 | Report on reconnaissance mission to determine camp locations conducted under SICCP sub-grant. | The outcome of the reconnaissance mission and the selection of the base camp site were reported to the Expedition Planning Team. |
| 1 | Improved knowledge of the diversity of flora and fauna in the Guadalcanal watersheds. | 1.1 | Curated specimen collections. All specimens collected will remain the property of the Solomon Islands government. Removal of specimens out of the | The collection effort from the expedition yielded not only specimens but also other forms of documentation of species: tissue samples, DNA samples, photographs and audio and video recordings.<br>Responsibility for identification and curation of each taxonomic group rests with the following organisations:<br>• Mammals: University of Queensland<br>• Birds: University of Kansas and the American Museum of Natural History<br>• Vascular Plants: duplicates deposited with herbaria in Honiara, USP, Bishop Museum and Florida Museum of Natural History<br>• Bryophytes: duplicates with Sydney Botanic |

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| | | | Solomon islands for the purposes of identification and/or long-term storage will be carried out in full consu | Gardens, USP, and Chicago Field Museum<br>• Pteridophytes: duplicates with USP, BISP and Te Papa Museum, Wellington<br>• Herpetofauna: USGS<br>• Freshwater Invertebrates and Odonata: USP<br>• Ants: Czech Academy of Sciences<br>• Beetles: USP |

Please describe and submit any tools, products, or methodologies that resulted from this project or contributed to the results.

**The survey approach followed the Rapid Assessment Program developed by Conservation International, with the goal of developing a comprehensive list of species present in the area surveyed.**

**The principal survey methodologies used for sampling different taxa were:**

- **Freshwater Invertebrates: Surber sampler, kick-netting**
- **Terrestrial invertebrates: light trapping, pitfall trapping, Winkler leaf litter extraction, netting, hand collection, malaise trapping, bait trapping.**
- **Freshwater vertebrates: dip-netting, spear fishing, underwater video recording**
- **Herpetofauna: sticky traps, visual encounter surveys, audio recording (frogs)**
- **Birds: mist-netting, audio recording, direct observation**
- **Mammals: camera traps, mist-netting, ultrasonic bat detection, spotlighting, harp trapping, sherman trapping**
- **Flora: voucher specimen collection, pressing and drying.**

## 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:

- Project Design Process *(aspects of the project design that contributed to its success/shortcomings)*
- Project Implementation *(aspects of the project execution that contributed to its success/shortcomings)*
- Describe any other lessons learned relevant to the conservation community

**The success of this type project is to a certain extent dependent on communication and collaboration between stakeholders and thus it is very important that project partners ensure that relationships are built and sustained over the long term. When designing the project, especially in terms of budgets and**

**time frames, it is also necessary to create an in-built level of flexibility, to allow for improvisation and compromise. An understanding of the issues involved in doing work of this kind, particularly within the Melanesia context, is important. Language barriers: the members of the expedition who were bilingual (pidgin and English) were extremely important in both the planning phase and the expedition itself, as they acted as translators for ensuring that communication flowed as best as possible within the whole team.**
**Having USP as the primary implementing agency contributed to the success of the project, taking into consideration its role as the main academic and research institution in the region. The choice of partners (AMNH and SICCP) was vital for successful implementation of the project, due to AMNH's historical partnerships in the Solomon Islands and SICCP's role as a locally-based conservation NGO. Together these three organisations had the expertise and the networks with which to leverage support and collaboration necessary for the project to be successful.**
**The expedition was delayed twice, primarily due to the floods of April 2014, but this allowed a much longer time period for planning the logistics, which in the end was part of the success of the project. It allowed ample time for all the necessary stakeholder consultations to take place. A reconnaissance trip to the base camp location was essential, for selecting the appropriate site to establish a camp for such a large number of people, where there was also helicopter access. The helicopter transportation, whilst an extremely costly component of the project, was vital to the success of the project. The same amount of work, in terms of area covered and specimens collected, would not have been possible without the helicopter.**

## Sustainability / Replication

Summarize the success or challenges in ensuring the project will be sustained or replicated, including any unplanned activities that are likely to result in increased sustainability or replicability.

