

NGATAMAHINERUA PLATEAU, KAIMAI-MAMAKU FOREST PARK

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On the weekend of the 20-21 March 2009, six members and partners headed up Thompson's Track in Kerry Jones's Land Rover to the summit to begin the trek onto the Ngatamahinerua Plateau and Kauritatahi Hut for the night. The weather had finally come to the party, as this was the third attempt at running this trip for the month of March. Thompson's Track was in reasonable order, which enabled us to reach the summit by vehicle without getting into any serious trouble. Previous botanical society trips in recent years had gone the same route to Ngatamahinerua trig and also onto the southern end of the plateau from Aongatete Lodge. This trip aimed to get onto the northern end of the plateau and botanise the area on route and around Kauritatahi Hut. This was also perfect timing to do it as DOC had just reopened, recut and marked the track from Thompson's Track summit up onto the plateau and through to the hut which made travel much quicker and easier than would otherwise be possible.

Once onto the plateau proper we were soon into the very stunted and open silver beech (*Nothofagus menziesii*) forest typical of much of this boggy plateau. While silver beech was the canopy dominant species, occasional tawari (*Ixerba brexioides*), toro (*Myrsine salicina*) and miro (*Prumnopitys ferruginea*) were also present in the canopy. These species also dominated the subcanopy along with neinei (*Dracophyllum traversii*). As the canopy and subcanopy were generally very open, understorey species were abundant including toropapa (*Alseuosmia macrophylla*), mingimingi (*Leucopogon fasciculatus*), *Astelia fragrans* and *A. trinervia*, *Pseudowintera axillaris*, *Gabnia pauciflora*, kamahi (*Weinmannia racemosa*), *Coprosma foetidissima*, Kirk's daisy (*Brachyglottis kirkii*) and tawheowheo (*Quintinia serrata*). In areas where silver beech forest canopy was closed bush rice grass (*Microlaena avenacea*), *Blechnum procerum* and kiokio (*B. novae-zelandiae*) were common in the understorey.

On the plateau it didn't take long to come across a whole host of liverworts characteristic of 'mossy' cloud forests. These are characterised by luxuriant (some

would say excessive) bryophyte mats, wefts and turfs that cloak almost every surface, and hang from virtually every branch. Despite the name most of the dominant species imparting the goblin-like aspect are liverworts, not mosses. A suite of liverwort species are characteristic of cool, hyperhumid environments, and are abundant at all altitudes on the west coast of the South Island. However, as suitable temperature bands move higher further north, so these species become increasingly restricted to mountain tops, to the extent that they occur only on the highest peaks in the upper third of the North Island. Species restricted to cloud forests in the north observed on Ngatamahinerua include *Drepanolejeunea aucklandica*, *Lembidium longifolium*, *Marsupidium setulosum*, *Radula multiamentula*, *R. tasmanica*, and *R. aff. physoloba* 'Mangawhero'.

Lembidium longifolium was a particularly interesting find. Ngatamahinerua is the fifth known mainland location in the North Island. On Little Barrier Island (the type locality) this species is associated with the entrances to burrows of taiko (black petrel), and is abundant above 450 m altitude. The species is unusual within Lepidoziaceae subf. Lembidioideae in reproducing asexually by fragmenting leaves. Like other bryophyte species, most famously members of the Calymperaceae, *Lembidium longifolium* may be dispersed between burrow entrances by petrels, and it is not inconceivable that this could occur over long distances. The other known locations for this species are Pirongia, Herangi, Mt Rowe, and Mamaku Plateau. These locations may all have been used or visited by petrels in recent history. Andreas Reicheck noted that prior the 1880s black petrel could be reliably found in virtually every range over 400 m altitude. The presence of breeding colonies may be recorded in many place names such as Parataiko (Northland) Puketaiko (Coromandel), and others including Titiokura (Hawkes Bay) and Titiraupenga (Taupo). It is probably no accident that on the North Island mainland *Lembidium longifolium* is now found primarily on the only areas of recently reworked soil present in these mountain forests - trackside banks. It's kind of unusual that liverworts, of all things, can also remind us of how much our landscapes have lost in recent history.

Other botanical highlights included abundant *Coprosma dodonaeifolia* –the Coromandel-Kaimai endemic that looks somewhat like a thin version of *Coprosma lucida*, some lovely flowering specimens of *Earina autumnalis* and lots of Kirk’s daisy, much of it terrestrial and some of it flowering. Several *Pseudopanax laetus*, which is locally common in the northern Kaimais, were also seen here.

