

## Capella Road wetland and forest remnants, northern Mamaku Plateau

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On 11 December 2016 sixteen Waikato and Rotorua Botanical Society members turned out for a field trip to the relatively unexplored Capella Rd wetland and forest remnants which lie to the NE of Galaxy Road and SH 5 on the northern Mamaku plateau. This area is a mosaic of forest and wetland remnants mixed with old tramways and logging roads with some areas of *Pinus radiata* plantation and rank ex-grazed pasture areas.

Following the access track off SH 5 the group soon headed off track into a dense area of manuka-*Coprosma tayloriae* scrub with areas of *Machaerina rubiginosa* and *Sphagnum* spp. A bit of broom (*Cytisus scoparius*) and gorse (*Ulex europaeus*) were present on the margins here. A few pokaka (*Elaeocarpus hookerianus*), *Nertera scapanioides* and sundew (*Drosera binata*) were noted in here. Heading north we moved into forest dominating on the raised rhyolite knobs. This was tanekaha-rimu-tawari-Hall's totara-tawa forest with toatoa (*Phyllocladus toatoa*) present, with a subcanopy including miro (*Prumnopitys ferruginea*), pokaka (*Elaeocarpus hookerianus*) and kamahi (*Weinmannia racemosa*). In the understorey *Hymenophyllum demissum*, horopito (*Pseudowintera colorata*) crown fern (*Blechnum discolor*), bush rice grass (*Microlaena avenacea*), rohutu (*Neomyrtus pedunculata*), bush lawyer (*Rubus australis*), *Raukawa anomalus* and *Coprosma tayloriae* were common. The understorey was relatively sparse, but more dense under the tawa (*Beilschmiedia tawa*)-dominated areas with good podocarp regeneration in places.

We stopped for a lunch break on what was turning out to be a rather cold and showery summer day on the Mamaku plateau. With lunch completed we sneaked along the edge of a large wet grassy clearing with scattered wild and planted radiata pine around the margins. Around the edge of the clearing were small areas of dense and scattered manuka-*Coprosma tayloriae* scrub, with *Machaerina rubiginosa* and *Sphagnum* sp. present in the wetter areas together with the exotic *Carex demissa*. Traversing this we headed out



Figure 1: Rhyolite knob in tawa dominated forest with open understorey



Figure 2: *Coprosma tenuicaulis* on the margin of red and silver beech forest.

across the grassy browntop (*Agrostis capillaris*)-dominated clearing and through another belt of manuka (*Leptospermum scoparium*)-dominated scrub to finally reached the beech forest. Debate ensued regarding whether it was hard beech (*Fuscospora truncata*) or red beech (*Fuscospora fusca*) present. Consensus seemed to be that the large forest trees were mostly red beech together with silver beech (*Lophozonia menziesii*) but with some hard beech present as well in places. Red and silver beech are a significant local feature of this part of the Mamaku plateau and not found elsewhere on the plateau at this altitude. In the subcanopy tawari (*Ixerba brexioides*) and kamahi were dominating with more crown fern, *Raukawa anomalus*, *Astelia grandis*, horopito, katote (*Cyathea smithii*) and bush rice grass and occasional *Alseuosmia macrophylla*. The understorey was fairly dense, with mosses and lichens abundant in the obviously fairly wet environment. Epiphytes noted commonly included the perching orchids *Earina mucronata* and *E. autumnalis* plus the ferns *Asplenium flaccidum*, *Microsorium pustulatum* and *Hymenophyllum sanguinolentum*. New species noted here included *Coprosma rotundifolia* and *Lindsaea trichomaniioides*. Heading NE we continued through this forest type with a quick assessment of a rhyolite knob where *Gaultheria antipoda* was noted.

