

Te Moehau, Coromandel

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Te Moehau is the highpoint of the Coromandel Peninsula rising 892 m asl and is the northern limit for a number of montane plants. James Adams was the earliest botanist known to visit Te Moehau in 1888 and noted (Adams, 1888), amongst other things, the occurrence of *Celmisia incana*, *Pentachondra pumila*, *Ourisia macrophylla*, *Carpha alpina*, *Phyllocladus alpina*, *Oreobolus australis* [*pectinatus*] and *Dacrydium* [*Halocarpus*] *bidwillii*. More recently Gardner and Smith-Dodsworth (1984) undertook a survey of the native plants species of Moehau and identified 269 species. They state "Two old collections, of *Dicksonia lanata* and *Brachyglottis myrianthos*, have been included although they probably were taken elsewhere in the Moehau Range". In between times Lucy Moore published a paper describing the botany on three high peaks overlooking the Hauraki Gulf - Hauturu, Mt. Hobson and Te Moehau. She notes the apparent disappearance of *Cordyline indivisa*, *Gaultheria depressa* var. *novae-zelandiae* and *Juncus novae-zelandiae* from Moehau since Adams' 1888 survey (Moore, 1973).

In addition to being the northern limit for several montane species Te Moehau forms an important habitat for one particular group of New Zealand natives. Molloy (2001) states "Moehau is clearly a very special place for native conifers, harbouring many species of interest. At least three native conifers reach their northern limit there, and all New Zealand genera except *Manoao* are represented in the vicinity." He notes the presence of *Podocarpus totara*, *P. hallii*, *P. hallii* x *P. totara*, *Dacrycarpus dacrydioides*, *Dacrydium cupressinum*, *Prumnopitys ferruginea*, *Phyllocladus trichomanoides*, *Phyllocladus toatoa*, *Phyllocladus* aff. *alpinus*, *Podocarpus hallii* x *P. nivalis*, *Halocarpus biformis*, *Lepidothamnus intermedius* and *Libocedrus bidwillii*. Molloy goes on to state "I did not see *Podocarpus nivalis*, *Halocarpus bidwillii*, *Libocedrus plumosa* or *Manoao colensoi* referred to by previous authors/collectors, and it is unlikely that these conifers occur on Moehau." However collections by de Lange of *Libocedrus plumosa* (AK 256168) and *Manoao colensoi* (AK 256167) in December 2001 confirms the presence of two of these.

Te Moehau has particular significance to Maori. The peak is the legendary burial place of Tama Te Kapua, leader of the Arawa canoe during its migration to New Zealand. Adams observed during his 1888 trip to the area "The Maoris, who are rather numerous on the coast at Otautu, Waiaro and Port Charles, have a great dread of the upper parts of the mountain. They say that long ago their numbers were much greater than at present, and that every port from Cabbage Bay on the west to Matamataharakeke on the east was thickly populated by the powerful and warlike tribe of Ngatirongo. In those good old times the interior was occupied, they say, by Turehu or Patupaiarehe, a race

short in stature and of fair skin...The Turehu could often be heard - voices of men, and women and children were audible in the dense bush on misty days and on dark nights...their home was near the summit of the mountain. The dread of the Turehu no doubt hindered the natives from ascending the mountain..." (Adams, 1888). Today the upper area of the mountain, including the summits of Little Moehau and of Te Moehau itself, are waahi tapu as a sign of respect to the resting place of Tama Te Kapua. The area is administered by the Moehau Nga Tangata Whenua Trust Board.