In late afternoon after several hours of tramping and botanising on the plateau we reached Kauritatahi Hut, which much to our surprise, given it was close to the ‘roar’, was empty. Half the party set up tents on the helipad while the rest piled into the few bunks in the hut. There was enough daylight left for a quick botanise around the hut and further south along the track for a few hundred metres. Dinner was enjoyed on the new deck, which had been recently added to the hut and as it got dark members enjoyed the distant lights of Katikati, which is clearly visible from the hut verandah.



Botanical Society team relaxing in the sun on the new deck at Kauritatahi Hut, Ngatamhinerua Plateau.

On Sunday morning members headed out for the morning further south along old North-South track which traverses the plateau. The track has not been maintained south of the hut so was more overgrown with frequent muddy and wet sections of track to be avoided. We spent a fair bit of time admiring the range of epiphytes present throughout the forest here. All the canopy trees were heavily covered with a range of epiphytic mosses, lichens, liverworts and vascular plants typical of high altitude wet environments. Vascular species we noted common here included *Luzuriaga parviflora*, *Hymenophyllum sanguinolentum* and *H. multifidum*, *Grammitis billardierei*, *Trichomanes venosum* and *Earina autumnalis*. The elusive *Hymenophyllum armstrongii* was also found here as an epiphyte amongst mosses and liverworts on tree trunks.

Further south kaikawaka became much more common in association with silver beech as the main canopy species. Dead kaikawaka spars were present along with many live trees with areas of smooth trunks with no mossy epiphytes present indicating that possums were most likely browsing some of the trees. (Kaikawaka is much favoured by possums). Also pleasing to see was that while there were standing dead kaikawaka, there was also plenty of sign of sapling recruitment around adult trees. However given the slow growth rates of trees in this harsh wet environment it would be many decades before these trees grew to the size of their forebears. Deer sign was also present on the plateau with hoof marks and tracking clearly visible in the boggy habitat.

While large kaikawaka trees were particularly abundant on this part of the plateau, pink pine (*Halocarpus biformis*) was rather rare. Eventually we found a nice example of a large adult tree and a juvenile. After several hours of botanising and avoiding mud holes we decided to turn back to the hut at NZMS 260 T14 2761875 6389419. We headed back to the hut for lunch. Looking around the hut we found quite a range of insects including 3 species of stick insects, 1 weevil, 2 longhorn beetles, 1 carabid and 2 wetas. Birds noted included bellbird, grey warbler, silvereye, whitehead and a harrier.

Satisfied we had spent enough time exploring the flora in and around the hut and on the plateau we packed up and headed back to the Land Rover at the summit for late afternoon. On the way we collected a herbarium specimen of a manuka bush believed to be the swamp form of manuka common in Waikato wetlands growing in boggy peat on the plateau. Coming back down Thompson's Track we were delayed somewhat by council contractors with a large bulldozer doing the annual maintenance on the 4WD track. Once past this large obstacle we made it safely to our vehicles at the bottom of the track and headed home. It was definitely worth the wait for a fine weekend to enjoy the unique flora of this often inhospitable place.

ACKNOWLEDGEMENTS

Thanks to the Tauranga DOC crew for clearing the track and the great hut and new verandah!! Also thanks to Kerry Jones for risking his Land Rover in the bottomless mud holes of Thompson's Track to get us up to the summit quicker. Chris Bycroft made useful comments on the draft of this report.

NGATAMAHINERUA PLATEAU VASCULAR PLANT SPECIES LIST

P. Cashmore, M. Renner and Rotorua Botanical Society

NZMS 260 T14 2762615 6389036

(old N-S track from 2761875 6389419 to 2763018 6388568)