Eventually we broke out onto an old tramway/road running N-S towards Airstrip Rd. Here a pond was present beside the road with dense kuta (*Eleocharis sphacelata*) present. We followed the old tramway north for some distance making easy walking on the firm compacted surface. We reached some more open areas on a hard rhyolite knob which had been quarried in the past. This was mostly clothed in dense manuka scrub with some gorse present and occasional monoao (*Dracophyllum subulatum*) surrounded by red – silver beech forest with kamahi. There were still bare areas present amongst manuka scrub and these proved to be good areas for orchid hunting. Several *Pterostylis* species were present along with one plant of *Caladenia chlorostyla* and three lycopods – *L. denterodensum*, *L. scariosum* and *L. volubile*. Another highlight was *Lindsaea linearis*. On the negative side, a few new weed species not seen elsewhere in the block were noted along the road edge and amongst manuka scrub, including heather (*Calluna vulgaris*), grey

willow (*Salix cinerea*) saplings and a few silver birch (*Betula pendula*) – a few of which were removed then and there.

As it was now late afternoon we decided to retreat back to SH 5 and the vehicles along the tramline to the south. We headed through the radiata pine forest and struggled to cross a deep cutting which was, in fact, the old tramline. Once across this obstacle we retraced our steps out into the open areas and back to the vehicles. The general consensus from the participants was a very interesting and botanically varied site which no one had visited before and a very rewarding even if chilly and wet day!

### **Capella Road wetland and forest remnants, northern Mamaku Plateau species list**

Graeme Jane, Gael Donaghy & Rotorua Botanical Society

#### **Gymnosperm trees and shrubs**

|                                                                        |                                 |
|------------------------------------------------------------------------|---------------------------------|
| <i>Dacrycarpus dacrydioides</i>                                        | kahikatea, white pine           |
| <i>Dacrydium cupressinum</i>                                           | rimu, red pine                  |
| <i>Phyllocladus toatoa</i>                                             | toatoa                          |
| <i>Phyllocladus trichomanoides</i>                                     | tanekaha; celery pine           |
| * <i>Pinus radiata</i>                                                 | Monterey pine; radiata          |
| * <i>Pinus strobus</i>                                                 | Weymouth pine; strobus; white   |
| <i>Podocarpus laetus</i> ( <i>P. hallii</i> , <i>P. cunninghamii</i> ) | Hall's totara; thin bark totara |
| <i>Prumnopitys ferruginea</i>                                          | miro; brown pine                |
| <i>Prumnopitys taxifolia</i>                                           | matai; black pine               |

#### **Monocotyledonous trees and shrubs**

|                            |                        |
|----------------------------|------------------------|
| <i>Cordyline australis</i> | cabbage tree; ti-kouka |
|----------------------------|------------------------|

#### **Dicotyledonous trees and shrubs**

|                               |                               |
|-------------------------------|-------------------------------|
| <i>Alseuosmia macrophylla</i> | toropapa; shrubby honeysuckle |
| <i>Aristotelia serrata</i>    | wineberry; makomako           |
| <i>Beilschmiedia tawa</i>     | tawa                          |
| * <i>Berberis glaucocarpa</i> | barberry                      |
| * <i>Betula pendula</i>       | birch                         |
| <i>Brachyglottis repanda</i>  | rangiora; bushmans friend     |
| * <i>Calluna vulgaris</i>     | heather; ling                 |
| <i>Carpodetus serratus</i>    | putaputaweta; marbleleaf      |

