

WAIKORAPA BUSH COVENANT, WAIKITE FIELD TRIP

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Sunday 19th April 2015 dawned a nice clear day following a very wet Saturday. A group of nine from Rotorua, Hamilton and Tauranga headed to the Waikite Valley to botanise the Waikorapa Bush Covenant. This 27 ha conservation covenant on Landcorp Waikite Station protects one of the few remaining indigenous forest remnants in the Atiamuri Ecological District. It has rarely been visited by botanists and to my knowledge has not been visited by the Rotorua Botanical Society before. Perched on a hilltop just below the Waikorapa trig at 696 m it is a reasonably visible landmark in the upper Waikite valley but is usually overlooked by botanists and Department of Conservation (DOC) staff busy looking at the geothermal wetland vegetation off Earthquake Flat Road in the valley immediately below the covenant.

The group assembled at the Waiotapu pub and then stopped briefly on Waikite Valley Road above Waikite hotpools for a quick overview of the valley while I gave the group a bit of background on some of the restoration work (plantings and water level controls) that DOC had been undertaking in the wetlands below.

After driving up Earthquake Flat Road and parking the cars, the group headed straight uphill, over the fence and into the covenant. This face was pretty steep and we were immediately met by a wall of supplejack (*Ripogonum scandens*) under the tawa-mangeao forest canopy. This required at least an hour of careful navigation and zig-zagging upslope to avoid the worst of the supplejack. One of the few advantages of tackling the steepest part of the block first was that it did have a reasonably dense understorey not seen on the flatter parts of the block. This is probably because under previous Landcorp management stock were sometimes grazed in the block, however stock would have had little access to the steeper slopes.

In the understorey mahoe (*Melicytus ramiflorus*) and a range of ferns including ponga (*Cyathea dealbata*), katote (*Cyathea smithii*), crown fern (*Blechnum discolor*), heruheru (*Leptopteris hymenophylloides*) and nini (*Blechnum chambersii*) were common with occasional patches of *Diplazium australe*.

We eventually managed to pick our way up onto a spur of rewarewa-kamahi forest which was much more open and easier to move through. This was a good location to point out to some of the newer members the finer points of tree fern identification. Along with an abundance of mamaku (*Cyathea medullaris*), ponga and katote some specimens of *Cyathea cunninghamii* and wheki (*Dicksonia squarrosa*) were present along with an occasional wheki-ponga (*Dicksonia fibrosa*). Other ground ferns including kiwakiwa (*Blechnum fluviatile*), nini, and heruheru were also common along with mahoe, hangehange (*Geniostoma ligustrifolium*) and mangeao (*Litsea calicaris*). Also noted were a range of interesting fungi including several earthstars.

We continued up the spur reaching a plateau in the kamahi forest on the main ridge where we decided to break for lunch in a small clearing with a hint of sunshine. This clearing had a typical range of native and exotic herbs and ground covers including foxglove (*Digitalis purpurea*), hook grass (*Uncinia uncinata*), *Hydrocotyle moschata*, *Lobelia angulata* and perennial sow thistle (*Sonchus arvensis*).

After lunch we continued west along the ridge through (rewarewa)-kamahi forest with lots of wheki-ponga, pigeonwood (*Hedycarya arborea*), water fern (*Histiopteris incisa*), bush lawyer (*Rubus cissoides*), and prickly shield fern (*Polystichum vestitum*) present in the understorey, but few palatable species, probably as a result of historic stock grazing. Wheki-ponga, wheki and katote dominated the subcanopy. A few rimu (*Dacrydium cupressinum*) saplings were noted and one large raukawa (*Raukawa edgerleyi*). This forest had several clearings present in it dominated by a mixture of kiwakiwa, hook grass, water fern and *Hypolepis ambigua*.

A few patches of the original tawa forest were present on ridge but the main area was in the gully running north-east which we skirted around staying in the kamahi-dominated forest until we popped out of the forest onto the farm edge near the Waikorapa trig. A quick walk along the south-west margin of the block took us to a high point on the farm edge with excellent views over Tumunui Bush, SH5 and across to Mt Tarawera in the east.

