

## Motu River trip to Huaero and Te Pohonui

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On Saturday 5<sup>th</sup> November 2022 twelve members of the Rotorua Botanical Society and locals from Raukumara Pae Maunga project met at Motu River bridge to undertake a botanical expedition to assess two sites up the Motu River known respectively as Huaero and Te Pohonui.

The objectives of the survey were:

- To conduct a botanical survey of Huaero Pā and the nearby Whareaua Kāinga sites;
- To help build Hapu capability in survey and botanical identification.

The trip started with three jetboats and gear leaving from downstream of the Motu River bridge for a 30-minute trip upriver to Huaero. The following history of the site was provided for the trip: “Huaero is an old settlement around 200–300 years old (estimated from local stories), maybe older. It is a large flat area which were gardens back then with whare and pit features around the outside of the garden area. A defensive pa is located on the northern end of the large flat above a cliff which drops into the Motu River. The flat area would have been cleared for gardens, but the regenerating native is probably 150–200 years old.” Today it is only used by hunters and is unbotanised.

After a quick but exhilarating ride up the Motu River we arrived on a broad sweeping curve of the riverbank at Huaero. (Figure 1.) We walked for a few minutes through the forest and unpacked our gear at the small Huaero hut. The groups then formed into two teams—one focusing on the botany and the other examining the historical cultural features of the site.

The botanical team headed east from the hut, parallel with the river. The forest was dominated by tawa-rewarewa forest on the slopes above the river terrace. Occasional hinau (*Elaeocarpus dentatus*) were also noted in the canopy. The subcanopy was dominated by pigeonwood (*Hedycarya arborea*), heketara (*Olearia rani* var. *colorata*), tawa (*Beilschmiedia tawa*), ponga (*Cyathea dealbata*), and mahoe (*Melicytus ramiflorus* subsp. *ramiflorus*). The understorey lacked palatable species, with pigeonwood, ponga, *Metrosideros fulgens*, *M. perforata* and *M. diffusa* common and with occasional kiekie (*Freycinetia banksii*) and a patch of nikau (*Rhopalostylis sapida*) also noted.



Figure 1: Looking upstream across Motu River from Huaero



Figure 2: Understorey under beech species and tanekaha on ridge at Huaero.

Supplejack (pirita) (*Ripogonum scandens*) was abundant, some of which appeared browsed. The groundcover was mainly dominated by filmy ferns *Hymenophyllum demissum*, *H. dilatatum*, with hound's tongue (*Lecanopteris pustulata* subsp. *pustulata*), *Blechnum filiforme*, and *Carex uncinata*.

As we followed the bank overlooking the river some of the botanists dropped down to the river to botanise the riverbank. Here we found our first population of *Olearia cheesemanii* (At Risk-Naturally Uncommon), along with native broom (*Carmichaelia australis*), *Jovellana sinclairii* (At Risk -Declining), wharariki or mountain flax (*Phormium cookianum* subsp. *hookeri*) and kowhai (*Sophora tetraptera*) – part of the typical vegetation of the steeper slopes on river banks along Motu River. Also noted were numerous ramarama (*Lophomyrtus bullata*) scattered throughout, many of which showed dieback and myrtle rust symptoms.

From here the botanical party headed inland through old kanuka-(rewarewa) forest on upper river terraces – old garden sites. The vegetation was generally fairly open with ponga, heketara and occasional tanekaha (*Phyllocladus trichomanoides*) and occasional nikau in the subcanopy. The understory was open with ponga and rewarewa (*Knightia excelsa*) the only main species present. Ground cover was dominated by bush rice grass (*Microlaena avenacea*), rewarewa and *Carex uncinata*. We soon came across a small spring which we followed for a small distance to its source. This was most likely important for gardens of Whareaua which once occupied the site. Vegetation noted around the spring included *Carex geminata* sedgeland with occasional creeping buttercup (*Ranunculus repens*) and piripiri (*Acaena anserinifolia*) present.

We then followed up the spur above the river for a short distance, which was quite steep and narrow. We sidled off the spur in a few places onto steeper slopes above the river. Here the flora changed to that more typical of steeper slopes and bluffs along the river where the vegetation was less accessible to browsing deer. Taurepo (*Rhabdothamnus solandri*), native iris (*Libertia grandiflora*), wharanui (*Peperomia urvilleana*), *Asplenium hookerianum*, pate (*Schefflera digitata*), shining karamu (*Coprosma lucida*) and wharariki (mountain flax) were all abundant in this habitat.

Eventually we headed back down the spur and north to the Huaero Stream at the northern end of the block, back through more tawa-rewarewa forest. Reaching

the Huaero Stream, we clambered down the steep track to a small dropoff preventing access to the stream. Here rengarenga (*Arthropodium cirratum*) was noted on the banks along with some young carmine rata (*Metrosideros carminea*) and African clubmoss (*Selaginella kraussiana*) on the river terrace. *Jovellana sinclairii* was present along with a few browsed toropapa (*Alseuosmia macrophylla*) plants. From here we climbed up onto the ridge which runs parallel with the main river where the pa is located. Vegetation on the ridge was different to that we had experienced in the rest of the block.

The flat ridge was dominated by black beech-hard beech – tanekaha forest with black beech (*Fuscospora solandri*) and hybrids (*Fuscospora* × *apiculata*) dominating at the northern end of the ridge. (Figure 2.) Canopy height was about 20 m. Subcanopy was relatively open with soft mingimingi (*Leptecophylla juniperina* var. *juniperina*), ponga and heketara scattered throughout. The understorey was also relatively open with *Coprosma spathulata*, *C. areolata*, ponga, soft mingimingi, tawa and turutu (*Dianella nigra*) common. Occasional patches of umbrella fern (*Sticherus cunninghamii*) were noted, with wharariki (mountain flax) common on the edge of the bluff dropping to the river. Further south down the ridge beyond the pa, hard beech (*Fuscospora truncata*) was more dominant with adult and pole trees present. Terrestrial puka (*Griselinia lucida*) was noted as being relatively common on steeper bluffs where animals did not have access. We followed our way back along the ridge through another kanuka (*Kunzea robusta*)-dominated forest stand similar to the previous one and back through more tawa-rewarewa forest. We found one kiekie vine in flower in this area. In this section we noted a small stand of pukatea (*Laurelia novae-zelandiae*) in damper areas with northern rata (*Metrosideros robusta*) present in several places. Different-aged northern rata trees were present ranging from saplings to mid-sized trees. Many puka were present perching in larger trees. A quick clamber down a steep bank onto the lower river terrace led us back to the hut to set up camp for the evening.

