

## LINDEMAN'S ROAD TRIP - 6 JULY 2014

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The full Lindeman's Loop track takes 3 hours tramping time. An earlier Rotorua Botanical Society trip in November 2001 managed the whole loop but this trip only attempted the shorter section from the road end to the old kauri dams which normally takes only an hour. A small group including two from Hamilton set off rather late at 10 am on typical winter's day, sunny after rain, but with rain more promised.

The first hundred metres or so to the Forest Park boundary provided a good view of the hilly terrain and vegetation to come and sighting of several lowland species not seen later including puriri (*Vitex lucens*) and kohekohe (*Dysoxylum spectabile*). The whole area had been logged a long time ago (as evidenced by the kauri dams) but the lower slopes had only recently been allowed to return to forest resulting in considerable areas of tree ferns, especially wheki (*Dicksonia squarrosa*) and much karamu (*Coprosma robusta*), mahoe (*Melicytus ramiflorus*) and the odd young rimu (*Dacrydium cupressinum*). A surprise find here was *Melicytus micranthus* which prompted much discussion on the differences between the divaricating shrubs and key ID characters such as the winged petiole and yellow patch at the leaflet base, used as key on this plant.

The track was quite easy at first but soon found a prominent ridge and began to steepen, something it continued to do so till well after lunch. This meant we had plenty of time to seek out interesting plants. Among these we found three maiden hair ferns, the common *Adiantum cunninghamii*, the harsh *A. hispidulum*, and *A. fulvum*, which looks rather like *A. cunninghamii*, but has a hairy rachis and dark hairs beneath the pinnules. Also present was a fleshy, bright green-leaved shrub, *Brachyglottis kirckii*, a common sight along the fringes of this side of the Kaimai Ranges.

As we reached the spur, a small stand of pole kauri (*Agathis australis*) had several saplings

of *Pittosporum cornifolium* on the ground beneath. This seems a more common occurrence in recent years resulting from good control of ground browsing animals (as with *Brachyglottis kirkei*). Other kauri plants included *Coprosma spathulata*, nearing its southern limit but quite common here and the odd hard beech (*Fuscospora truncata*). In more open areas *Lygodium deuterodensum*, looking a bit like young rimu was quite common. *Libertia grandiflora* with its small pods and orange fruit was also quite apparent. The canopy was often dominated with toru (*Toronnia toru*) with masses of now decaying fleshy fruit on the ground beneath from a very heavy crop. A sighting of a mandatory *Drymoanthus adversus* began a chain of orchid records. The pygmy orchid (*Bulbophyllum tuberosum*) was a common epiphyte, especially on toru, *Winika cunninghamii* hanging from kamahi (*Weinmannia racemosa*), and on the ground, patches of (*Pterostylis trullifolia*) were just coming in to flower. Sighting of these orchids prompted discussion on usage of formal names and a recent flip-flop in acceptance of formal names by some writers.

Further on the heavily perfumed flowers of toropapa (*Alseuosmia macrophylla*) were just beginning to open, months earlier than expected. In an area of mamaku (*Cyathea medullaris*) as is typical in the Kaimais, *Corybas trilobus* was just coming into flower and *C. oblongus* was noted in bud. Higher up *C. acuminatus* was also just in bud. A special find was a solitary large *Libocedrus plumosa* with its deep red stringy bark, a rare sighting in the Kaimais. Higher up miro was often seen in heavy fruit.

After a short section of tawa (*Beilschmiedia tawa*) dominated forest with abundant pigeonwood (*Hedycarya arborea*) and supplejack (*Rhipogonum scandens*), tawari (*Ixerba brexioides*) with prominent flower buds (but not due till November) became common, an indication of higher rainfall forest. Scattered throughout this section were plants of *Mida salicifolia* with very narrow and also broad leaves but brown twigs, and the white twigged *Nestegis lanceolata*. Ferns of note included *Lindsaea linearis* with its erect fertile and prostrate sterile fronds on the drier areas and the more attractive *L. trichomanoides* in areas of light shade.

As the ridge flattened out (briefly), we found a sunny spot to settle for lunch under kauri, amongst *Corokia buddleioides* (in fruit), a typical kauri associate; with observations that we were still a long way from our destination, cries which continued for much of the afternoon. The lovely, well named, *Hydrocotyle dissecta* formed mats on the ground here along with patches of *Gonocarpus incanus*, *G. micranthus* (in a wet spot) and *Nertera dichondrifolia* (now nearing its southern limit, replaced by the very similar *N. villosa* further south). From there the track continued to steepen before finally flattening off in mainly tawari forest, with some large old kauri and *Dracophyllum latifolium*. The little "tree fern" *Blechnum fraseri* was quite common forming patches fringing the track. Just over the summit the target *Pittosporum kirkii*, with prominent large fruits, was noted hanging from a *Collospermum hastatum* amongst the now abundant kiekie (*Freycinetia banksii*).