|   |                                                       |                               |
|---|-------------------------------------------------------|-------------------------------|
|   | <i>Coprosma grandifolia</i>                           | raurekau; kanono; mamono      |
|   | <i>Coprosma lucida</i>                                | karamu; shining karamu        |
|   | <i>Coprosma propinqua</i> var. <i>propinqua</i>       | mingimingi                    |
|   | <i>Coprosma rhamnoides</i> agg                        | thorny coprosma               |
|   | <i>Coprosma robusta</i>                               | karamu                        |
|   | <i>Coprosma rotundifolia</i>                          | round-leaved coprosma         |
|   | <i>Coprosma tayloriae</i> ( <i>C. parviflora</i> (t)) |                               |
|   | <i>Coprosma tenuicaulis</i>                           |                               |
| * | <i>Cytisus scoparius</i>                              | broom                         |
|   | <i>Dracophyllum subulatum</i>                         | monoao                        |
|   | <i>Elaeocarpus dentatus</i>                           | hinau                         |
|   | <i>Elaeocarpus hookerianus</i>                        | pokaka                        |
| * | <i>Erica lusitanica</i>                               | Spanish heath                 |
|   | <i>Fuchsia excorticata</i>                            | fuchsia; kotukutuku           |
|   | <i>Fuscospora fusca</i> ( <i>Nothofagus</i> )         | red beech                     |
|   | <i>Fuscospora truncata</i> ( <i>Nothofagus</i> )      | hard beech; tawhairaunui      |
|   | <i>Gaultheria antipoda</i>                            | snowberry; tawiniwini         |
|   | <i>Griselinia littoralis</i>                          | broadleaf; kapuka             |
|   | <i>Griselinia lucida</i>                              | puka                          |
|   | <i>Ixerba brexioides</i>                              | tawari                        |
|   | <i>Kunzea robusta</i>                                 | kanuka                        |
|   | <i>Leptospermum scoparium</i> var. <i>scoparium</i>   | manuka; red teatree           |
|   | <i>Leucopogon fasciculatus</i>                        | mingimingi; kaikaitau         |
|   | <i>Lophozonia menziesii</i> ( <i>Nothofagus</i> )     | silver beech; tawhai          |
|   | <i>Melicytus ramiflorus</i>                           | mahoe                         |
|   | <i>Myrsine salicina</i>                               | toro                          |
|   | <i>Neomyrtus pedunculata</i>                          | rohutu                        |
|   | <i>Nestegis lanceolata</i>                            | white maire                   |
|   | <i>Nestegis montana</i>                               | orooro; narrow-leaved maire   |
|   | <i>Pseudopanax arboreus</i> agg.                      | five finger; puhou; whaupaku  |
|   | <i>Pseudopanax crassifolius</i>                       | lancewood; horoeaka           |
|   | <i>Pseudowintera axillaris</i>                        | horopito                      |
|   | <i>Pseudowintera colorata</i>                         | pepperwood; mountain horopito |
|   | <i>Raukaua anomalus</i>                               | whauwhaupaku                  |
|   | <i>Raukaua edgerleyi</i>                              | raukawa                       |
| * | <i>Salix cinerea</i>                                  | grey willow                   |
|   | <i>Schefflera digitata</i>                            | pate; patae; kotete           |
| * | <i>Ulex europaeus</i>                                 | gorse                         |
|   | <i>Weinmannia racemosa</i>                            | kamahi; towai; tawhero        |

## Monocotyledonous lianes

*Ripogonum scandens*

supplejack; kareao

## Dicotyledonous lianes and related trailing plants

*Clematis paniculata*

clematis; puawhananga

*Metrosideros diffusa*

white climbing rata; akatea

*Metrosideros fulgens*

scarlet rata; winter rata

*Muehlenbeckia australis*

poheuheu

*Parsonsia capsularis* var. *capsularis*

small flowered jasmine; akakior

*Parsonsia heterophylla*

maori jasmine; kaihu; kaiwhiria

*Rubus australis*

bush lawyer

*Rubus cissoides*

bush lawyer; tataramoa

\* *Rubus fruticosus* agg.