The botany of the nearby high peaks of Coromandel Peninsula were well known to Adams prior to his trip to the summit of Te Moehau. He observes (Adams, 1888) "I must, however, confess my belief that, if a suspicion existed among botanists that the top of Te Moehau was a veritable garden of rare plants that could not be found nearer than the Ruahine Range, in Hawkes Bay District, this would have been sufficient inducement to have had the mountain-top explored long ago. There was no ground for such a suspicion". While altitude must be one reason for the occurrence of such a range of interesting plants the geology of Te Moehau must also be considered as a contributing factor. Greywacke and argillite form a deep bed - the Moehau series - that fossils appear to be absent from. Atop this lies the Manaia Hill series consisting of conglomerates, grits, shales and fossils of Jurassic age. It is most likely that this series was laid down in shallow water. The Moehau and Manaia Hill series were then folded and elevated during a mountain building phase (orogeny). At the beginning of the Tertiary this land mass underwent a period of erosion. The low lying areas were submerged and received deposition of limestone, conglomerates and shales. This, the Torehine series, gave rise to coal seams. The rest of the Tertiary was made up of three periods of volcanism. "Great piles of tuffs, breccias and lavas from numerous volcanic vents led to a great accumulation of material as much as 2,000ft thick" (Mackadam, 1950). The hydrothermal action of volcanic tuffs and lavas on the deposits of sinter, quartz and ore deposits that followed provided the gold of the Coromandel region.

On the 23rd March 2002 a small group of Auckland Botanical Society members ascended Te Moehau from the western side at (Te) Hope Stream. Paradise shelducks and wild turkeys were numerous in the paddocks surrounding the lower reaches of the Te Hope Stream. Small clumps of mist flower (*Ageratina riparia*) inhabited the shaded stream-banks close to the track. On the hillside to the north of the stream mature kanuka and manuka stands dominated the views. In the mid 1930s Cranwell and Moore (1936) noted "Regeneration of kauri and its associated species occurs freely wherever milled areas have been

allowed to revert to second growth, but much of the land has so suffered from continual burning that the ground may be altogether bare or poorly covered by a low stubborn growth of *Leptospermum scoparium*....".

Upon exiting the pasture area the track passes through a broadleaf-conifer forest where kohekohe, mahoe, tawa, taraire, rewarewa, kauri and miro overtop smaller shrubs such as *Coprosma robusta*, *C. arborea* and *Alseuosmia macrophylla* and common fern species *Asplenium bulbiferum*, *Blechnum* spp. The groundcover of the forest near the margins tends to be particularly sparse providing excellent habitat for wineberry (*Aristotelia serrata*). Goats and pigs are not uncommon on the mountain (D. Hitchcock, pers. comm.) and the occasional signs of browsing were observed during the walk to the summit. The approach to the start of the leading ridge was along an undulating streamside track.

From this point on the track topography and vegetation of the surrounding bush changed dramatically. The track became significantly steeper and it cut more or less straight up the side of the hill to join with the origin of the summit ridge. The vegetation became noticeably denser. *Alseuosmia macrophylla*, *Olearia furfuracea*, *Coprosma arborea*, and *Blechnum* spp. overtopped the track which had eroded into a knee deep trench. The occasional example of northern tree rata (*Metrosideros robusta*) towered above the canopy. Orchid species were particularly common in this area of the forest with an abundance of *Winika cunninghamii*, *Earina mucronata*, *Earina autumnalis* (flowering), *Bulbophyllum pygmaeum* (fruiting), *Drymoanthus adversus* and *Acianthus sinclairii*.

Towards the top of this first main ridge *Myrsine salicina*, *Brachyglottis kirkii*, kamahi (*Weinmannia racemosa*) and hinau (*Elaeocarpus dentatus*) were common along with the occasional specimen of pukatea (*Laurelia novae-zealandiae*). Two species of *Libertia* (*L. ixiodes* and *L. pulchella*) were seen in the middle of the track. Soon after sub montane forest species began to appear. *Quintinia serrata*, *Ascarina lucida*, *Pseudowintera* spp., *Ixerba brexiodes*, *Dracophyllum latifolium* and *D. sinclairii* were all relatively widespread here. The canopy seemed a lot closer now and it wasn't long before the group burst out of the thick bush into an open grassed area.