In the evening we had some great discussions on the beach and around the campsite. One highlight was a large puriri moth (*Aenetus virescens*) on a nikau near the hut. During the night we heard ruru/morepork and Koekoeā/long-tailed cuckoo.

Next morning, Sunday 6 November 2022, the parties packed up and returned to the jetboats. We firstly headed slightly downstream to inspect from the jetboat the cliffs below the pa site on the ridge we had visited the day before, on the

southern side of Huaero Stream, for a different perspective. Here we again noted the different species mix on these steeper sites where deer could generally not reach. Of note were two more *Olearia cheesemanii* specimens along with three *Pittosporum ellipticum* shrubs growing amongst the similar species mix mentioned previously.

From here we returned downstream around the next river bend to another site known as Te Pohonui. We landed at the mouth of the Te Mangatu Stream at the northern end of the site. This gave us a chance to botanise in the stream and get a closer look at the mix of species present both on the riverbed gravels and on steep faces surrounding the river and side stream.

The riverbed near the stream mouth was dominated by conspicuous exotic species including pampas (*Cortaderia selloana*), tutsan (*Hypericum androsaemum*), lotus (*Lotus pedunculatus*), Himalayan fairy grass (*Miscanthus nepalensis*), as well as kanuka. On steeper banks around the stream, we noted kiekie, taurepo, native iris, manono (*Coprosma autumnalis*), rengarenga lily, *Anaphalioides trinervis*, pate, hangehange (*Geniostoma ligustrifolium* var. *ligustrifolium*), and unfortunately, Mexican daisy (*Erigeron karvinskianus*). This appeared relatively common, especially on the drier faces along the main river.

After time botanising along the stream bed, we headed up the steep bank and into the forest proper. The forest was on a gently sloping broad river terrace mostly dominated by tawa-rewarewa-(pukatea) forest. The subcanopy was dominated by pigeonwood, mahoe, ponga, nikau, and pukatea similar to Huaero. The understorey was open with nikau and ponga common, with the groundcover dominated by unpalatable species – *Blechnum filiforme*, *Carex uncinata*, with the native grasses – *Oplismenus hirtellus* subsp. *imbecillis*, and bush rice grass (*Microlaena avenacea*) present (Figure 3). Lianes noted included abundant supplejack with *Metrosideros diffusa*. Pig rooting was noted in the block. Of note was the discovery of a carmine rata growing on a fallen ponga log in one place and twelve Hochstetter's frog (*Leiopelma hochstetteri*) seen in a small seep in the forest.

We continued heading south through tawa forest before reaching a stream which is not visible on aerial or topographical maps. We followed parallel to this along a flat broad spur before meeting up with the other party that were looking at cultural features. On this broad flat spur, vegetation was open with rimu-kanuka-

heketara-ponga present in the low canopy and a relatively open understorey. Several dead kamahi (*Pterophylla racemosa*) trees, that had signs of severe possum browsing, were noted on the edges. It appeared the area was regenerating from past disturbance, so it was possibly a garden site in the past.

We clambered down to the lower river terrace beside the main river and found ourselves back in hard beech-tanekaha forest similar to that we had seen near pa ridge at Huaero. The subcanopy was dominated by tanekaha, soft mingimingi and heketara with *Metrosideros fulgens* abundant. Ponga and hard beech were the only common species in the understorey while the ground was largely bare with the exception of *Carex uncinata*, and some patches of local turutu and *Hymenophyllum demissum*. Looking over the steep bank towards the river we also noted *Pittosporum cornifolium*, *Melicope simplex* and toru (*Toronia toru*) which we had not seen before.

The party regrouped and got back into the jetboats. From here we took a much closer look at the cliffs at Te Pohonui beside the Motu River, both immediately upstream and downstream of the Te Mangatu Stream confluence. It was very obvious that the flora on the cliffs was very different to what we had experienced in the forest, mostly because of the different habitat but also we noted many species which survive where browsers, in particular deer, generally cannot reach them (Figure 4). In this section we noted abundant mountain flax, kowhai, lotus, native broom, shining karamu, Himalayan fairy grass, Mexican daisy, koromiko (*Veronica stricta* var. *stricta*), kiekie and *Anaphalioides trinervis* as common species. A quick survey with multiple pairs of eyes and binoculars also noted five *Scandia* aff. *rosifolia* (AK 344466; “inland”), four *Jovellana sinclairii* and seventy-eight *Olearia cheesemanii* in this section, suggesting these species are locally common in this habitat along the Motu River, which was pleasing to see. The jetboats gave us a different perspective on the vegetation allowing us to come very close to the river edge and examine the steeper sections of the riverbank, which we could not cover on foot. With midday approaching we headed back downstream to the SH 35 bridge and back to the vehicles for lunch.



Figure 3: Understory in Te Pohonui showing lack of palatable species.



Figure 4: Cliff vegetation near Te Pohonui with palatable species common.

In summary, this brief visit gave us a good appreciation of the forest habitats present in these two historic sites. Both showed a mosaic of mature tawa-dominated forest interspersed with localised areas of older regenerating kanuka-dominated forest on river terraces which would have subsequently developed upon abandonment of the cultivation sites. The survey also reinforced the impact that animal pests, particularly deer, are having on the forests throughout the Motu catchment – the forest understory is generally very open with few palatable species present in contrast to the steeper faces where many palatable species still reside. It was pleasing to find some threatened flora species still locally abundant including *Jovellana sinclairii* and *Olearia cheesemanii*. This is probably the biggest known population of *Olearia cheesemanii* in the Bay of Plenty and it is likely to be present in other areas of similar habitat and side streams up and down the river. As these areas have never been botanised in depth before, this has been a useful survey to assess the condition of these forests and to compile some flora and fauna species lists for future reference.

The Rotorua Botanical Society would like in particular to thank Clarke Koopu and Willie Ngamoki from Raukumara Pae Maunga project, for organising access and guiding us on this hikoi, and the BOP Regional Council for assisting with some funding for the trip costs.

