More Schizeilema trifoliolatum at Awhitu, SW Auckland

During an exploration of remnant native bush on 9 March 2011, near the head of the large valley system locally known as 'Tasman Gully' on Auckland's Awhitu Peninsula, I was delighted to find a second population of *Schizeilema trifoliolatum* (Apiaceae) on the Peninsula. This small mat-forming herb was first noted during an Auckland Botanical Society field trip to Craig's Bush at Pollok in 2004, and was a major range extension to the known northern geographical limit (Cameron 2004). The new site, opposite the western end of Boiler Gully Road, extends the known northern limit by nearly 7 km. The site is physically similar to the Pollok area but is steeper and even more exposed to the southwest winds - the main colony on a spur facing the southwest measures c.5 m². Several smaller patches were noted within 100 m to the north of the main colony. Plants appear to be smaller in general than those at Pollok although this may be because of increased light. The bush canopy, dominated by karaka (*Corynocarpus laevigatus*), puriri (*Vitex lucens*) and some tawa (*Beilschmiedia tawa*) is intact but it is open to light grazing by cattle. Plants were still in fruit (voucher: AK 322554).

Acknowledgement

I wish to thank the landowner Brenda Lowry for inviting me to take a walk through her property.

Reference

Cameron, E.K. 2004: A new record for the Auckland Region: *Schizeilema trifoliolatum* (Apiaceae). *Auckland Botanical Society Journal 59*: 148-150.

Rarotonga's threatened flora: an expedition to survey cloud forest endemics on the highest peaks

Tim Martin

Background

The Cook Island archipelago spans 12 degrees of latitude, from 9 to 21°, over a distance of approximately 1400 kilometres (north-south). Of the 15 islands, many are small, low-lying atolls, and only Rarotonga, one of the southern-most of the group, has any substantial height, with peaks to 653 m altitude.

The indigenous vegetation of the Rarotonga lowlands is, in many ways, similar to many of the other Cook Islands, and indeed, the wider tropical Pacific. The flat coastal plain, once covered with coastal forest, has been heavily modified by humans, and is now predominantly resorts, holiday houses, and restaurants. Only small fragments of Rarotonga's coastal forest, probably totalling less than a few hectares, remain.

Botanically, it is the vegetation and flora at higher altitudes that is particularly fascinating and unique. The combination of Rarotonga's geographical isolation from other land masses, and the scarcity of higher altitude cloud forest in this part of the Pacific, means that Rarotonga's cloud forests, in the mountainous interior of the island, support a suite of species found nowhere else on Earth. These cloud forest endemics, many of which were first collected amd described by Thomas Cheeseman in 1899 (Cheeseman 1903), inhabit the highest peaks above 400 m (McCormack and Kunzle 1995), where frequent rain and cloaking cloud create a humid, cooler environment. The total area of cloud forest on Rarotonga is only 150 ha.

The rampant growth of exotic weeds, and the disappearance of previously-known threatened plant populations, is causing growing concern about the future of Rarotonga's endemic flora. This led to Wildland Consultants, the company for which I work, and the Cook Islands Natural Heritage Trust (CINHT), collaborating to undertake an expedition to survey and document the conservation status of Rarotonga's endemic flora. This survey, in conjunction with Peter de Lange and Gerald McCormack (CINHT), was successfully completed in July 2010.

The Expedition

Having previously been to Rarotonga for two "hammock-lazing" family holidays, during which I spent much time contemplating the looming peaks from the coast, I thought I had a fair idea of the ruggedness of the terrain. So as well as undertaking a crash course in the Cook Island flora (courtesy of the Cook Islands Biodiversity Database [2010]), I diligently prepared my body for the onslaught by climbing Auckland's volcanic cones. In hindsight, training for an Ironman would have been more apt.

Peter and I arrived in Rarotonga after midnight, and immediately faced our first challenge - a game of Bicycle Origami (Extended Edition). This involved

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