At this point during the stop for lunch a quick scan of the surrounding bush resulted in several notable additions to our list including *Corokia buddleoides*, *Libocedrus bidwillii*, *Phyllocladus toatoa*, and *Ozothamnus leptophyllus*. Looking like something from the age of the

dinosaurs the distinctive *Dracophyllum traversii* rises well above the surrounding stunted vegetation, it's bronze leaves shining in the glare of the early afternoon sun. A solitary example of *Raukaua anomalus* was identified growing amongst the sea of *Microlaena avenacea*. This appears to be the dominant grass, a feature noted by Cranwell and Moore (1934) who stated almost seventy years ago "This replacement of one formation (forest) by another (grassland) is the more remarkable in that it has occurred without the intervention of bush felling or fire, but depends simply upon the progressive action of introduced animals - cattle, pigs and goats." This area forms the junction of where the two tracks ascending the mountain (the Te Hope Stream track on the west and the Stony Bay track to the east) join the track that leads into the waahi tapu area (and ultimately to the summit itself).

Soon after passing into the waahi tapu area the track led into a *Sphagnum* dominated wetland. The group was encouraged to show caution when making their way through the area in order to minimize damage to the fragile surrounds. *Baumea tenax*, *Juncus gregifforus*, *Schoenus tendu*, *Isolepis reticularis*, *Lepidosperma australe* and the introduced rush *Juncus articulatus* were all common in and around the margins of this wetland. From here the track led back into bush dominated by *Ascarina*, *Pseudowintera* and *Quintinia*. The track itself was badly eroded and was effectively a thigh high trench - the cumulative result of years of use and water erosion.

Upon emerging from the forest the route to the summit of Little Moehau was obvious (as was the density of *Phormium cookianum*). En route to the summit *Carpha alpina* and *Luzuriaga parviflora* (with it's distinctive stripping on the underside of the leaf)



Celmisia incana photographed near the summit of Little Moehau

could be seen nestled beneath fruiting *Gaultheria antipoda*. The delicate *Viola filicaulis* was not uncommon amongst the rocks on the final summit approach as was *Kelleria dieffenbachii*. It wasn't until 50m from the summit of Little Moehau that the prized sighting of *Celmisia incana* was declared. From then on numerous clumps of the light green plants were observed seemingly thriving in one of their northernmost locales. Further on another highlight was *Ourisia colensoi*, located at the base of the summit rocks on a west facing aspect. Around thirty individual plants were noted after a brief count. It is likely there were a significant number more due to the abundance of similar (but inaccessible) habitat in the vicinity.

The summit of Little Moehau is home to stunted examples of *Weinmannia racemosa*, *Pyllocladus alpina*, *Ascarina lucida*, *Androstoma empetrifolia*, *Gaultheria antipoda*, *Corokia buddleoides*, *Halocarpus biformis* and *Olearia furfuracea*. Beneath these grow the smaller woody shrubs and herbs such as *Carpha alpina*, *Luzuriaga parviflora*, *Pentachondra pumila*, *Oreobolus pectinatus* and *Celmisia incana* - but curiously not it's close relative *C. adamsii* that does occur on nearby Castle Rock (AK 157194) and Maratoto (AK 237587) further to the south. Superb views to the eastern coastline took in Stony Bay and Waikawau. Further out to sea Cuvier Island and the Mercury Island Group could be seen. To the north the summit of Mt. Hobson (Great Barrier Island) was visible and to the west Waiheke Island appeared quite close nestled in the Hauraki Gulf.

Unfortunately we were short of time and a trip out to the true summit of Moehau was not possible. Chambers and Mason (1950) comment "The main peak, Big Moehau ...supports a stunted vegetation, the tallest plants being *Dracophyllum recurvatum* [*D. latifolium*], *Libocedrus plumosa* [? *L. bidwillii*] and the three species of *Phyllocladus*...almost $\frac{3}{4}$ mile [c.1.2km] distant is the double rocky peak of Little Moehau, which is about 50ft. [c.15m] lower...Little Moehau, being more isolated and windswept, supports a truly alpine vegetation..." and go on to say (in the context of the general flora of Te Moehau only) "...*Poa colensoi* and *Drapetes* [*Kelleria*] *dieffenbachii* appear to be confined to the isolated peaks of Little Moehau".