## Huaero – Kāinga and Pā, Motu River, eastern Bay of Plenty – species list

Sarah Beadel, Rotorua Botanical Society

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### Indigenous Species

#### Gymnosperms

|                                             |          |
|---------------------------------------------|----------|
| <i>Dacrydium cupressinum</i>                | rimu     |
| <i>Pectinopitys ferruginea</i>              | miro     |
| <i>Phyllocladus trichomanoides</i>          | tanekaha |
| <i>Podocarpus totara</i> var. <i>totara</i> | tōtara   |

#### Monocot. trees and shrubs

|                             |                                 |
|-----------------------------|---------------------------------|
| <i>Cordyline australis</i>  | tī kōuka, cabbage tree          |
| <i>Cordyline banksii</i>    | tī ngahere, forest cabbage tree |
| <i>Rhopalostylis sapida</i> | nīkau                           |

#### Dicot. trees and shrubs

|                                                  |                                   |
|--------------------------------------------------|-----------------------------------|
| <i>Alectryon excelsus</i> subsp. <i>excelsus</i> | tītoki                            |
| <i>Alseuosmia macrophylla</i>                    | toropapa, karapapa, matukuroimata |
| <i>Beilschmiedia tawa</i>                        | tawa                              |
| <i>Brachyglottis repanda</i>                     | rangiora                          |
| <i>Carmichaelia australis</i>                    | maukoro, tainoka, taunoka         |

|                                                             |                                    |
|-------------------------------------------------------------|------------------------------------|
| <i>Carpodetus serratus</i>                                  | putaputawētā                       |
| <i>Coprosma areolata</i>                                    | thin-leaved coprosma               |
| <i>Coprosma autumnalis</i>                                  | kanono, raurēkau, raurākau, manono |
| <i>Coprosma lucida</i>                                      | karamū, kāramuramu, glossy karamū  |
| <i>Coprosma rhamnoides</i>                                  |                                    |
| <i>Coprosma robusta</i>                                     | karamū, kāramuramu                 |
| <i>Coprosma spathulata</i> subsp. <i>spathulata</i>         |                                    |
| <i>Coriaria arborea</i> var. <i>arborea</i>                 | tutu                               |
| <i>Corynocarpus laevigatus</i>                              | karaka                             |
| <i>Didymocheton spectabilis</i>                             | kohekohe                           |
| <i>Dodonaea viscosa</i>                                     | akeake                             |
| <i>Elaeocarpus dentatus</i>                                 | hīnau, whīnau                      |
| <i>Fuscospora fusca</i>                                     | red beech, tawhairaunui            |
| <i>Fuscospora solandri</i> var. <i>solandri</i>             | black beech, tawhairauriki         |
| <i>Fuscospora truncata</i>                                  | hard beech, tawhairaunui           |
| <i>Fuscospora xapiculata</i>                                | tawhai                             |
| <i>Geniostoma ligustrifolium</i> var. <i>ligustrifolium</i> | hangehange                         |
| <i>Griselinia lucida</i>                                    | puka                               |
| <i>Hedycarya arborea</i>                                    | porokaiwhiri; pigeonwood           |
| <i>Helichrysum lanceolatum</i>                              | niniao                             |
| <i>Hoheria sexstylosa</i>                                   | houhere, lacebark                  |
| <i>Knightia excelsa</i>                                     | rewarewa                           |
| <i>Kunzea robusta</i>                                       | kānuka                             |
| <i>Laurelia novae-zelandiae</i>                             | pukatea                            |
| <i>Leptecophylla juniperina</i> var. <i>juniperina</i>      | prickly mingimingi                 |
| <i>Leptospermum scoparium</i>                               | mānuka                             |
| <i>Leucopogon fasciculatus</i>                              | mingimingi                         |
| <i>Lophomyrtus bullata</i>                                  | ramarama                           |
| <i>Melicope simplex</i>                                     | poataniwha                         |
| <i>Melicytus ramiflorus</i> subsp. <i>ramiflorus</i>        | māhoe                              |
| <i>Metrosideros robusta</i>                                 | northern rātā                      |
| <i>Myrsine australis</i>                                    | māpou, matipou, māpau              |
| <i>Nestegis lanceolata</i>                                  | white maire, maire rauriki         |
| <i>Olearia cheesemanii</i>                                  |                                    |
| <i>Olearia furfuracea</i>                                   | akepiro, tanguru                   |
| <i>Olearia rani</i> var. <i>colorata</i>                    | heketara                           |
| <i>Piper excelsum</i> subsp. <i>excelsum</i>                | kawakawa                           |
| <i>Pittosporum ellipticum</i>                               |                                    |
| <i>Pittosporum tenuifolium</i>                              | kōhūhū, rautāhiri, rautāwhiri      |
| <i>Pseudopanax arboreus</i>                                 | whauwhaupaku, puahou, five finger  |
| <i>Pseudopanax crassifolius</i>                             | horoeka, lancewood                 |
| <i>Pseudowintera axillaris</i>                              | horopito                           |
| <i>Pterophylla racemosa</i>                                 | kāmahi, tawhero                    |
| <i>Quintinia serrata</i>                                    | tāwheowheo                         |
| <i>Rhabdothamnus solandri</i>                               | taurepo                            |
| <i>Schefflera digitata</i>                                  | patē                               |
| <i>Sophora tetraptera</i>                                   | kōwhai                             |
| <i>Toronia toru</i>                                         | toru                               |

*Veronica parviflora*  
*Veronica stricta* var. *stricta*  
*Veronica tairawhiti*  
*Vitex lucens*

koromiko tārama, kōkōmuka tārama  
koromiko, kōkōmuka

pūriri

#### **Monocot. lianes**

*Freycinetia banksii*  
*Ripogonum scandens*

kiekie  
supplejack, kareao, pirita

#### **Dicot. lianes**

*Clematis cunninghamii*  
*Clematis forsteri*  
*Clematis paniculata*  
*Metrosideros carminea*  
*Metrosideros diffusa*  
*Metrosideros fulgens*  
*Metrosideros perforata*  
*Muehlenbeckia australis*  
*Muehlenbeckia complexa*  
*Muehlenbeckia australis* × *M. complexa*  
*Parsonsia capsularis*  
*Passiflora tetrandra*  
*Rubus cissoides* agg.