We continued along the farm margin and followed an old farm track back into the forest interior, stopping briefly to botanise an old broadleaf (*Griselinia littoralis*) and a range of epiphytes present including the *Earina* species. Poroporo (*Solanum laciniatum*) was seen here. The farm track soon took us down to the stream through some large tawa forest with a big emergent miro (*Prumnopitys ferruginea*) present. We crossed the deep gully on an old farm dam. In the gully we noted dense pate (*Schefflera digitata*) along with fuschia (*Fuschia excorticata*), and it was the only place we noted tutu (*Coriaria arborea*) in the block. On the true right we were in tall tawa forest with large emergent rimu present. Tree fern species were common with dense hen and chicken fern (*Asplenium bulbiferum*) and nini present in the understorey. The subcanopy was relatively open with mahoe present along with occasional pigeonwood and ponga.



Figure 1: Open tawa forest on the ridge.

We worked our way up a steep face back onto the main ridge heading north-east. The main ridge was again different in composition to the rest of the block with some new species recorded here including several large hinau (*Elaeocarpus dentatus*), toro (*Myrsine*

salicina), lancewood (*Pseudopanax crassifolius*), putaputaweta (*Carpodetus serratus*), white maire (*Nestegis lanceolata*) and mapou (*Myrsine australis*). Four large pole rimu were noted in this area as well. After following the ridge for a while we headed back down the steep south face towards the farm boundary and the vehicles. Some nice emerging rimu was noted near the top of the face here. *Asplenium hookerianum* var. *colensoi* and a small patch of *Blechnum vulcanicum* were also seen while scrambling down the face. We got back to the vehicles with time for a quick walk down a freshly bulldozed track to a pond in the Waikite Wildlife Management Reserve below. After a quick look we headed home. Although there were no significant discoveries or threatened species found in the Waikorapa Bush it was good to compile a detailed species list for the block and see some understorey recovery from past grazing. It was obvious that the original podocarp-tawa forest in the block had been logged over in the past but some fine rimu specimens still remained for us to admire.



Figure 2: Botanists checking out the kamahi forest margin near Waikorapa trig.



Figure 3: View from near Waikorapa trig along the edge of Waikorapa Bush east towards Maungawhakamana and Mt Tarawera.

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**Waikorapa Bush Covenant, Waikite Station, Vascular Plant Species List**

G. Jane & G Donaghy  
U16 012 182

\* = naturalised plants

- |                                                      |                             |
|------------------------------------------------------|-----------------------------|
| <i>Acaena anserinifolia</i>                          | bidibid                     |
| * <i>Acaena novae-zelandiae</i>                      | red bidibid, piripiri       |
| * <i>Agrostis capillaris</i>                         | browntop                    |
| <i>Aristotelia serrata</i>                           | wineberry, makomako         |
| <i>Asplenium bulbiferum</i>                          | hen and chickens fern, moku |
| <i>Asplenium flaccidum</i>                           | hanging spleenwort, makawe  |
| <i>Asplenium hookerianum</i> var. <i>colensoi</i>    |                             |
| <i>Asplenium hookerianum</i> var. <i>hookerianum</i> | lacy spleenwort             |
| <i>Asplenium oblongifolium</i>                       | shining spleenwort          |
| <i>Asplenium polyodon</i>                            | sickle spleenwort, petako   |
| <i>Astelia solandri</i>                              | kowharawhara                |
| <i>Beilschmiedia tawa</i>                            | tawa                        |
| <i>Blechnum chambersii</i>                           | nini, lance fern            |