James Adams (1888) stated "There is nothing upon the mountain to support life -neither bird nor beast - ...as no kauri grows there above the level of 1000ft. [c.300m], there is no attraction for the gumdigger: so that, after a few expeditions have been made to fully explore the summit for plants, Te Moehau will

probably be left undisturbed except by the wind." Unfortunately, this was not the case. "...after Adam's ascent of the mountain in January, 1888, the summit remained practically untouched until the trig-station was erected about twenty years ago. Assisted by survey lines cut at that time, introduced animals (especially goats and pigs) have now gained access to all higher ground and have wrought havoc on all sides." (Cranwell and Moore, 1936) During our brief visit there were, however, few signs of pig and goat activity in the upper reaches of the track and on the summit of Little Moehau.

The well used track crossing the Colville Range from Te Hope Stream on the western side to Stony Bay on the east forms a permanent scar through the forest. Where this track continues into the first section of the waahi tapu section it travels through a delicate sphagnum bog. It may be reasonable to cut a new track around the edge of the wetland if a suitable path could be found. Local iwi are attempting to minimise the erosion and damage to this sensitive area by limiting the number of people that access the summit region. Conversely the relatively few numbers of weeds on the mountain was refreshing to see. Aside from small areas of mist flower seen streamside during the initial approach through stock paddocks and some blackberry in the *Microlaena* grasslands, no weeds of consequence were seen.

Like most places throughout New Zealand, possums and mustelids have been a problem and are an ongoing threat to the resident flora and fauna. North Island brown kiwi are known to occur in significant numbers in the surrounding forests (Roxburgh, 2000) and Moehau is also known to be home to important populations of both Hochstetter's and Archey's frogs. The mountain is also home to "Rare land snails, stag beetles: *Dorcus* sp., *Lissoetes planus* and *L. stewartii* plus a range of other unusual invertebrates including an unnamed stick insect." (Humphreys & Tyler, 1990) Bellbirds were heard during our trip to the summit and this area of the Coromandel Peninsula is quoted as having the "northernmost resident N.Z. Falcon and northern mainland limit of rifleman" (McEwen, 1987). The Moehau Nga Tangata Whenua Trust are working alongside the Department of Conservation to carry out an extensive predator control programme on the lower slopes of Te Moehau. Early signs show this may be having an impact on at least the possum numbers with numerous kohekohe fruit seen on the track during the walk to the summit.

Native Vascular Plant List of Te Moehau

Ferns and Fern Allies

<i>Adiantum cunninghamii</i>	<i>Asplenium flaccidum</i>	<i>Blechnum fraseri</i>	<i>Cyathea smithii</i>	<i>Grammitis magellanica</i>
<i>Adiantum diaphanum</i>	<i>Asplenium lamprophyllum</i>	<i>Blechnum membranaceum</i>	<i>Dicksonia fibrosa</i>	<i>Grammitis pseudociliata</i>
<i>Adiantum fulvum</i>	<i>Asplenium oblongifolium</i>	<i>Blechnum nigrum</i>	<i>Dicksonia lanata</i> - #	<i>Histiopteris incisa</i>
<i>Adiantum hispidulum</i>	<i>Asplenium polyodon</i>	<i>Blechnum novae-zelandiae</i>	<i>Dicksonia squarrosa</i>	<i>Huperzia varia</i>
<i>Adiantum viridescens</i>	<i>Blechnum chambersii</i>	<i>Blechnum procerum</i>	<i>Doodia australis</i>	<i>Hymenophyllum</i>
<i>Anarthropteris lanceolata</i>	<i>Blechnum colensoi</i>	<i>Blechnum vulcanicum</i>	<i>Gleichenia dicarpa</i>	<i>demissum</i>
<i>Asplenium bulbiferum</i>	<i>Blechnum discolor</i>	<i>Ctenopteris heterophylla</i>	<i>Gleichenia microphylla</i>	<i>Hymenophyllum dilatatum</i>
spp. <i>bulbiferum</i>	<i>Blechnum filiforme</i>	<i>Cyathea dealbata</i>	<i>Grammitis billardierei</i>	<i>Hymenophyllum</i>
	<i>Blechnum fluviatile</i>	<i>Cyathea medullaris</i>	<i>Grammitis ciliata</i>	<i>ferrugineum</i>