ngākau-kiore, pokopoko  
poananga, puawānanga  
puawānanga  
akakura  
rātā  
rātā  
aka  
puka  
pōhuehue  
  
akakiore  
kohia; native passionfruit  
tātaramoa, tātaraheke, bush lawyer

#### **Lycopods and psilopsids**

*Phlegmariurus varius*  
*Pseudodiphasium volubile*  
*Tmesipteris elongata*  
*Tmesipteris lanceolata*

waewaekoukou, climbing clubmoss

#### **Ferns**

*Adiantum cunninghamii*  
*Adiantum diaphanum*  
*Asplenium bulbiferum*  
*Asplenium flabellifolium*  
*Asplenium flaccidum* subsp. *flaccidum*  
*Asplenium hookerianum*  
*Asplenium oblongifolium*  
*Asplenium polyodon*  
*Asplenium flaccidum* × *A. oblongifolium*  
*Blechnum chambersii*  
*Blechnum discolor*  
*Blechnum filiforme*  
*Blechnum membranaceum*  
*Blechnum novae-zelandiae*  
*Blechnum parrisiae*  
*Cyathea cunninghamii*  
*Cyathea dealbata*  
*Cyathea medullaris*

huruhuru tapairu, maidenhair fern  
huruhuru tapairu, maidenhair fern  
mouku, mouki, mauku, hen and chicken fern  
necklace fern, butterfly fern  
makawe, ngā makawe o raukatauri  
  
huruhuru whenua, shining spleenwort  
petako, paratao, sickle spleenwort  
  
rereti, nini, lance fern  
piupiu, petipeti, crown fern  
pānako, thread fern  
  
kiokio, horokio  
pukupuku  
pūnui, gully tree fern  
ponga, silver fern  
mamaku, black tree fern

|                                                          |                                           |
|----------------------------------------------------------|-------------------------------------------|
| <i>Cyathea smithii</i>                                   | kātote, soft tree fern                    |
| <i>Dicksonia squarrosa</i>                               | whēkī                                     |
| <i>Diplazium australe</i>                                |                                           |
| <i>Hymenophyllum demissum</i>                            | irirangi, piripiri, drooping filmy fern   |
| <i>Hymenophyllum dilatatum</i>                           | matua mauku, filmy fern                   |
| <i>Hymenophyllum flabellatum</i>                         | mauku, fan-like filmy fern                |
| <i>Hymenophyllum flexuosum</i>                           | mauku, filmy fern                         |
| <i>Hymenophyllum multifidum</i>                          | mauku, much-divided filmy fern            |
| <i>Hymenophyllum nephrophyllum</i>                       | kidney fern, konehu raurenga, kopakopa    |
| <i>Hymenophyllum rarum</i>                               | mauku, tufted filmy fern                  |
| <i>Hymenophyllum revolutum</i>                           | mauku, filmy fern                         |
| <i>Hymenophyllum sanguinolentum</i>                      | piripiri, filmy fern                      |
| <i>Hymenophyllum scabrum</i>                             | mauku, rough filmy fern                   |
| <i>Lecanopteris pustulata</i> subsp. <i>pustulata</i>    | kōwaowao, pāraharaha, hound's tongue fern |
| <i>Lecanopteris scandens</i>                             | mokimoki, fragrant fern                   |
| <i>Lastreopsis microsora</i> subsp. <i>pentangularis</i> |                                           |
| <i>Leptopteris hymenophylloides</i>                      | heruheru, single crepe fern               |
| <i>Notogrammitis heterophylla</i>                        |                                           |
| <i>Paesia scaberula</i>                                  | mātātā, hard fern                         |
| <i>Parapolystichum glabellum</i>                         | smooth shield fern                        |
| <i>Pellaea rotundifolia</i>                              | tarawera, button fern                     |
| <i>Pakau pennigera</i>                                   | piupiu, pākauroharoha, gully fern         |
| <i>Polystichum neozelandicum</i>                         |                                           |
| <i>Pteris tremula</i>                                    | turawera, shaking brake                   |
| <i>Pyrrosia elaeagnifolia</i>                            | leather-leaf fern                         |
| <i>Rumohra adiantiformis</i>                             | karuwhai                                  |
| <i>Sticherus cunninghamii</i>                            | waekura, umbrella fern                    |
| <i>Trichomanes venosum</i>                               |                                           |

### Orchids

|                               |          |
|-------------------------------|----------|
| <i>Bulbophyllum pygmaeum</i>  | piripiri |
| <i>Corybas cheesemanii</i>    |          |
| <i>Corybas oblongus</i>       |          |
| <i>Microtis unifolia</i> agg. |          |
| <i>Pterostylis graminea</i>   |          |

### Grasses

|                                                      |                           |
|------------------------------------------------------|---------------------------|
| <i>Austroderia fulvida</i>                           | toetoe                    |
| <i>Microlaena avenacea</i>                           | bush rice grass           |
| <i>Microlaena stipoides</i>                          | pātītī, meadow rice grass |
| <i>Oplismenus hirtellus</i> subsp. <i>imbecillis</i> |                           |
| <i>Pentapogon crinitus</i>                           | plume grass               |
| <i>Poa anceps</i> agg.                               |                           |
| <i>Rytidosperma gracile</i>                          |                           |
| <i>Poaceae</i> sp.                                   |                           |

### Sedges

|                          |  |
|--------------------------|--|
| <i>Carex breviculmis</i> |  |
| <i>Carex dissita</i>     |  |

|                              |                         |
|------------------------------|-------------------------|
| <i>Carex forsteri</i>        |                         |
| <i>Carex geminata</i> agg.   | rautahi                 |
| <i>Carex healyi</i>          | matau                   |
| <i>Carex solandri</i>        |                         |
| <i>Carex uncinata</i>        | kamu matau a Maui, kamu |
| <i>Carex virgata</i>         | pūrei                   |
| <i>Cyperus ustulatus</i>     | toetoe upoko-tangata    |
| <i>Gahnia pauciflora</i>     | takahikahi              |
| <i>Gahnia setifolia</i>      | māpere                  |
| <i>Machaerina sinclairii</i> | toetoe tūhara, pēpepe   |

### **Rushes**

|                                       |          |
|---------------------------------------|----------|
| <i>Juncus edgariae</i>                | wi, wīwī |
| <i>Luzula picta</i> var. <i>picta</i> |          |