|                                                             |                                    |
|-------------------------------------------------------------|------------------------------------|
| <i>Blechnum discolor</i>                                    | crown fern, piupiu, petipeti       |
| <i>Blechnum fluviatile</i>                                  | kiwakiwa, kiwikiwi                 |
| <i>Blechnum novae-zelandiae</i>                             | kiokio                             |
| <i>Blechnum parrisiae</i>                                   | pukupuku, rasp fern                |
| <i>Blechnum penna-marina</i>                                | alpine blechnum                    |
| <i>Blechnum vulcanicum</i>                                  |                                    |
| <i>Brachyglottis repanda</i>                                | rangiora, bushmans friend          |
| * <i>Callitriche stagnalis</i>                              | starwort                           |
| <i>Cardamine debilis</i> "long style"                       |                                    |
| <i>Carex coriacea</i>                                       | cutty grass, toetoe rautahi        |
| <i>Carpodetus serratus</i>                                  | putaputaweta, marbleleaf           |
| * <i>Cerastium fontanum</i> subsp. <i>vulgare</i>           | mouse-eared chickweed              |
| * <i>Cirsium arvense</i>                                    | Californian thistle                |
| * <i>Cirsium vulgare</i>                                    | Scotch thistle                     |
| <i>Clematis paniculata</i>                                  | clematis, puawhananga              |
| <i>Collospermum microspermum</i>                            |                                    |
| * <i>Conium maculatum</i>                                   | hemlock                            |
| <i>Coprosma grandifolia</i>                                 | raurekau, kanono, mamono           |
| <i>Coprosma lucida</i>                                      | karamu, shining karamu             |
| <i>Coprosma robusta</i>                                     | karamu                             |
| <i>Coriaria arborea</i> var. <i>arborea</i>                 | tree tutu                          |
| * <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>Dendrobium cunninghamii</i>                              | bamboo orchid                      |
| <i>Dicksonia fibrosa</i>                                    | wheki-ponga, kuripaka              |
| <i>Dicksonia squarrosa</i>                                  | wheki, harsh tree fern             |
| <i>Diplazium australe</i>                                   |                                    |
| <i>Drymoanthus adversus</i>                                 |                                    |
| <i>Earina autumnalis</i>                                    | Easter orchid, raupeka             |
| <i>Earina mucronata</i>                                     | spring orchid, peka-a-waka         |
| <i>Elaeocarpus dentatus</i>                                 | hinau                              |
| <i>Epilobium rotundifolium</i>                              | round-leaved willowherb            |
| <i>Fuchsia excorticata</i>                                  | fuchsia, kotukutuku                |
| * <i>Galium aparine</i>                                     | cleavers                           |
| <i>Geniostoma ligustrifolium</i> var. <i>ligustrifolium</i> | hangehange, privet                 |
| <i>Griselinia lucida</i>                                    | puka                               |
| <i>Hedycarya arborea</i>                                    | pigeonwood, porokaiwhiri           |
| <i>Histiopteris incisa</i>                                  | water fern                         |
| * <i>Holcus lanatus</i>                                     | Yorkshire fog                      |