blackberry

## Psilopsids, Lycopods & Quillworts

*Lycopodium deuterodensum*

puakarimu

*Lycopodium scariosum*

creeping clubmoss

*Lycopodium volubile*

waewae-koukou; climbing clubmoss

*Phlegmariurus varius*

hanging clubmoss; iwituna

## Ferns

*Asplenium bulbiferum*

hen and chickens fern; moku

*Asplenium flaccidum* ss

hanging spleenwort; makawe

*Asplenium polyodon*

sickle spleenwort; petako

*Blechnum chambersii*

nini; lance fern

*Blechnum discolor*

crown fern; piupiu; petipeti

*Blechnum fluviatile*

kiwakiwa; kiwikiwi

*Blechnum novae-zelandiae*

kiokio

*Blechnum penna-marina*

alpine blechnum

*Blechnum vulcanicum*

*Cyathea dealbata*

ponga; silver fern

*Cyathea smithii*

soft-leaved tree fern; katote

*Dicksonia fibrosa*

wheki-ponga; kuripaka

*Dicksonia squarrosa*

wheki; harsh tree fern

*Gleichenia dicarpa*

waewaekaka; tangle fern

*Histiopteris incisa*

water fern

*Hymenophyllum bivalve*

*Hymenophyllum demissum*

piripiri; irirangi

*Hymenophyllum dilatatum*

lop-sided filmy fern

*Hymenophyllum flabellatum*

fan fern

*Hymenophyllum flexuosum*

*Hymenophyllum frankliniae*

|                                                         |                                 |
|---------------------------------------------------------|---------------------------------|
| <i>Hymenophyllum multifidum</i>                         |                                 |
| <i>Hymenophyllum nephrophyllum</i>                      | kidney fern; raurenga           |
| <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>Hypolepis rufobarbata</i>                            | sticky pig fern                 |
| <i>Leptopteris hymenophylloides</i>                     | single crepe fern; heruheru     |
| <i>Leptopteris hymenophylloides</i> x <i>L. superba</i> |                                 |
| <i>Leptopteris superba</i>                              | Prince of Wales feather         |
| <i>Lindsaea linearis</i>                                | mudwort                         |
| <i>Lindsaea trichomanoides</i>                          |                                 |
| <i>Loxogramme dictyopteris</i>                          |                                 |
| <i>Lygodium articulatum</i>                             | mangemange; bushmans mattress   |
| <i>Microsorium pustulatum</i> ssp. <i>pustulatum</i>    | hounds tongue; kowaowao         |
| <i>Notogrammitis billardiarei</i>                       | common strap fern               |
| <i>Notogrammitis heterophylla</i>                       |                                 |
| * <i>Osmunda regalis</i>                                | royal fern                      |
| <i>Paesia scaberula</i>                                 | scented fern; matata; ring fern |
| <i>Polystichum vestitum</i>                             | prickly shield fern; punui      |
| <i>Pteridium esculentum</i>                             | bracken; rauaruhe               |
| <i>Pyrrosia eleagnifolia</i>                            | leather-leaf fern               |
| <i>Rumohra adiantiformis</i>                            | butcher's fern                  |
| <i>Tmesipteris elongata</i>                             |                                 |
| <i>Tmesipteris tannensis</i>                            | chain fern; fork fern           |
| <i>Trichomanes venosum</i>                              | veined bristle fern             |

## Orchids

|                                        |                            |
|----------------------------------------|----------------------------|
| <i>Caladenia minor</i>                 |                            |
| <i>Corybas acuminatus</i>              |                            |
| <i>Corybas cheesemanii</i>             |                            |
| <i>Dendrobium cunninghamii</i>         | bamboo orchid              |
| <i>Earina autumnalis</i>               | Easter orchid; raupeka     |
| <i>Earina mucronata</i>                | spring orchid; peka-a-waka |
| <i>Orthoceras novae-zeelandiae</i>     |                            |
| <i>Pterostylis</i> aff. <i>montana</i> |                            |
| <i>Pterostylis cardiostigma</i>        |                            |
| <i>Pterostylis graminea</i>            | grassy hooded orchid       |
| <i>Pterostylis montana</i>             |                            |
| <i>Thelymitra longifolia</i>           | white sun orchid           |
| <i>Thelymitra pauciflora</i>           |                            |

## Grasses

|   |                              |                            |
|---|------------------------------|----------------------------|
| * | <i>Agrostis capillaris</i>   | browntop                   |
| * | <i>Anthoxanthum odoratum</i> | sweet vernal               |
|   | <i>Austroderia fulvida</i>   | kakaho; toetoe             |
|   | <i>Danthonia decumbens</i>   | heath grass                |
| * | <i>Holcus lanatus</i>        | Yorkshire fog              |
|   | <i>Microlaena avenacea</i>   | bush rice grass; oat grass |