### **Monocot. herbs (other than orchids, grasses, sedges, and rushes)**

|                                                 |                          |
|-------------------------------------------------|--------------------------|
| <i>Arthropodium cirratum</i>                    | rengarenga               |
| <i>Astelia fragrans</i>                         | kakaha                   |
| <i>Astelia hastata</i>                          | kahakaha                 |
| <i>Astelia microsperma</i>                      |                          |
| <i>Astelia solandri</i>                         | kōwharawhara             |
| <i>Dianella nigra</i>                           | tūrutu                   |
| <i>Libertia grandiflora</i>                     | mīkoikoi; native iris    |
| <i>Phormium cookianum</i> subsp. <i>hookeri</i> | wharariki, mountain flax |

### **Composite herbs**

|                                                   |                     |
|---------------------------------------------------|---------------------|
| <i>Anaphalioides trinervis</i>                    | puatea              |
| <i>Euchiton audax</i>                             |                     |
| <i>Euchiton sphaericus</i>                        |                     |
| <i>Lagenophora pumila</i>                         | papataniwhaniwha    |
| <i>Leptinella squalida</i> subsp. <i>squalida</i> |                     |
| <i>Pseudognaphalium luteoalbum</i> agg.           | pukatea             |
| <i>Raoulia tenuicaulis</i>                        | tatahuna            |
| <i>Senecio bipinnatisectus</i>                    | Australian fireweed |

### **Dicot. herbs (other than composites)**

|                                                        |                   |
|--------------------------------------------------------|-------------------|
| <i>Acaena anserinifolia</i>                            | piripiri, hutiwai |
| <i>Cardamine</i> sp.                                   |                   |
| <i>Dichondra brevifolia</i>                            |                   |
| <i>Epilobium brunnescens</i> subsp. <i>brunnescens</i> |                   |
| <i>Epilobium nerteroides</i>                           |                   |
| <i>Epilobium pedunculare</i>                           |                   |
| <i>Epilobium pubens</i>                                |                   |
| <i>Epilobium rotundifolium</i>                         |                   |
| <i>Gunnera monoica</i>                                 |                   |
| <i>Haloragis erecta</i> subsp. <i>erecta</i>           | toatoa            |
| <i>Hydrocotyle elongata</i>                            |                   |
| <i>Hydrocotyle heteromeria</i>                         |                   |
| <i>Hydrocotyle moschata</i> var. <i>moschata</i>       |                   |
| <i>Jovellana sinclairii</i>                            |                   |

|                              |            |
|------------------------------|------------|
| <i>Lobelia angulata</i>      | pānakenake |
| <i>Nertera depressa</i>      |            |
| <i>Oxalis magellanica</i>    | tūtae-kāhu |
| <i>Peperomia urvilleana</i>  | wharanui   |
| <i>Ranunculus reflexus</i>   | maruru     |
| <i>Solanum americanum</i>    | raupeti    |
| <i>Stellaria parviflora</i>  | kohukohu   |
| <i>Wahlenbergia violacea</i> | rimuroa    |

## Naturalised and Exotic Species

### Gymnosperms

|                                 |                |
|---------------------------------|----------------|
| <i>Chamaecyparis lawsoniana</i> | Lawson cypress |
|---------------------------------|----------------|

### Dicot. trees and shrubs

|                                               |            |
|-----------------------------------------------|------------|
| <i>Buddleja davidii</i>                       | buddleia   |
| <i>Hypericum androsaemum</i>                  | tutsan     |
| <i>Rubus</i> sp. ( <i>R. fruticosus</i> agg.) | blackberry |
| <i>Ulex europaeus</i>                         | gorse      |

### Lycopods and psilopsids

|                               |                                |
|-------------------------------|--------------------------------|
| <i>Selaginella kraussiana</i> | creeping clubmoss, selaginella |
|-------------------------------|--------------------------------|

### Grasses

|                                                       |                            |
|-------------------------------------------------------|----------------------------|
| <i>Agrostis capillaris</i>                            | browntop                   |
| <i>Agrostis stolonifera</i>                           | creeping bent              |
| <i>Aira caryophyllea</i> subsp. <i>caryophyllea</i>   | silver hairy grass         |
| <i>Anthoxanthum odoratum</i>                          | sweet vernal               |
| <i>Axonopus fissifolius</i>                           | narrow-leaved carpet grass |
| <i>Bromus</i> sp.                                     | brome                      |
| <i>Cortaderia selloana</i>                            | pampas                     |
| <i>Dactylis glomerata</i>                             | cocksfoot                  |
| <i>Holcus lanatus</i>                                 | Yorkshire fog              |
| <i>Lolium arundinaceum</i> subsp. <i>arundinaceum</i> | tall fescue                |
| <i>Poa annua</i>                                      | annual poa                 |
| <i>Sporobolus africanus</i>                           | ratstail                   |
| <i>Vulpia</i> sp.                                     |                            |

### Sedges

|                           |                |
|---------------------------|----------------|
| <i>Cyperus eragrostis</i> | umbrella sedge |
|---------------------------|----------------|

### Rushes

|                                             |              |
|---------------------------------------------|--------------|
| <i>Juncus articulatus</i>                   | jointed rush |
| <i>Juncus bufonius</i> var. <i>bufonius</i> | toad rush    |
| <i>Juncus tenuis</i> var. <i>tenuis</i>     | track rush   |

### Monocot. herbs (other than orchids, grasses, sedges, and rushes)

|                                   |            |
|-----------------------------------|------------|
| <i>Crocasmia ×crocasmii</i> flora | montbretia |
|-----------------------------------|------------|

### Composite herbs

|                        |                     |
|------------------------|---------------------|
| <i>Cirsium arvense</i> | Californian thistle |
| <i>Cirsium vulgare</i> | Scotch thistle      |

|                               |                       |
|-------------------------------|-----------------------|
| <i>Crepis capillaris</i>      | hawksbeard            |
| <i>Erigeron karvinskianus</i> | Mexican daisy         |
| <i>Erigeron sumatrensis</i>   | broad-leaved fleabane |
| <i>Gamochaeta calviceps</i>   | silky cudweed         |
| <i>Gamochaeta coarctata</i>   | purple cudweed        |
| <i>Hypochaeris radicata</i>   | catsear               |
| <i>Jacobaea vulgaris</i>      | ragwort               |
| <i>Mycelis muralis</i>        | wall lettuce          |
| <i>Sonchus asper</i>          | prickly puha          |
| <i>Sonchus oleraceus</i>      | puha, sow thistle     |