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|-----------------------------------------------------|---------------------------------|
| <i>Hydrocotyle heteromeria</i>                      | wax weed                        |
| <i>Hydrocotyle moschata</i> var. <i>moschata</i>    |                                 |
| <i>Hymenophyllum demissum</i>                       | piripiri, irirangi              |
| <i>Hymenophyllum dilatatum</i>                      | lop-sided filmy fern            |
| <i>Hymenophyllum flabellatum</i>                    | fan fern                        |
| <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>Hypochaeris radicata</i>                       | catsear                         |
| <i>Hypolepis ambigua</i>                            |                                 |
| <i>Hypolepis rufobarbata</i>                        | sticky pig fern                 |
| * <i>Jacobaea vulgaris</i>                          | ragwort                         |
| * <i>Juncus effusus</i> var. <i>effusus</i>         | soft rush                       |
| * <i>Juncus tenuis</i> subsp. <i>tenuis</i>         | track rush                      |
| <i>Knightsia excelsa</i>                            | rewarewa, NZ honeysuckle        |
| <i>Lagenophora pumila</i>                           |                                 |
| <i>Lastreopsis glabella</i>                         | felted fern                     |
| <i>Lastreopsis velutina</i>                         | velvet fern                     |
| <i>Leptopteris hymenophylloides</i>                 | single crepe fern, heruheru     |
| <i>Leptospermum scoparium</i> var. <i>scoparium</i> | manuka, red teatree             |
| <i>Leucopogon fasciculatus</i>                      | mingimingi, kaikaitau           |
| <i>Litsea calicaris</i>                             | mangeo                          |
| <i>Lobelia angulata</i>                             | panakenake                      |
| * <i>Lotus pedunculatus</i>                         | lotus major                     |
| <i>Loxogramme dictyopteris</i>                      |                                 |
| <i>Melicytus ramiflorus</i>                         | mahoe                           |
| <i>Metrosideros diffusa</i>                         | white climbing rata, akatea     |
| <i>Metrosideros perforata</i>                       | aka, small white rata, torotoro |
| <i>Microlaena stipoides</i>                         | forest rice grass               |
| * <i>Mycelis muralis</i>                            | wall lettuce                    |
| <i>Myrsine australis</i>                            | red matipo, mapou               |
| <i>Myrsine salicina</i>                             | toro                            |
| <i>Nertera depressa</i>                             | common nertera                  |
| <i>Nestegis lanceolata</i>                          | white maire                     |
| <i>Notogrammitis ciliata</i>                        | hairy strap fern                |
| <i>Paesia scaberula</i>                             | scented fern, matata, ring fern |
| <i>Parsonsia capsularis</i> var. <i>capsularis</i>  | small flowered jasmine, akakior |
| <i>Parsonsia heterophylla</i>                       | maori jasmine, kaihu, kaiwhiria |
| <i>Pellaea rotundifolia</i>                         | tarawera, button fern           |
| <i>Pittosporum tenuifolium</i>                      | black matipo, kohuhu            |
| <i>Pneumatopteris pennigera</i>                     | gully fern, pakau,              |
| <i>Polystichum vestitum</i>                         | prickly shield fern, punui      |
| <i>Prumnopitys ferruginea</i>                       | miro, brown pine                |

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|--------------------------------------------------------|------------------------------|
| <i>Prumnopitys taxifolia</i>                           | matai, black pine            |
| * <i>Prunella vulgaris</i>                             | selfheal                     |
| <i>Pseudopanax arboreus</i>                            | five finger, puhou, whaupaku |
| <i>Pseudopanax crassifolius</i>                        | lancewood, horoeka           |
| <i>Pteridium esculentum</i>                            | bracken, rauaruhe            |
| <i>Pteris macilenta</i>                                | sweet fern                   |
| <i>Pyrrhosia eleagnifolia</i>                          | leather-leaf fern            |
| <i>Ranunculus reflexus</i>                             | maruru, hairy buttercup      |
| * <i>Ranunculus repens</i>                             | creeping buttercup           |
| <i>Raukawa edgerleyi</i>                               | raukawa                      |
| <i>Ripogonum scandens</i>                              | supplejack, kareao           |
| <i>Rubus cissoides</i>                                 | bush lawyer, tataramoa       |
| <i>Rubus schmidelioides</i> var. <i>schmidelioides</i> | bush lawyer, tataramoa       |
| * <i>Rumex brownii</i>                                 | hooked dock                  |
| <i>Rumohra adiantiformis</i>                           | butcher's fern               |
| <i>Rytidosperma gracile</i>                            | forest fairy grass           |
| <i>Schefflera digitata</i>                             | pate, patae, kotete          |
| * <i>Senecio bipinnatisectus</i>                       | Australian fireweed          |
| <i>Senecio minimus</i>                                 | fireweed                     |
| <i>Solanum laciniatum</i>                              | poroporo                     |
| * <i>Sonchus arvensis</i>                              | perennial sow thistle        |
| * <i>Stellaria media</i> subsp. <i>media</i>           | chickweed                    |
| <i>Stellaria parviflora</i>                            |                              |
| * <i>Taraxacum officinale</i>                          | dandelion                    |
| <i>Tmesipteris elongata</i>                            |                              |
| <i>Trichomanes venosum</i>                             | veined bristle fern          |
| * <i>Trifolium repens</i>                              | white clover                 |
| <i>Uncinia gracilentia</i>                             |                              |
| <i>Uncinia uncinata</i>                                | watu                         |
| <i>Urtica incisa</i>                                   | stinging nettle              |
| <i>Weinmannia racemosa</i>                             | kamahi, towai, tawhero       |