Along this flattish section filmy ferns were especially common, including the dark-leaved *Blechnum nigrum*, hairy stemmed, bright green *Hymenophyllum scabrum*, and the brown fronded and also hairy *H. frankliniae*. A real treasure although was a solitary wavy fronded *H. flexuosum*. There was also a very large rimu laden with epiphytes including masses of *Winika cunninghamii* and *Phlegmariurus varius* hanging from the branches and masses of *Collospermum hastatum*. Further into the gully and near the first kauri dam remnant pukatea (*Laurelia novae-zelandiae*) was quite common. At the old kauri dam the main bearers and hooks for the gate on one of them were still very evident. A brief climb brought us to an old haul line deeply carved in the ground. Here the purple petioled *Pseudopanax laetus* was present in low scrub. The final decent to the track junction passed a huge old felled kauri "head" over 2 m tall and passed into a tree fern gully with increasing kamahi then kanuka (*Kunzea ericoides*). A highlight here was *Raukama anomalus* a pair to the earlier *Melicytus micranthus*, this time with a dark patch at the leaf base and hairy remnants of the other leaflets at the top of the petiole (and the odd trifoliate leaf).

The second kauri dam was much less evident with just a few timbers and cuts in the rock

to show its location. But above it, the dense kanuka suggested a recently colonised lake bed. Several sedges were noted including *Machaerina tenax* and *Schoenus maschalinus*. After a brief afternoon tea at 3 pm we headed back to the vehicles, taking far less time and arriving well before sunset.

### Lindeman's Loop track

G Donaghy, G Jane

\* = naturalised species

<i>Acianthus sinclairii</i>	heart-leaf orchid
<i>Adiantum cunninghamii</i>	maiden hair fern
<i>Adiantum fulvum</i>	
<i>Adiantum hispidulum</i>	rosy maidenhair fern
<i>Adiantum viridescens</i>	
<i>Agathis australis</i>	kauri
* <i>Agrostis capillaris</i>	browntop
<i>Alseuosmia macrophylla</i>	toropapa, shrubby honeysuckle
* <i>Anthoxanthum odoratum</i>	sweet vernal
<i>Aristotelia serrata</i>	wineberry, makomako
<i>Asplenium bulbiferum</i>	hen and chickens fern, moku
<i>Asplenium flaccidum</i> subsp. <i>flaccidum</i>	hanging spleenwort, makawe
<i>Asplenium oblongifolium</i>	shining spleenwort
<i>Asplenium polyodon</i>	sickle spleenwort, petako
<i>Astelia solandri</i>	kowharawhara
<i>Astelia trinervia</i>	
<i>Austroderia fulvida</i>	kakaho, toetoe
* <i>Axonopus fissifolius</i>	narrow-leaved carpet grass
<i>Beilschmiedia tawa</i>	tawa
* <i>Berberis glaucocarpa</i>	barberry
<i>Blechnum chambersii</i>	nini, lance fern
<i>Blechnum colensoi</i>	peretao, paretao
<i>Blechnum discolor</i>	crown fern, piupiu, petipeti
<i>Blechnum filiforme</i>	climbing hard fern, thread fern
<i>Blechnum fluviatile</i>	kiwakiwa, kiwikiwi
<i>Blechnum fraseri</i>	
<i>Blechnum membranaceum</i>	
<i>Blechnum nigrum</i>	black fern
<i>Blechnum novae-zelandiae</i>	kiokio