#### **Dicot. herbs (other than composites)**

|                                                 |                         |
|-------------------------------------------------|-------------------------|
| <i>Cardamine flexuosa</i>                       | wavy bittercress        |
| <i>Cardamine</i> sp.                            |                         |
| <i>Cerastium fontanum</i> subsp. <i>vulgare</i> | mouse-ear chickweed     |
| <i>Daucus carota</i>                            | wild carrot             |
| <i>Digitalis purpurea</i>                       | foxglove                |
| <i>Galium divaricatum</i>                       | slender bedstraw        |
| <i>Geranium robertianum</i>                     | herb Robert             |
| <i>Lotus pedunculatus</i>                       | lotus                   |
| <i>Lotus suaveolens</i>                         | hairy birdsfoot trefoil |
| <i>Mentha pulegium</i>                          | penny royal             |
| <i>Phytolacca octandra</i>                      | inkweed                 |
| <i>Plantago major</i>                           | broad-leaved plantain   |
| <i>Ranunculus repens</i>                        | creeping buttercup      |
| <i>Rumex acetosella</i>                         | sheep's sorrel          |
| <i>Rumex obtusifolius</i>                       | broad-leaved dock       |
| <i>Scrophularia auriculata</i>                  | water figwort           |
| <i>Solanum nigrum</i>                           | black nightshade        |
| <i>Stellaria media</i>                          | chickweed               |
| <i>Trifolium dubium</i>                         | suckling clover         |
| <i>Trifolium pratense</i>                       | red clover              |
| <i>Trifolium repens</i>                         | white clover            |
| <i>Verbascum thapsus</i>                        | woolly mullein          |
| <i>Verbascum virgatum</i>                       | moth mullein            |
| <i>Verbena incompta</i>                         | purple-top              |
| <i>Veronica arvensis</i>                        | field speedwell         |

## **Te Pohonui, Motu River, Eastern Bay of Plenty – species list**

Sarah Beadel, Rotorua Botanical Society  
6 November 2022 (NZTM: E2014159 N5795702)

### **Indigenous Species**

#### **Gymnosperms**

|                                    |          |
|------------------------------------|----------|
| <i>Dacrydium cupressinum</i>       | rimu     |
| <i>Pectinopitys ferruginea</i>     | miro     |
| <i>Phyllocladus trichomanoides</i> | tānekaha |

**Monocot. trees and shrubs***Cordyline australis*

tī kōuka, cabbage tree

*Cordyline banksii*

tī ngahere, forest cabbage tree

*Rhopalostylis sapida*

nīkau

**Dicot. trees and shrubs***Aristotelia serrata*

makomako, wineberry

*Beilschmiedia tawa*

tawa

*Brachyglottis repanda*

rangiora

*Carmichaelia australis*

maukoro, tainoka, taunoka

*Carpodetus serratus*

putaputawētā

*Coprosma autumnalis*

kanono, raurēkau, raurākau, manono

*Coprosma lucida*

karamū, kāramuramu, glossy karamū

*Coprosma rhamnoides**Coprosma robusta*

karamū, kāramuramu

*Coprosma spathulata* subsp. *spathulata**Coriaria arborea* var. *arborea*

tutu

*Corynocarpus laevigatus*

karaka

*Didymocheton spectabilis*

kohekohe

*Dodonaea viscosa*

akeake

*Elaeocarpus dentatus*

hīnau, whīnau

*Fuchsia excorticata*<sup>1</sup>

kōtukutuku, kōnini

*Fuscopora truncata*

hard beech, tawhairaunui

*Geniostoma ligustrifolium* var. *ligustrifolium*

hangehange

*Griselinia lucida*

puka

*Hedycarya arborea*

porokaiwhiri; pigeonwood

*Helichrysum lanceolatum*

niniao

*Knightia excelsa*

rewarewa

*Kunzea robusta*

kānuka

*Laurelia novae-zelandiae*

pukatea

*Leptospermum scoparium*

mānuka

*Leucopogon fasciculatus*

mingimingi

*Lophomyrtus bullata*

ramarama

*Melicope simplex*

poataniwha

*Melicytus ramiflorus* subsp. *ramiflorus*

māhoe

*Metrosideros robusta*

northern rātā

*Metrosideros excelsa* × *M. robusta*<sup>2</sup>*Myrsine australis*

māpou, matipou, māpau

*Olearia cheesemanii**Olearia furfuracea*

akepiro, tanguru

*Olearia rani* var. *colorata*

heketara

*Piper excelsum* subsp. *excelsum*

kawakawa

*Pittosporum cornifolium*

tāwhiri karo, wharewhareatua

*Pittosporum ellipticum**Pittosporum tenuifolium*

kōhūhū, rautāhiri, rautāwhiri

*Pseudopanax crassifolius*

horoeka, lancewood

1 Observed adjacent to block, downstream. Not seen on the block during the survey.

2 Observed on true left of Mōtū River, but not seen in the study area during the field survey.

|                                                            |                                    |
|------------------------------------------------------------|------------------------------------|
| <i>Pterophylla racemosa</i>                                | kamahi, tawhero                    |
| <i>Rhabdothamnus solandri</i>                              | taurepo                            |
| <i>Scandia</i> aff. <i>rosifolia</i> (AK 344466; “inland”) |                                    |
| <i>Schefflera digitata</i>                                 | patē                               |
| <i>Sophora tetraptera</i>                                  | kōwhai                             |
| <i>Toronia toru</i>                                        | toru                               |
| <i>Veronica parviflora</i>                                 | koromiko tārangā, kōkōmuka tārangā |
| <i>Veronica stricta</i> var. <i>stricta</i>                | koromiko, kōkōmuka                 |
| <i>Veronica tairawhiti</i>                                 |                                    |

