



Executive Summary

Source: A Rapid Biodiversity Assessment of the Nakorotubu Range, Ra and Tailevu Provinces, Fiji

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Report at a Glance

A RAPID BIODIVERSITY ASSESSMENT OF THE NAKOROTUBU RANGE, RA AND TAILEVU PROVINCES, FIJI

Expedition Dates

November 29- December-12, 2009

Description of Expedition

This 12-day RAP expedition surveyed several sites in the Nakorotubu Range, a 19071 ha isolated forested remnant in the Ra and Tailevu Provinces, Fiji. The survey sites were located in lowland and upland rainforest vegetation, and their associated streams and rivers in the northeast of Fiji's largest island, Viti Levu. The actual field work began at Matuku settlement where the team hiked through secondary forest into the more forested mountains. The first base camp was located at 120 m on a flood plain next to the Nabavatu Creek in lowland rainforest vegetation. The second base camp was located at Nalalau at the headwaters of the Lequ Creek at 500 m altitude in upland rainforest vegetation. The third camp was located at 200 m altitude in lowland rainforest vegetation. Three days were spent at each base camp. The surveyed sites at Base camp 1 showed signs of human disturbance. Study sites at Base camps 2 and 3 showed very little human disturbance with the exception of traditional trails that led to the areas which provided access to relatively undisturbed forest habitats.

Reason for the RAP Survey

In April 2008, the Fiji Water Foundation and Conservation International (CI) entered into a three-year grant agreement to protect the natural resources of Viti Levu, Fiji. One of the three key objectives of the Fiji Water Grant involves technical assessments and community consultations to facilitate conservation initiatives within the Yaqara and Nakauvadra watersheds. The Nakorotubu Range is adjacent to the Nakauvadra watershed and the purpose of this Nakorotubu RAP was to assess (i) its flora and fauna and, (ii) its relationship with Nakauvadra. Both Nakauvadra and Nakorotubu are part of the Viti Levu Conservation Corridor whose definition is also part of the grant agreement.

MAJOR RESULTS

In total the RAP survey documented 556 confirmed species (Table 1), including a number of rare and endangered species. Three of Viti Levu's globally threatened bird species were recorded, the Pink-billed parrotfinch (*Erythrura kleinschmidti*), the Black-faced shrikebill (*Clytorhynchus nigrogularis*) and the Friendly ground dove (*Gallicolumba stairii*) along with two rare and endemic stick insects *Nisyris spinulosus* and *Cotylosoma dipneusticum*. Two plant species of particular interest found were *Acropyle sabniana* (Critically Endangered, Viti Levu endemic) and *Calamus vitiensis* (endemic palm, rare in Fiji). High levels of endemism were recorded in the damselflies and dragonflies group (58%) as well as the terrestrial

gastropods (50%), birds (40%) and plants (31%). New records and range extensions were made for a number of species in all taxa. These results suggest that due to its moderate to high biodiversity and relative isolation, the Nakorotubu Range should be targeted for conservation action.

Species of conservation concern (IUCN 2008 and CITES 2008)

Amphibians

Fiji tree frog *Platymantis vitiensis* (NT)

Birds

Fiji goshawk *Accipter ruftitorques* (CITES II)
 Pacific harrier *Circus approximans* (CITES II)
 Black-faced shrikebill *Clytorhynchus nigrogularis* (VU)
 Friendly ground dove *Gallicolumba stairii* (VU)
 Pink-billed parrotfinch *Erythrura kleinschmidti* (VU)
 Masked shining parrot *Prosopaea personata* (NT, CITES II)
 Collared lory *Phigys solitarius* (CITES II)

Mammals

Pacific sheath-tailed bat *Emballonura semicaudata* (EN)
 Samoan fruit bat *Pteropus samoensis* (NT, CITES I, II)
 Tongan fruit bat *Pteropus tonganus* (CITES I, II)

Reptiles

Pacific Boa *Candoia bibroni* (CITES II)

Plants

Acropyle sabniana (CR, CITES II)
Astronidium tomentosum (NT)
Degeneria vitiensis (VU)
Cycas seemannii (VU, CITES II)
Dendrobium biflorum (CITES II)
Geniostoma cf. clavigerum (CR)
Oberonia heliophila (CITES II)
Podocarpus neriifolius (CITES III)
Cyathea alta (CITES II)
Cyathea hornei (CITES II)
Cyathea lunulata (CITES II)
Cyathea medullaris (CITES II)
Cyathea propinqua (CITES II)
 26 Orchid species (CITES II)

Table 1: Number of species recorded during the 2009 Nakorotubu Range RAP survey. Insects are not included due to incomplete identification of specimens (completed down to family only).

	Total	No. of endemic species	No. of native species	No. of introduced species
Plants	425	132	229	64
Herpetofauna	10	3	6	1
Birds	38	15	19	4
Bats	3	0	3	0
Terrestrial gastropods ¹	22	11	2	7
Freshwater crustaceans	12	1	11	0
Damselflies and dragonflies	31	18	13	0
Freshwater fish	15	0	13	2
Total	556	180	298	78

¹Two species remain unidentified

KEY CONSERVATION RECOMMENDATIONS

Additional recommendations are presented in the Executive Summary.

- *Protection of important habitats*

Because of the relative pristine nature of the forests in the Nakorotubu Range and the fact that it is one of the last remaining intact forest systems along the transition zone (dry and wet zone) on Viti Levu, every effort should be made to collaborate with local

communities, Government departments, conservation NGOs and academic researchers to conserve the forests in the region. This will also include rehabilitation of adjacent forest areas decimated by clearing (especially fire) for agriculture and grazing by domesticated animals. In particular, forests in the upper reaches of the three main river headwaters, the Wailou, Nabavatu and Wailotua should be preserved as protected areas to maintain water quality and act as a repository for

potable water for the local communities.

- *Community awareness and education*

As the land in the Nakorotubu Range is owned by local communities, they will play a vital role in the future conservation management of the region and the biodiversity within. As such, it is critical that local communities are made aware of the negative impacts of some of their activities as well as offered potential solutions and/or information to ameliorate the impacts of their daily activities.

- *Future research*

Due to the short-term nature of this RAP survey, the data collected represents a 'snapshot' of the Nakorotubu Range and its biodiversity and conservation value. All researchers involved in this survey agree that further surveys are needed to improve the quality of the data and provide more complete checklists of biodiversity in the area. Additional surveys are also important for assessing the conservation status and distribution of threatened or endangered species recorded during this RAP survey. In addition, future surveys will provide information on seasonal variation as well as provide a more robust baseline for long-term monitoring of biodiversity trends in the region.