<i>Blechnum procerum</i>	kiokio, small kiokio
<i>Brachyglottis kirkii</i> var. <i>kirkii</i>	Kirks daisy
<i>Brachyglottis repanda</i>	rangiora, bushman's friend
<i>Bulbophyllum pygmaeum</i>	
<i>Caladenia chlorostyla</i>	
<i>Cardiomanes reniforme</i>	kidney fern, raurenga
<i>Carex breviculmis</i>	
<i>Carex lambertiana</i>	
<i>Carpodetus serratus</i>	putaputaweta, marbleleaf
* <i>Centaureum erythraea</i>	centaury
<i>Centella uniflora</i>	
<i>Chiloglottis cornuta</i>	green bird orchid
<i>Clematis cunninghamii</i>	scented clematis, pokopoko
<i>Clematis paniculata</i>	clematis, puawhananga
<i>Collospermum hastatum</i>	kahakaha
* <i>Conyza sumatrensis</i>	
<i>Coprosma arborea</i>	mamangi, tree coprosma
<i>Coprosma grandifolia</i>	raurekau, kanono, mamono
<i>Coprosma lucida</i>	karamu, shining karamu
<i>Coprosma robusta</i>	karamu
<i>Coprosma spathulata</i> subsp. <i>spathulata</i>	
<i>Cordyline australis</i>	cabbage tree, ti-kouka
<i>Cordyline banksii</i>	forest cabbage tree, ti ngahere
<i>Cordyline pumilio</i>	ti rauriki, dwarf cabbage tree
<i>Corokia buddleioides</i>	korokio-taranga
<i>Corybas "Kaimai"</i>	
<i>Corybas acuminatus</i>	
<i>Corybas oblongus</i>	
<i>Corybas trilobum</i>	
* <i>Crepis capillaris</i>	hawkesbeard
<i>Cyathea cunninghamii</i>	slender tree fern, gully tree fern
<i>Cyathea dealbata</i>	ponga, silver fern
<i>Cyathea medullaris</i>	mamaku, korau, black tree fern
<i>Cyathea smithii</i>	soft-leaved tree fern, katote
<i>Dacrydium cupressinum</i>	rimu, red pine
* <i>Dactylis glomerata</i>	cocksfoot
<i>Dianella nigra</i>	blueberry, turutu
<i>Dicksonia squarrosa</i>	wheki, harsh tree fern
* <i>Digitalis purpurea</i>	foxglove
<i>Diplazium australe</i>	
<i>Dracophyllum latifolium</i> agg.	needle-leaved neinei
<i>Drosera auriculata</i>	
<i>Drymoanthus adversus</i>	
<i>Dysoxylum spectabile</i>	kohekohe

<i>Earina autumnalis</i>	Easter orchid, raupeka
<i>Earina mucronata</i>	spring orchid, peka-a-waka
<i>Echinopogon ovatus</i>	hedgehog grass
<i>Elaeocarpus dentatus</i>	hinau
* <i>Eragrostis brownii</i>	bay grass
* <i>Erica caffra</i>	hedge heath
<i>Euchiton involucratus</i>	creeping cudweed
<i>Freycinetia banksii</i>	kiekie
<i>Fuscospora truncata</i>	hard beech, tawhairaunui
<i>Gabnia pauciflora</i>	
<i>Gabnia setifolia</i>	
* <i>Gamochaeta coarctata</i>	
* <i>Gamochaeta purpurea</i>	
<i>Gaultheria antipoda</i>	snowberry, tawiniwini
<i>Geniostoma ligustrifolium</i> var. <i>ligustrifolium</i>	hangehange, privet
<i>Gleichenia dicarpa</i>	waewaekaka, tangle fern
<i>Gonocarpus incanus</i> agg.	
<i>Gonocarpus micranthus</i>	
<i>Griselinia lucida</i>	puka
* <i>Hakea sericea</i>	needlebrush
<i>Haloragis erecta</i> subsp. <i>erecta</i>	toatoa
<i>Hebe stricta</i> var. <i>stricta</i>	koromiko
<i>Hedycarya arborea</i>	pigeonwood, porokaiwhiri
<i>Histiopteris incisa</i>	water fern
<i>Hydrocotyle dissecta</i>	
<i>Hydrocotyle moschata</i> var. <i>moschata</i>	
<i>Hydrocotyle novae-zeelandiae</i> var. <i>novae-zeelandiae</i>	common pennywort
<i>Hymenophyllum demissum</i>	piripiri, irirangi
<i>Hymenophyllum dilatatum</i>	lop-sided filmy fern
<i>Hymenophyllum flabellatum</i>	fan fern
<i>Hymenophyllum flexuosum</i>	
<i>Hymenophyllum frankliniae</i>	
<i>Hymenophyllum hyalii</i>	
<i>Hymenophyllum multifidum</i>	
<i>Hymenophyllum rarum</i>	wire-stemmed filmy fern
<i>Hymenophyllum revolutum</i>	
<i>Hymenophyllum sanguinolentum</i>	blood-scented filmy fern
<i>Hymenophyllum scabrum</i>	coarse-haired filmy fern
* <i>Hypochaeris radicata</i>	catsear
<i>Hypolepis distans</i>	
<i>Ixerba brexioides</i>	tawari
* <i>Jacobaea vulgaris</i>	ragwort
* <i>Juncus articulatus</i>	jointed rush
* <i>Juncus effusus</i> var. <i>effusus</i>	soft rush