#### **Dicot. lianes**

|                               |                                    |
|-------------------------------|------------------------------------|
| <i>Clematis cunninghamii</i>  | ngākau-kiore, pokopoko             |
| <i>Clematis paniculata</i>    | puawānanga                         |
| <i>Metrosideros carminea</i>  | akakura                            |
| <i>Metrosideros diffusa</i>   | rātā                               |
| <i>Metrosideros fulgens</i>   | rātā                               |
| <i>Metrosideros perforata</i> | aka                                |
| <i>Muehlenbeckia complexa</i> | pōhuehue                           |
| <i>Rubus cissoides</i> agg.   | tātaramoa, tātaraheke, bush lawyer |

#### **Lycopods and psilopsids**

|                               |  |
|-------------------------------|--|
| <i>Tmesipteris elongata</i>   |  |
| <i>Tmesipteris lanceolata</i> |  |

#### **Ferns**

|                                                    |                                           |
|----------------------------------------------------|-------------------------------------------|
| <i>Adiantum cunninghamii</i>                       | huruhuru tapairu, maidenhair fern         |
| <i>Adiantum diaphanum</i>                          | huruhuru tapairu, maidenhair fern         |
| <i>Arthropteris tenella</i>                        | jointed fern                              |
| <i>Asplenium bulbiferum</i>                        | mouku, mouki, mauku, hen and chicken fern |
| <i>Asplenium flaccidum</i> subsp. <i>flaccidum</i> | makawe, ngā makawe o raukatauri,          |
| <i>Asplenium hookerianum</i>                       |                                           |
| <i>Asplenium oblongifolium</i>                     | huruhuru whenua, shining spleenwort       |
| <i>Asplenium polyodon</i>                          | petako, paratao, sickle spleenwort        |
| <i>Blechnum chambersii</i>                         | rereti, nini, lance fern                  |
| <i>Blechnum discolor</i>                           | piupiu, petipeti, crown fern              |
| <i>Blechnum filiforme</i>                          | pānako, thread fern                       |
| <i>Blechnum fluviatile</i>                         | kiwikiwi, kiwakiwa, creek fern            |
| <i>Blechnum novae-zelandiae</i>                    | kiokio, horokio                           |
| <i>Cyathea cunninghamii</i>                        | pūnui, gully tree fern                    |
| <i>Cyathea dealbata</i>                            | ponga, silver fern                        |
| <i>Cyathea medullaris</i>                          | mamaku, black tree fern                   |
| <i>Cyathea smithii</i>                             | kātote, soft tree fern                    |
| <i>Dicksonia squarrosa</i>                         | whēkī                                     |
| <i>Diplazium australe</i>                          |                                           |
| <i>Histiopteris incisa</i>                         | mātātā, water fern                        |
| <i>Hymenophyllum demissum</i>                      | irirangi, piripiri, drooping filmy fern   |
| <i>Hymenophyllum dilatatum</i>                     | matua mauku, filmy fern                   |
| <i>Hymenophyllum multifidum</i>                    | mauku, much-divided filmy fern            |
| <i>Hymenophyllum rarum</i>                         | mauku, tufted filmy fern                  |

*Hymenophyllum revolutum*  
*Hymenophyllum sanguinolentum*  
*Lastreopsis hispida*  
*Leptopteris hymenophylloides*  
*Loxogramme dictyopteris*  
*Notogrammitis heterophylla*  
*Paesia scaberula*  
*Pakau pennigera*  
*Polystichum neozelandicum*  
*Polystichum silvaticum*  
*Polystichum wawranum*  
*Pteris tremula*  
*Pyrrosia elaeagnifolia*  
*Rumohra adiantiformis*  
*Trichomanes elongatum*  
*Trichomanes venosum*

mauku, filmy fern  
 piripiri, filmy fern  
 tuakura  
 heruheru, single crepe fern  
 lace fern  
  
 mātātā, hard fern  
 piupiu, pākauroharoha, gully fern

turawera, shaking brake  
 leather-leaf fern  
 karuwhai  
 bristle fern

### Orchids

*Corybas trilobus*  
*Earina autumnalis*  
*Earina mucronata*  
*Microtis unifolia* agg.  
*Pterostylis cardiostigma*  
*Pterostylis graminea*  
*Thelymitra longifolia*

raupeka  
 peka-a-waka

### Grasses

*Austroderia toetoe*  
*Microlaena avenacea*  
*Microlaena stipoides*  
*Oplismenus hirtellus* subsp. *imbecillis*  
*Poa anceps* agg.  
*Rytidosperma gracile*

toetoe  
 bush rice grass  
 pātītī, meadow rice grass

### Sedges

*Carex flagellifera*  
*Carex forsteri*  
*Carex geminata* agg.  
*Carex maorica*  
*Carex solandri*  
*Carex subviridis*  
*Carex uncinata*  
*Carex virgata*  
*Gahnia pauciflora*  
*Gahnia setifolia*  
*Machaerina sinclairii*  
*Morelotia affinis*

manaia  
  
 rautahi  
  
 matau  
 kamu matau a Maui, kamu  
 pūrei  
 takahikahi  
 māpere  
 toetoe tūhara, pēpepe

**Rushes**

|                                       |          |
|---------------------------------------|----------|
| <i>Juncus edgariae</i>                | wī, wīwī |
| <i>Luzula picta</i> var. <i>picta</i> |          |

**Monocot. herbs (other than orchids, grasses, sedges, and rushes)**

|                                                 |                          |
|-------------------------------------------------|--------------------------|
| <i>Arthropodium cirratum</i>                    | rengarenga               |
| <i>Astelia hastata</i>                          | kahakaha                 |
| <i>Astelia microsperma</i>                      |                          |
| <i>Astelia solandri</i>                         | kōwharawhara             |
| <i>Dianella nigra</i>                           | tūrutu                   |
| <i>Libertia grandiflora</i>                     | mīkoikoi; native iris    |
| <i>Phormium cookianum</i> subsp. <i>hookeri</i> | wharariki, mountain flax |

**Composite herbs**

|                                                   |                     |
|---------------------------------------------------|---------------------|
| <i>Anaphalioides trinervis</i>                    | puatea              |
| <i>Euchiton gymnocephus</i>                       |                     |
| <i>Euchiton sphaericus</i>                        |                     |
| <i>Leptinella squalida</i> subsp. <i>squalida</i> |                     |
| <i>Pseudognaphalium luteoalbum</i> agg.           | pukatea             |
| <i>Raoulia tenuicaulis</i>                        | tatahuna            |
| <i>Senecio banksia</i>                            |                     |
| <i>Senecio bipinnatisectus</i>                    | Australian fireweed |