**In terms of sustainability of the project, one of the main challenges is to ensure that the ongoing work of specimen identification, and any additional taxonomic work (i.e. molecular analysis), and the publication of these results continues. The follow-up work involved – especially for the little-known taxa (insects and bryophytes), is a long-term commitment, and can continue for several months or years after the end of the official project period. Funding for this type of sustainability of the project needs to be considered for the future.**
**With appropriate funding, the replication of this project, whether in another KBA, or in another area within the Guadalcanal Watersheds KBA, is entirely possible.**

## Safeguards

If not listed as a separate Project Component and described above, summarize the implementation of any required action related to social, environmental, or pest management safeguards

**A grievance issue arose in September 2015, regarding the collection of specimens of certain animals which have customary significance to the tribe. This issue concerns the collection of specimens of a**

**frog (*Littorea* sp.) and a bird (possibly *Rhipidura drownei*). During the expedition, some of the Uluna-Sutahuri participants had been aware of these collections, but the fact that these were species of customary significance and not to be collected had not been communicated to the scientific team at the time.**
**Supported by the grant extension a meeting was convened in Honiara in June 2017 to bring together the Uluna-Sutahuri with members of the Expedition Planning Team to finalise a path towards resolution of the issue. The minutes of that meeting are attached. The main outcome of the meeting was an agreement that a traditional tiangi ceremony was the preferred means to resolve this issue. The minutes indicate that the Uluna-Sutahuri were to convene a meeting amongst themselves in July in order to come to an agreement on how and when the tiangi would take place, and they would then relate that information to USP and Chris Filardi.**
**However, when the minutes were circulated, it became apparent that there was opposition from key influential members of the tribe to the proposed resolution - the primary issue being an insistence on financial compensation, and refusal to condone any kind of customary ceremony proceeding unless this is done. The individuals were not present at the June meeting to voice these concerns (despite having being invited).**
**Despite USPs efforts to secure confirmation for a meeting and customary resolution, we have heard nothing yet from the Uluna-Sutahuri on the way forward to carry out reconciliation through the presentation of a tiangi. USP has made a good faith effort to reach resolution on this issue,and that we have done our due diligence, but that there is really nothing USP can do to move this forward, in the face of a lack of agreed consensus from the Uluna-Sutahuri. The current impasse can only be resolved internally within the Uluna-Sutahuri. USP remains ready to progress with this grievance resolution as soon as the Uluna-Sutahuri indicate their readiness to proceed.**

## Additional Comments/Recommendations

Use this space to provide any further comments or recommendations in relation to your project or CEPF

## Additional Funding

Provide details of any additional funding that supported this project and any funding secured for the project, organization, or the region, as a result of CEPF investment

**Total additional funding** (US$)
*$8,170.00*

**Type of funding**
*Please provide a breakdown of additional funding (counterpart funding and in-kind) by source, categorizing each contribution into one of the following categories:*

*A Project Co-Financing (other donors or your organization contribute to the direct costs of this 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 funded project)*

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

**A - Project Co-financing - direct cost contributions**

| Donor | Type of Funding* | Amount (USD) | Notes |
|---|---|---|---|
| **United States Geological Survey** | **A** | **1050** | **Contribution towards expedition supplies** |
| **Bishop Museum, Hawaii** | **A** | **750** | **Contribution towards expedition supplies and helicopter costs** |
| **Czech Academy of Sciences** | **A** | **450** | **Contribution towards expedition supplies** |
| **Taiwan and Makino Botanic Gardens** | **A** | **4570** | **Contribution towards expedition supplies and helicopter costs** |
| **CSIRO, Australia** | **A** | **375** | **Contribution towards expedition supplies** |
| **University of Queensland** | **A** | **525** | **Contribution towards expedition supplies** |
| **Te Papa Museum, Wellington** | **A** | **450** | **Contribution towards expedition supplies** |

## 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, and publicized in our newsletter and other communications.

1. Please include your full contact details (Name, Organization, Mailing address, Telephone number, E-mail address) below

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