## Sedges

|   |                                               |              |
|---|-----------------------------------------------|--------------|
|   | <i>Carex breviculmis</i>                      |              |
| * | <i>Carex demissa</i>                          |              |
|   | <i>Carex dipsacea</i>                         |              |
|   | <i>Carex dissita</i>                          |              |
|   | <i>Carex horizontalis (Uncinia rupestris)</i> |              |
|   | <i>Carex imbecilla (Uncinia gracilentia)</i>  |              |
| * | <i>Carex lurida</i>                           | sallow sedge |
|   | <i>Carex subviridis (Uncinia distans)</i>     |              |
|   | <i>Carex zotovii (Uncinia)</i>                |              |
|   | <i>Eleocharis acuta</i>                       | spike rush   |
|   | <i>Eleocharis gracilis</i>                    |              |
|   | <i>Eleocharis sphacelata</i>                  |              |
|   | <i>Gahnia rigida</i>                          |              |
|   | <i>Gahnia setifolia</i>                       |              |
|   | <i>Gahnia xanthocarpa</i>                     | giant sedge  |
|   | <i>Lepidosperma australe</i>                  | four square  |
|   | <i>Machaerina rubiginosa (Baumea)</i>         |              |
|   | <i>Machaerina tenax (Baumea)</i>              |              |
|   | <i>Machaerina teretifolia (Baumea)</i>        |              |
|   | <i>Schoenus maschalinus</i>                   |              |

## Rushes and allied plants

|   |                                             |              |
|---|---------------------------------------------|--------------|
| * | <i>Juncus acuminatus</i>                    |              |
| * | <i>Juncus articulatus</i>                   | jointed rush |
| * | <i>Juncus bufonius</i> var. <i>bufonius</i> | toad rush    |
| * | <i>Juncus bulbosus</i>                      | bulbous rush |
|   | <i>Juncus edgariae</i>                      | wiwi         |
| * | <i>Juncus effusus</i> var. <i>effusus</i>   | soft rush    |
|   | <i>Juncus planifolius</i>                   |              |
| * | <i>Luzula congesta</i>                      |              |

### Remaining Monocotyledonous herbs

|   |                                |                   |
|---|--------------------------------|-------------------|
| * | <i>Aponogeton distachyos</i>   | cape pondweed     |
|   | <i>Astelia "nervosa broad"</i> |                   |
|   | <i>Astelia fragrans</i>        | bushflax; kakaha  |
|   | <i>Astelia grandis</i>         |                   |
|   | <i>Astelia microsperma</i>     |                   |
|   | <i>Astelia nervosa</i>         | kahakaha          |
|   | <i>Astelia solandri</i>        | kowharawhara      |
|   | <i>Dianella nigra</i>          | blueberry; turutu |
|   | <i>Sparganium subglobosum</i>  |                   |

### Daisy-like herbs

|   |                             |         |
|---|-----------------------------|---------|
| * | <i>Hypochaeris radicata</i> | catsear |
| * | <i>Jacobaea vulgaris</i>    | ragwort |
|   | <i>Raoulia glabra</i>       |         |

### Dicotyledonous herbs other than Daisies

|   |                                  |                         |
|---|----------------------------------|-------------------------|
|   | <i>Acaena anserinifolia</i> agg  | bidibid                 |
|   | <i>Centella uniflora</i>         |                         |
| * | <i>Digitalis purpurea</i>        | foxglove                |
|   | <i>Drosera auriculata</i>        |                         |
|   | <i>Drosera binata</i>            | scented sundew          |
|   | <i>Gonocarpus micranthus</i>     |                         |
|   | <i>Gonocarpus montanus</i>       |                         |
|   | <i>Lobelia angulata</i> (Pratia) | panakenake              |
| * | <i>Lotus pedunculatus</i>        | lotus major             |
|   | <i>Nertera depressa</i> agg      | common nertera          |
|   | <i>Nertera scapanioides</i>      |                         |
|   | <i>Nertera villosa</i>           |                         |
| * | <i>Persicaria hydropiper</i>     |                         |
| * | <i>Potentilla anglica</i>        | creeping cinquefoil     |
| * | <i>Ranunculus flammula</i>       | spearwort               |
| * | <i>Ranunculus repens</i>         | creeping buttercup      |
| * | <i>Ranunculus sceleratus</i>     | celery-leaved buttercup |
|   | <i>Viola cunninghamii</i>        | white violet; haka      |