* = naturalised

<i>Acaena anserinifolia</i>	Bidibid
* <i>Agrostis capillaris</i>	Browntop
<i>Alseuosmia macrophylla</i>	Toropapa; shrubby honeysuckle
* <i>Anthoxanthum odoratum</i>	Sweet vernal
<i>Asplenium polyodon</i>	Sickle spleenwort; petako
<i>Astelia fragrans</i>	Bushflax; kakaha
<i>Astelia solandri</i>	Kowharawhara
<i>Astelia trinervia</i>	
<i>Blechnum colensoi</i>	Peretao; paretao
<i>Blechnum discolor</i>	Crown fern; piupiu; petipeti
<i>Blechnum filiforme</i>	Thread fern
<i>Blechnum fluviatile</i>	Kiwakiwa; kiwikiwi
<i>Blechnum nigrum</i>	Black fern
<i>Blechnum novae-zelandiae</i>	Kiokio
<i>Brachyglottis kirkii</i> var. <i>angustior</i>	Kirk's daisy
<i>Cardiomanes reniforme</i>	Kidney fern; raurenga
<i>Carpodetus serratus</i>	Putaputaweta; marbleleaf
<i>Carex dissita</i>	
* <i>Cirsium vulgare</i>	Scotch thistle
<i>Collospermum microspermum</i>	
* <i>Conyza sumatrensis</i>	broad-leaved fleabane
<i>Coprosma colensoi</i>	Springy coprosma
<i>Coprosma dodonaeifolia</i>	
<i>Coprosma foetidissima</i>	Stinkwood; hupiro
<i>Coprosma grandifolia</i>	Raurekau; kanono; mamono
<i>Cordyline banksii</i>	Forest cabbage tree; ti ngahere
<i>Cortaderia fulvida</i>	Kakaho; toetoe
<i>Cortaderia toetoe</i>	Toetoe
<i>Ctenopteris heterophylla</i>	
<i>Cyathea smithii</i>	Katote; soft tree fern
<i>Dacrydium cupressinum</i>	Rimu
* <i>Dactylis glomerata</i>	Cocksfoot
<i>Dianella nigra</i>	Blueberry; turutu
<i>Dracophyllum traversii</i>	Neinei
<i>Earina autumnalis</i>	Easter orchid; raupeka
<i>Earina mucronata</i>	Spring orchid; peka-a-waka
<i>Freycinetia banksii</i>	Kiekie
<i>Gabnia pauciflora</i>	

* <i>Gamochaeta spicata</i>	Snowberry; tawiniwini
<i>Gaultheria antipoda</i>	
<i>Grammitis billardierei</i>	Common strap fern
<i>Grammitis pseudociliata</i>	
<i>Griselinia littoralis</i>	Broadleaf; kapuka
<i>Halocarpus biformis</i>	Pink pine; yellow pine
<i>Hedycarya arborea</i>	Pigeonwood
<i>Histiopteris incisa</i>	Water fern
* <i>Holcus lanatus</i>	Yorkshire fog
<i>Huperzia varia</i>	Hanging clubmoss; iwituna
<i>Hydrocotyle elongata</i>	
<i>Hymenophyllum armstrongii</i>	
<i>Hymenophyllum dilatatum</i>	Lop-sided filmy fern
<i>Hymenophyllum flabellatum</i>	Fan fern
<i>Hymenophyllum ferrugineum</i>	
<i>Hymenophyllum multifidum</i>	
<i>Hymenophyllum pulcherrimum</i>	
<i>Hymenophyllum rarum</i>	
<i>Hymenophyllum revolutum</i>	
<i>Hymenophyllum sanguinolentum</i>	Blood-scented filmy fern
<i>Hymenophyllum scabrum</i>	
* <i>Hypochaeris radicata</i>	Catsear
<i>Hypolepis rufobarbata</i>	Sticky pig fern
<i>Isolepis distigmatosa</i>	
<i>Ixerba brexioides</i>	Tawari
* <i>Juncus effusus</i> var. <i>effusus</i>	Soft rush
<i>Juncus planifolius</i>	
<i>Kunzea ericoides</i> var. <i>ericoides</i>	Kanuka; white teatree
<i>Lagarostrobus colensoi</i>	Silver pine; manoa
<i>Lastreopsis hispida</i>	Hairy fern
<i>Leptopteris superba</i>	Prince of Wales feather
<i>Leptospermum scoparium</i> 'Waikato wetland form'	Manuka
<i>Leucopogon fasciculatus</i>	Mingimingi; kaikaitau
<i>Libertia micrantha</i>	Star herb
<i>Libocedrus bidwillii</i>	Cedar; kaikawaka; pahautea
<i>Lindsaea trichomanoides</i>	
<i>Luzuriaga parviflora</i>	Lantern berry; puwatawata
<i>Lycopodium deuterodensum</i>	Puakarimu
<i>Lycopodium scariosum</i>	Creeping clubmoss
<i>Lycopodium volubile</i>	Climbing clubmoss
<i>Lygodium articulatum</i>	Mangemange; bushmans mattress
<i>Metrosideros fulgens</i>	Scarlet rata; winter rata
<i>Metrosideros robusta</i>	Northern rata
<i>Myrsine salicina</i>	Toro
<i>Singularlybas oblongus</i>	Spider orchid
<i>Nertera depressa</i>	Common nertera