<i>Hymenophyllum flabellatum</i>	<i>Phyllocladus toatoa</i>	<i>Euchiton gymnocephalus</i>	<i>Pseudognaphalium luteoalbum</i>	<i>Juncus planifolius</i>
<i>Hymenophyllum lyallii</i>	<i>Podocarpus hallii</i>	<i>Fuchsia excorticata</i>	<i>Pseudopanax arboreum</i>	<i>Juncus prismatocarpus</i>
<i>Hymenophyllum multifidum</i>	<i>Podocarpus totara</i>	<i>Galium propinquum</i>	<i>Pseudopanax colensoi</i>	<i>Lagenifera pumila</i>
<i>Hymenophyllum rarum</i>	<i>P. hallii</i> x <i>P. nivalis</i>	<i>Gaultheria antipoda</i>	<i>Pseudopanax crassifolius</i>	<i>Lepidosperma australe</i>
<i>Hymenophyllum revolutum</i>	<i>P. hallii</i> x <i>P. totara</i>	<i>Gaultheria depressa</i>	<i>Pseudopanax laetus</i>	<i>Libertia grandiflora</i>
<i>Hymenophyllum sanguinolentum</i>	<i>Prumnopitys ferruginea</i>	<i>Geranium potentilloides</i>	<i>Pseudopanax laetus</i>	<i>Libertia ixioides</i>
	<i>Prumnopitys spicatus</i>	<i>Gonocarpus incanus</i>	<i>Pseudowintera axillaris</i>	<i>Libertia micrantha</i>
<i>Hymenophyllum scabrum</i>		<i>Gonocarpus micranthus</i>	<i>Pseudowintera colorata</i>	<i>Luzuriaga parviflora</i>
<i>Hymenophyllum villosum</i>	Dicotyledons	<i>Griselinia littoralis</i>	<i>Quintinia serrata</i>	<i>Oreobolus pectinatus</i>
<i>Hymenophyllum armstrongii</i>	<i>Acaena anserinifolia</i>	<i>Griselinia ludida</i>	<i>Ranunculus reflexus</i>	<i>Phormium cookianum</i>
<i>Hypolepis ambigua</i>	<i>Acaena novae-zelandiae</i>	<i>Hebe macrocarpa</i>	<i>Raukaua anomalus</i>	<i>Rhopalostylis sapida</i>
<i>Hypolepis rufo-barbata</i>	<i>Alectryon excelsus</i>	<i>Hebe pubescens</i>	<i>Raukaua edgerleyi</i>	<i>Ripogonum scandens</i>
<i>Hypolepis tenuifolium</i>	<i>Alseuosmia macrophylla</i>	<i>Hebe ? stricta</i>	<i>Raukaua simplex</i>	<i>Schoenus maschalinus</i>
<i>Lastreopsis glabella</i>	<i>Anaphalioides trinervis</i>	<i>Hedycarya arborea</i>	<i>Rhabdothamnus solandri</i>	<i>Schoenus tendo</i>
<i>Lastreopsis hispida</i>	<i>Androstoma empetrifolia</i>	<i>Hydrocotyle heteromeria</i>	<i>Rubus australis</i>	<i>Uncinia banksii</i>
<i>Leptopteris hymenophylloides</i>	<i>Aristolelia serrata</i>	<i>Hydrocotyle moschata</i>	<i>Rubus cissoides</i>	<i>Uncinia rupestris</i>
<i>Lindsaea trichomanoides</i>	<i>Ascarina lucida</i>	<i>Ixerba brexioides</i>	<i>Schefflera digitata</i>	<i>Uncinia uncinata</i>
<i>Lycopodiella laterale</i>	<i>Beilschmiedia tarairi</i>	<i>Kelleria dieffenbachii</i>	<i>Senecio minimus</i>	<i>Uncinia zotovii</i>
<i>Lycopodium deuterodensum</i>	<i>Beilschmiedia tawa</i>	<i>Knighthia excelsa</i>	<i>Toronia toru</i>	