* <i>Juncus tenuis</i> subsp. <i>tenuis</i>	track rush
<i>Knightia excelsa</i>	rewarewa, NZ honeysuckle
<i>Kunzea ericoides</i> var. <i>ericoides</i>	kanuka, white teatree
<i>Lagenophora pumila</i>	
<i>Lagenophora strangulata</i>	paranui
<i>Lastreopsis glabella</i>	felted fern
<i>Lastreopsis hispida</i>	hairy fern, hairy legs
<i>Laurelia novae-zelandiae</i>	pukatea
<i>Leptecophylla juniperina</i> subsp. <i>juniperina</i>	
<i>Leptolepia novae-zelandiae</i>	lacey fern
<i>Leptopteris hymenophylloides</i>	single crepe fern, heruheru
<i>Leptospermum scoparium</i> var. <i>scoparium</i>	manuka, red teatree
* <i>Leucanthemum vulgare</i>	oxeye daisy
<i>Leucopogon fasciculatus</i>	mingimingi, kaikaitau
<i>Leucopogon fraseri</i>	patotara
* <i>Leycesteria formosa</i>	Himalayan honeysuckle
<i>Libertia grandiflora</i>	
<i>Libertia micrantha</i>	star herb
<i>Libocedrus plumosa</i>	kawaka
<i>Lindsaea linearis</i>	mudwort
<i>Lindsaea trichomanoides</i>	
<i>Litsea calicaris</i>	mangeao
<i>Lobelia anceps</i>	wild lobelia
<i>Lophomyrtus bullata</i>	ramarama
* <i>Lotus pedunculatus</i>	lotus major
<i>Loxogramme dictyopteris</i>	
<i>Lycopodiella cernua</i>	carpet clubmoss
<i>Lycopodiella lateralis</i>	puakarimu
<i>Lycopodium deuterodensum</i>	waewae-koukou, climbing clubmoss
<i>Lycopodium volubile</i>	mangemange, bushman's mattress
<i>Lygodium articulatum</i>	
<i>Machaerina tenax</i>	
<i>Meliccytus micranthus</i> var. <i>microphyllus</i>	manakura, swamp mahoe
<i>Meliccytus ramiflorus</i>	mahoe
<i>Metrosideros albiflora</i>	white rata, akatea
<i>Metrosideros diffusa</i>	white climbing rata, akatea
<i>Metrosideros fulgens</i>	scarlet rata, winter rata
<i>Metrosideros perforata</i>	aka, small white rata
<i>Metrosideros robusta</i>	northern rata
<i>Microlaena avenacea</i>	bush rice grass, oat grass
<i>Microlaena stipoides</i>	forest rice grass
<i>Microsorium novae-zelandiae</i>	fragrant fern
<i>Microsorium pustulatum</i> subsp. <i>pustulatum</i>	hounds tongue, kowaowao
<i>Microsorium scandens</i>	mokimoki, fragrant fern

<i>Microtis unifolia</i>	onion orchid
<i>Mida salicifolia</i>	willow-leaved maire
* <i>Miscanthus nepalensis</i>	Himalayan fairy grass
<i>Morelotia affinis</i>	
<i>Muehlenbeckia australis</i>	pohuehue, wire vine
* <i>Mycelis muralis</i>	wall lettuce
<i>Myrsine australis</i>	red matipo, mapou
<i>Myrsine salicina</i>	toro
<i>Nertera depressa</i> agg.	common nertera
<i>Nertera dichondrifolia</i>	hairy nertera
<i>Nestegis cunninghamii</i>	black maire
<i>Notogrammitis billardierei</i>	common strap fern
<i>Notogrammitis ciliata</i>	hairy strap fern
<i>Notogrammitis heterophylla</i>	
<i>Olearia rani</i> var. <i>colorata</i>	heketara
<i>Oplismenus hirtellus</i> subsp. <i>imbecillis</i>	oat grass
<i>Orthoceras novae-zeelandiae</i>	
<i>Oxalis exilis</i> ss	yellow oxalis, creeping oxalis
<i>Paesia scaberula</i>	scented fern, matata, ring fern
<i>Parsonsia heterophylla</i>	maori jasmine, kaihu, kaiwhiria
* <i>Paspalum dilatatum</i>	paspalum
<i>Phlegmariurus varius</i>	hanging clubmoss, iwituna
<i>Phormium cookianum</i> subsp. <i>cookianum</i>	mountain flax, wharariki
<i>Phyllocladus totoa</i>	tootoa
<i>Phyllocladus trichomanoides</i>	tanekaha, celery pine
* <i>Phytolacca octandra</i>	inkweed
* <i>Pinus pinaster</i>	maritime pine
* <i>Pinus radiata</i>	Monterey pine, radiata
<i>Piper excelsum</i> subsp. <i>excelsum</i>	kawakawa, pepper tree
<i>Pittosporum colensoi</i>	
<i>Pittosporum cornifolium</i>	tawhirikaro, perching kohukohu
<i>Pittosporum kirkii</i>	thick-leaved kohuhu
* <i>Plantago major</i>	broad-leaved plantain
<i>Pneumatopteris pennigera</i>	gully fern, pakau, pakauharoha
<i>Podocarpus cunninghamii</i>	Hall's totara, thin bark totara
<i>Pomaderris amoena</i>	tauhinu
<i>Prumnopitys ferruginea</i>	miro, brown pine
* <i>Prunella vulgaris</i>	selfheal
<i>Pseudopanax arboreus</i> agg.	five finger, puhou, whaupaku
<i>Pseudopanax crassifolius</i>	lancewood, horoeka
<i>Pseudopanax laetus</i>	
<i>Pseudowintera axillaris</i>	horopito
<i>Pteridium esculentum</i>	bracken, rauaruhe
<i>Pteris macilenta</i>	sweet fern

