

## Report at a glance

### **DATES OF RAP SURVEY**

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October 9 - November 25, 2010

### **DESCRIPTION OF STUDY SITES**

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We surveyed four forest sites between 300 – 900 m above sea level in the Mt. Panié region of northeastern New Caledonia: two on the western slopes of Mt. Panié (La Guen and Wewec), one on the western slopes of Mt. Colnett (Dawenia) and one on the eastern slopes of Roches de la Ouaième. Mt. Panié is known to host many micro-endemic species, some of which occupy only a few square kilometers. Mt. Panié (1629 m) is the highest mountain in New Caledonia, and with ca. 20,000 ha of forest, the Mt. Panié range contains one of the largest blocks of forest in the country, including the 5,400 ha Mt. Panié wilderness reserve. The forest of the Roches de la Ouaième lies at the eastern end of an 8,000 ha forest block, separated from the Mt. Panié forest by the Ouaième River. Habitats surveyed mostly included forests and rivers, including lower mountain cloud forest. The geological substrate is mostly of micashist, with some peridotites.

### **OBJECTIVES OF THE MT. PANIÉ RAP SURVEY**

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The Mt. Panié RAP goals were to:

- Update and improve the taxonomic inventory of the region
- Establish a biological and climatological baseline for long-term monitoring
- Contribute to taxonomic and scientific training of local guides
- Evaluate threats to biodiversity, including invasive species and climate change
- Identify priority sites and actions for conservation including management recommendations for the Mt. Panié Wilderness Reserve

- Contribute to the conservation of biodiversity and ecosystem services of the area

This survey complements a marine RAP survey of the neighboring coral reefs conducted in 2004, which together provide a complete integrated coastal watershed assessment from ridge to reef.

### **MAJOR RESULTS**

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This RAP survey provides the most comprehensive and multidisciplinary evaluation yet for four sites of the Mt. Panié region, for which little was previously known. The RAP team found high species richness and endemism, including 25 species considered globally threatened by IUCN. Fourteen plant species and three reptile species found during the survey are potentially new to science. New locality records, including many rare or endangered species, were discovered. The Crow Honeyeater, a rare and Critically Endangered bird species, was observed for the first time in twelve years in the region. The team also found a large breeding colony of the Tahiti Petrel, a Near Threatened species. Although not targeted during this survey, the team encountered remnants of human occupation which are at least a century old, although local people don't have stories related to these sites nor do they know when they were last occupied.

Despite its unique biodiversity and endemism, the region faces several threats. Invasive mammals, especially rusa deer and feral pigs, are significant and growing threats to biodiversity at all sites, especially in the foothills of La Guen. Although no invasive plant species were found within the forest, at least five were recorded in savannah and secondary forest. Deforestation is an active phenomenon with a rate of 1.9%/year. Anthropogenic bushfires have been an important historical driver of deforestation at all sites and still actively threaten the Roches de la Ouaième area. However, we also found forests to be quite resilient, showing recovery following deforestation in several places. Climate change also appears to be a threat to local biodiversity. We identified a warming trend, which, in conjunction with cyclical droughts