<i>Lycopodium scariosum</i>	<i>Beilschmiedia tawaroa</i>	<i>Kunzea ericoides</i>	<i>Viola filicaulis</i>	Grasses
<i>Lycopodium volubile</i>	<i>Brachyglottis kirkii</i>	<i>Laurelia novae-zelandiae</i>	<i>Vitex lucens</i>	<i>Microlaena avenacea</i>
<i>Lygodium articulatum</i>	<i>Brachyglottis myrianthos</i> —#	<i>Leionema nudum</i>	<i>Wahlenbergia littorcola</i>	<i>Microlaena stipoides</i>
<i>Marattia salicina</i>	<i>Brachyglottis repanda</i>	<i>Leptospermum scoparium</i>	<i>Weinmannia racemosa</i>	<i>Oplismenus hirtellus</i>
<i>Microsorium pustulatum</i>	<i>Callitriche muelleri</i>	<i>Leucopogon fasciculatus</i>	<i>Weinmannia sylvicola</i>	<i>Poa anceps</i>
<i>Microsorium scandens</i>	<i>Carmichaelia australis</i>	<i>Litsea calicaris</i>		<i>Poa colensoi</i>
<i>Paesia scaberula</i>	<i>Carpodetus serratus</i>	<i>Lophomyrtus bullata</i>	Monocots (excl. grasses & orchids)	<i>Rhytidosperra clavatum</i>
<i>Pneumatopteris pennigera</i>	<i>Celmisia incana</i>	<i>Macropiper excelsum</i>	<i>Astelia banksii</i>	<i>Rydidosperra gracile</i>
<i>Pteridium esculentum</i>	<i>Centella uniflora</i>	<i>Melicope ternata</i>	<i>Astelia nervosa</i>	<i>Rydidosperra setifolium</i>
<i>Pteris tremula</i>	<i>Clematis cunninghamii</i>	<i>Melicope ternata</i>	<i>Astelia solandri</i>	
<i>Pyrosia eleagnifolia</i>	<i>Clematis paniculata</i>	<i>Metrosideros albiflora</i>	<i>Astelia trinervia</i>	Orchids
<i>Rumohra adiantiformis</i>	<i>Coprosma arborea</i>	<i>Metrosideros diffusa</i>	<i>Baumea rubiginosa</i>	<i>Acianthus sinclairii</i>
<i>Schizaea australis</i>	<i>Coprosma australis</i>	<i>Metrosideros excelsa</i>	<i>Baumea tenax</i>	<i>Aporostylis bifolia</i>
<i>Schizaea fistulosa</i>	<i>Coprosma cf. macrocarpa</i>	<i>Metrosideros fulgens</i>	<i>Baumea teretifolia</i>	<i>Bulbophyllum pygmaeum</i>
<i>Sticherus cunninghamii</i>	<i>Coprosma colensoi</i>	<i>Metrosideros perforata</i>	<i>Carex cf. solandri</i>	<i>Caladenia carnea</i>
<i>Tmesipteris elongata</i>	<i>Coprosma dodonaeifolia</i>	<i>Metrosideros robusta</i>	<i>Carex dissita</i>	<i>Caladenia catenata</i>
<i>Tmesipteris lanceolata</i>	<i>Coprosma foetidissima</i>	<i>Metrosideros umbellata</i>	<i>Carex divulsa</i>	<i>Chiloglottis comuta</i>
<i>Tmesipteris sigmatifolia</i>	<i>Coprosma lucida</i>	<i>Muehlenbeckia australis</i>	<i>Carex lambertiana</i>	<i>Corybas acuminatus</i>
<i>Tmesipteris tannensis</i>	<i>Coprosma rhamnoides</i>	<i>Myrsine australis</i>	<i>Carpha alpina</i>	<i>Corybas cheesemanii</i>