<i>Nertera dichondrifolia</i>	Hairy nertera
<i>Nothofagus menziesii</i>	Silver beech; tawhai
<i>Olearia rani</i>	Heketara
<i>Paesia scaberula</i>	Scented fern; matata; ring fern
<i>Phyllocladus alpinus</i>	Mountain toatoa; celery pine
<i>Phyllocladus toatoa</i>	Toatoa
* <i>Plantago lanceolata</i>	Narrow leaved plantain
<i>Podocarpus hallii</i>	
<i>Polystichum neozelandicum</i> ssp. <i>neozelandicum</i>	
<i>Prumnopitys ferruginea</i>	Miro; brown pine
<i>Pseudopanax colensoi</i> var. <i>colensoi</i>	Mountain three finger; orihou
<i>Pseudopanax laetus</i>	
<i>Pseudowintera axillaris</i>	Horopito
<i>Pseudowintera colorata</i>	Pepperwood; mountain horopito
<i>Pteridium esculentum</i>	Bracken; rauaruhe
<i>Quintinia serrata</i>	Tawheowheo
<i>Raukawa edgerleyi</i>	Raukawa
<i>Raukawa simplex</i>	Haumakoroa
<i>Ripogonum scandens</i>	Supplejack; kareao
<i>Rubus cissoides</i>	Bush lawyer; tataramoa
<i>Rumohra adiantiformis</i>	Butcher's fern
<i>Schefflera digitata</i>	Pate
<i>Schoenus maschalinus</i>	
<i>Sticherus cunninghamii</i>	Umbrella fern; kotuku; tapuwae
<i>Tmesipteris sigmatifolia</i>	
<i>Tmesipteris tannensis</i>	Chain fern; fork fern
<i>Trichomanes strictum</i>	
<i>Trichomanes venosum</i>	Veined bristle fern
<i>Uncinia uncinata</i>	Watu
<i>Viola filicaulis</i>	Forest violet
<i>Weinmannia racemosa</i>	Kamahi
<i>Winika cunninghamii</i>	Bamboo orchid

NGATAMAHINERUA PLATEAU NON-VASCULAR PLANT SPECIES

LIST (Liverworts only)

M. Renner and Rotorua Botanical Society

- Acrochila biserialis*
Acrobolbus lophocoleoides
Acromastigum colensoanum
Acromastigum marginatum
Adelanthus falcatus
Bazzania adnexa var. *adnexa*
Bazzania nitida
Bazzania novae-zelandiae
Bazzania sp. indet.
Chandonanthus squarrosus
Chiloscyphus helmsianus
Chiloscyphus muricatus
Chiloscyphus sp. indet.
Cololejeunea laevigata
Diplasiolejeunea pusilla
Drepanolejeunea aff. *aucklandica*
Drepanolejeunea aucklandica
Frullania sp. indet.
Gackstroemia alpina
Geocalyx caledonica
Goelbeliella cornigera
Haplomitrium gibbsiae
Heteroscyphus menziesii
Isotachis minima
Jamesoniella colorata
Jamesoniella monodon
Kurzia calcarata
Kurzia hippuroides var. *hippuroides*
Lembidium longifolium
Lembidium nutans
Lepicolea attenuata
Lepidolaena palpebrifolia
Lepidozia hirta
Lepidozia laevifolia
Lepidozia spinosissima
Marchantia berteriana
Marsupidium epiphytum
Marsupidium setulosum
Metzgeria sp. indet.
Paracromastigum macrostipum
Paraschistochila conchophylla
Paraschistochila pinnatifida
Plagiochila circinalis
Plagiochila deltoidea
Plagiochila gigantea
Plagiochila pleurata
Pseudocephalozia lepidozoioides
Pseudocephalozia paludicola
Psiloclada clandestina var. *clandestina*
Radula aff. *physoloba* 'Mangawhero'
Radula aff. *pseudoscripta* 'Big Dave'
Radula multiamentula
Radula physoloba
Radula plicata
Radula pseudoscripta
Radula tasmanica
Riccardia crassa
Schistochila appendiculata
Schistochila glaucescens
Schistochila nobilis
Schistochila repleta
Telaranea gibbsiana
Telaranea granulata
Telaranea herzogii
Telaranea tetrapila var. *cancellata*
Treubia lacunosa
Trichocolea hatcheri
Trichocolea mollissima
Zoopsis argentea var. *argentea*
Zoopsis ceratophylla
Zoopsis lietgebiana
Zoopsis setulosa