<i>Pterostylis</i> aff. <i>montana</i>	
<i>Pterostylis agathicola</i>	
<i>Pterostylis alobula</i>	
<i>Pterostylis banksii</i>	tutukiwi
<i>Pterostylis cardiostigma</i>	
<i>Pterostylis graminea</i>	grassy hooded orchid
<i>Pterostylis trullifolia</i>	trowel-leaved orchid
<i>Pyrrosia eleagnifolia</i>	leather-leaf fern
<i>Quintinia serrata</i> agg.	quintinia, tawheowheo
<i>Raukawa anomalus</i>	whauwhaupaku
<i>Raukawa edgerleyi</i>	rauakawa
<i>Raukawa simplex</i>	haumakoroa
<i>Rhopalostylis sapida</i>	nikau
<i>Ripogonum scandens</i>	supplejack, kareao
<i>Rubus australis</i>	bush lawyer
<i>Rubus cissoides</i>	bush lawyer, tataramoa
* <i>Rubus fruticosus</i> agg.	blackberry
<i>Rubus schmidelioides</i> var. <i>schmidelioides</i>	bush lawyer, tataramoa
<i>Rumohra adiantiformis</i>	butcher's fern
<i>Rytidosperma gracile</i>	forest fairy grass
* <i>Rytidosperma penicillatum</i>	
<i>Schefflera digitata</i>	pate, patae, kotete
<i>Schizaea bifida</i>	forked comb fern
<i>Schoenus apogon</i>	
<i>Schoenus maschalinus</i>	
<i>Schoenus tendo</i>	
* <i>Selaginella kraussiana</i>	
* <i>Senecio bipinnatisectus</i>	Australian fireweed
<i>Senecio glomeratus</i>	fireweed
* <i>Sonchus oleraceus</i>	sow thistle, puha, puka
* <i>Sporobolus africanus</i>	needle grass, rat's tail
<i>Sticherus cunninghamii</i>	umbrella fern, kotuku, tapuwae
<i>Thelymitra aemula</i>	
<i>Thelymitra carnea</i>	
<i>Thelymitra longifolia</i>	white sun orchid
<i>Thelymitra nervosa</i>	broad-leaved sun orchid
<i>Thelymitra pauciflora</i>	
<i>Thelymitra tholiformis</i>	
<i>Tmesipteris elongata</i>	
<i>Tmesipteris lanceolata</i>	
<i>Tmesipteris tannensis</i>	chain fern, fork fern
<i>Toronia toru</i>	toru
<i>Trichomanes endlicherianum</i>	rock mat fern
<i>Trichomanes venosum</i>	veined bristle fern

* <i>Trifolium repens</i>	white clover
* <i>Ulex europaeus</i>	gorse
<i>Uncinia banksii</i>	
<i>Uncinia ferruginea</i>	
<i>Uncinia gracilentata</i>	
<i>Uncinia leptostachya</i>	
<i>Uncinia uncinata</i>	watu
<i>Uncinia zotovii</i>	
<i>Veronica plebeia</i>	Australian speedwell
<i>Vitex lucens</i>	pururi, kauere
<i>Wahlenbergia violacea</i>	blue harebell, rimu-roa
<i>Weinmannia racemosa</i>	kamahi, towai, tawhero
<i>Winika cunninghamii</i>	bamboo orchid