<i>Trichomanes elongatum</i>	<i>Coprosma spathulata</i>	<i>Myrsine salicina</i>	<i>Collosperrum microspermum</i>	<i>Corybas oblongus</i>
<i>Trichomanes endlicherianum</i>	<i>Coprosma x cunninghamii</i>	<i>Nertera depressa</i>	<i>Collosperrum hastatum</i>	<i>Corybas rivularis</i>
<i>Trichomanes reniforme</i>	<i>Coriaria arborea</i>	<i>Nertera dichondrifolia</i>	<i>Cordyline banksii</i>	<i>Corybas trilobus</i>
<i>Trichomanes strictum</i>	<i>Corokia buddleioides</i>	<i>Nestegis lanceolata</i>	<i>Cordyline indivisa</i>	<i>Drymoanthus adversus</i>
<i>Trichomanes venosum</i>	<i>Corynocarpus laevigatus</i>	<i>Nestegis montana</i>	<i>Dianella nigra</i>	<i>Earina autumnalis</i>
	<i>Cyathodes juniperina</i>	<i>Olearia furfuracea</i>	<i>Freyinetia banksii</i>	<i>Earina mucronata</i>
	<i>Dactyanthus taylorii</i>	<i>Olearia rani</i>	<i>Gahnia pauciflora</i>	<i>Microtis unifolia</i>
	<i>Dracophyllum adamsii</i>	<i>Ourisia colensoi</i>	<i>Gahnia lacera</i>	<i>Prasophyllum colensoi</i>
Gymnosperms	<i>Dracophyllum latifolium</i>	<i>Ourisia lactea</i>	<i>Gahnia setifolia</i>	<i>Prasophyllum patens</i>
<i>Agathis australis</i>	<i>Dracophyllum sinclairii</i>	<i>Ozothamnus leptophyllus</i>	<i>Gahnia xanthocarpa</i>	<i>Pterostylis alobula</i>
<i>Dacrycarpus dacrydioides</i>	<i>Dracophyllum traversii</i>	<i>Parsonia capsularis</i>	<i>Isolepis ? distigmatosa</i>	<i>Pterostylis banksii</i>
<i>Dacrydium cupressinum</i>	<i>Drosera auriculata</i>	<i>Parsonia heterophylla</i>	<i>Isolepis inundata</i>	<i>Pterostylis trullifolia</i>
<i>Halocarpus biformis</i>	<i>Dysoxylum spectabile</i>	<i>Pentachondra pumila</i>	<i>Isolepis reticularis</i>	<i>Thelymitra cyanea</i>
<i>Lepidothamnus intermedius</i>	<i>Elaeocarpus dentatus</i>	<i>Peraxilla tetrapetala</i>	<i>Juncus gregiflorus</i>	<i>Thelymitra longifolia</i>
<i>Libocedrus plumosa</i>	<i>Elaeocarpus hookerianus</i>	<i>Pittosporum cornifolium</i>	<i>Juncus novae-zelandiae</i>	<i>Thelymitra venosa</i>
<i>Libocedrus bidwillii</i>	<i>Etelea arborescens</i>	<i>Pittosporum eugenioides</i>	Ext?	<i>Winika cunninghamii</i>
<i>Manoao colensoi</i>	<i>Epilobium alsinoides</i>	<i>Pittosporum kirkii</i>	<i>Juncus pallidus</i>	
<i>Phyllocladus trichomanoides</i>	<i>Epilobium brunnescens</i>	<i>Pittosporum tenuifolium</i>	<i>Juncus pauciflorus</i>	
<i>Phyllocladus alpinus</i>	<i>Epilobium pedunculare</i>	<i>Pittosporum umbellatum</i>		
<i>Phyllocladus glaucus</i>	<i>Epilobium rotundifolium</i>	<i>Pittosporum virgatum</i>		

Included by Gardner & Smith Dodsworth (1984) who note "they were probably taken elsewhere on the Moehau Range" Ext ? recorded previously but now possibly extinct on Moehau.

Note: This list encompasses records from previous expeditions to Te Moehau and also includes others verified in AK Herbarium. While no new additions were made to the list of native species known from Te Moehau during this trip (March 2002) extensive revisions have been made to the Gardner and Smith-Dodsworth list from eighteen years previous.

Acknowledgements:

Many thanks to Danny Hitchcock - Ngatirongo representative for guiding us on the trip and for sharing the history of the area with us; and thanks to the Moehau Nga Tangata Whenua Trust Board for their assistance in us gaining access to the area. The assistance provided by the Waikato Conservancy of the Department of Conservation (in particular Amy Hinaki, Joe Harawira, John Gaukrodger, Andrea Brandon and Jason Roxburgh) was most appreciated especially the short period of time in which they were able to put together a collection permit. Thanks to the staff of the Auckland Museum herbarium (AK) - Ewen Cameron and Mei Nee Lee - for providing electronic records of Te Moehau and access to the collection. Thank you to Peter de Lange and Rhys Gardner for their insight and knowledge of the flora of Te Moehau and Ewen Cameron for species identification and comments on the final draft of this article. Finally the author would like to acknowledge the time and efforts of Kerry Bodmin for not only proofing the initial drafts of this article but for her organization of the trip.

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The party - Left to right:
Mei Nee Lee, Holly Cox,
Sara Flynn, Kerry Bodmin,
Cameron Kilgour, Alan Flynn
and Steve McCraith

✧ *Baumea arthropphylla* at Mahurangi

Mike Wilcox

Baumea arthropphylla (Nees) Boeck. (syn. *Baumea huttonii* (T.Kirk) S.T.Blake) occurs in Australia and New Zealand. The synonymy of the earlier name with *B. arthropphylla* has been indicated by Wilson (1993). It forms a sedgeland in swamps, on lake shores or on the margins of small pools or streams, and is indicative of the very early stages of eutrophication (Clarkson & Clarkson 1987). In the central North Island, where it is best known, there are dense stands at L. Rerewhakaaitu, L. Rotoma, Hinehopu Mire, Waitangi Soda Springs, at Lake Rotopounamu (Turangi), Kuirau Park (Rotorua), Lake Tarawera, and Waipai Lagoon (Kaingaroa Forest).

Auckland Museum Records of this sedge in the Auckland region, kindly supplied by Ewen Cameron, are few and far between: AK 142959 Bethells Swamp, A E Wright, 1-5-77; AK 149846 Henderson Valley, wetland on roadside, A. E. Esler, 18-4-79; AK 169257 Cornwallis, Huia Rd, roadside grass verge, in wet ground, J. Mackinder, 26-2-85; AK 217934 Henderson Valley, No. 3 Road Scenic Reserve, broad stream bed, A. E. Esler & M. L. Scott, 1-2-79; AK 245869 Lake Otamatearua (Muir's Lake), Awhitu, local, with *Eleocharis sphacelata*, M. Butler, 7-1-00; AK 254507 Greenhithe, west of the Te Wharau Creek, locally common in open streamside manuka, R. O. Gardner,

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5-6-97; AK 27411 Huia, swamp, K. Wood, 11-8-51; AK 27977 Huia, Huia Stream, swamp near swing bridge, K. Wood, 11-8-51; AK 46098 Huia swamp, K. Wood, 8/55; AK 237832, Kaitoke Swamp, north-west part, Great Barrier Island, E. K. Cameron, 24-11-97, local, very wet area (c.1 m deep) amongst *Baumea rubiginosa* and *Eleocharis sphacelata*, "hut not pale enough, but inflorescence slender enough"- R O Gardner.

On 17 February 2002, during a mangrove boating trip up Dyers Creek, Mahurangi Harbour with David Skilton, I noticed a tall (1.5-2m) stand of a *Baumea* sedge at the margin of the creek on the western side of Bob and Sue Stevenson's "Uhuru" Farm, on the Pukapuka Peninsula. It was a lot taller than is usual for the common *B. rubiginosa*. Closer examination showed that the culms and leaves were somewhat flattened (see page 206 Moore & Edgar 1970), the tips sharply pointed, the nuts small and creamy-white, and the branchlets of the panicle drooping. It turned out to be *B. arthropphylla* – evidently the first time it has been recorded in the Warkworth area. On 20 April 2002, with the Bot Soc outing to the native bush on "Uhuru" Farm led by Maureen Young, I saw another colony of this species in a small wetland near the sea on the eastern side of the property.