**Dicot. herbs (other than composites)**

|                                                                  |                   |
|------------------------------------------------------------------|-------------------|
| <i>Acaena anserinifolia</i>                                      | piripiri, hutiwai |
| <i>Cardamine hirsuta</i>                                         | bittercress       |
| <i>Epilobium nerteroides</i>                                     |                   |
| <i>Epilobium pedunculare</i>                                     |                   |
| <i>Epilobium rotundifolium</i>                                   |                   |
| <i>Gunnera monoica</i>                                           |                   |
| <i>Haloragis erecta</i> subsp. <i>erecta</i>                     | toatoa            |
| <i>Hydrocotyle elongata</i>                                      |                   |
| <i>Hydrocotyle heteromeria</i>                                   |                   |
| <i>Hydrocotyle moschata</i> var. <i>moschata</i>                 |                   |
| <i>Hydrocotyle novae-zeelandiae</i> var. <i>novae-zeelandiae</i> |                   |
| <i>Jovellana sinclairii</i>                                      |                   |
| <i>Lobelia angulata</i>                                          | pānakenake        |
| <i>Nertera depressa</i>                                          |                   |
| <i>Oxalis exilis</i>                                             |                   |
| <i>Peperomia urvilleana</i>                                      | wharanui          |
| <i>Ranunculus reflexus</i>                                       | maruru            |
| <i>Stellaria parviflora</i>                                      | kohukohu          |
| <i>Urtica sykesii</i>                                            |                   |
| <i>Wahlenbergia violacea</i>                                     | rimuroa           |

**Naturalised and Exotic Species****Dicot. trees and shrubs**

|                                               |            |
|-----------------------------------------------|------------|
| <i>Hypericum androsaemum</i>                  | tutsan     |
| <i>Rubus</i> sp. ( <i>R. fruticosus</i> agg.) | blackberry |

**Lycopods and psilopsids***Selaginella kraussiana*

African clubmoss, selaginella

**Grasses***Agrostis capillaris*

browntop

*Agrostis stolonifera*

creeping bent

*Aira caryophyllea* subsp. *caryophyllea*

silver hairy grass

*Anthoxanthum odoratum*

sweet vernal

*Axonopus fissifolius*

narrow-leaved carpet grass

*Cortaderia selloana*

pampas

*Dactylis glomerata*

cocksfoot

*Holcus lanatus*

Yorkshire fog

*Miscanthus nepalensis*

Himalaya fairy grass

*Poa annua*

annual poa

**Rushes***Juncus effusus* var. *effusus*

soft rush, leafless rush

**Monocot. herbs (other than orchids, grasses, sedges, and rushes)***Crocasmia ×crocosmiiflora*

montbretia

**Composite herbs***Cirsium arvense*

Californian thistle

*Cirsium palustre*

marsh thistle

*Cirsium vulgare*

Scotch thistle

*Crepis capillaris*

hawksbeard

*Erigeron karvinskianus*

Mexican daisy

*Erigeron sumatrensis*

broad-leaved fleabane

*Gamochaeta coarctata*

purple cudweed

*Hypochaeris radicata*

catsear

*Jacobaea vulgaris*

ragwort

*Leontodon taraxacoides*

hawkbit

*Mycelis muralis*

wall lettuce

*Sonchus oleraceus*

puha, sow thistle

**Dicot. herbs (other than composites)***Centaurium erythraea*

centaury

*Cerastium fontanum* subsp. *vulgare*

mouse-ear chickweed

*Digitalis purpurea*

foxglove

*Galium divaricatum*

slender bedstraw

*Geranium robertianum*

herb Robert

*Lotus pedunculatus*

lotus

*Lotus suaveolens*

hairy birdsfoot trefoil

*Mentha spicata*

spearmint

*Plantago lanceolata*

narrow-leaved plantain

*Prunella vulgaris*

selfheal

*Ranunculus repens*

creeping buttercup

*Rumex acetosella*

sheep's sorrel

*Rumex obtusifolius*

broad-leaved dock

*Sagina procumbens*  
*Verbascum thapsus*  
*Verbascum virgatum*  
*Veronica arvensis*

pearlwort  
 woolly mullein  
 moth mullein  
 field speedwell

## Specimens collected on the visit to Huaero and Te Pohonui on the Motu River, November 2022

The specimens are now accessioned at the National Forestry Herbarium at Scion, Rotorua.

| Accession Number | Species (* = exotic)                            | Site       | Collection date |
|------------------|-------------------------------------------------|------------|-----------------|
| NZFRI 34006      | <i>Olearia cheesemanii</i>                      | Huaero     | 5 November 2022 |
| NZFRI 34007      | <i>Fuscospora solandri</i> var. <i>solandri</i> | Huaero     | 5 November 2022 |
| NZFRI 34008      | <i>Fuscospora truncata</i>                      | Huaero     | 5 November 2022 |
| NZFRI 34009      | <i>Phyllocladus trichomanoides</i>              | Huaero     | 5 November 2022 |
| NZFRI 34010      | <i>Coprosma spathulata</i>                      | Huaero     | 5 November 2022 |
| NZFRI 34011      | <i>Pseudowintera axillaris</i>                  | Huaero     | 5 November 2022 |
| NZFRI 34012      | <i>Carex healyi</i>                             | Huaero     | 5 November 2022 |
| NZFRI 34013      | <i>Coprosma areolata</i>                        | Huaero     | 5 November 2022 |
| NZFRI 34014      | <i>Cardamine flexuosa</i> *                     | Huaero     | 5 November 2022 |
| NZFRI 34015      | <i>Jovellana sinclairii</i>                     | Te Pohonui | 6 November 2022 |
| NZFRI 34016      | <i>Polystichum wawranum</i>                     | Te Pohonui | 6 November 2022 |
| NZFRI 34017      | <i>Polystichum silvaticum</i>                   | Te Pohonui | 6 November 2022 |
| NZFRI 34018      | <i>Cardamine hirsuta</i>                        | Te Pohonui | 6 November 2022 |

## Bird observations, November 2022

Chris Bycroft

Key: 1. Huaero – Kāinga and Pā A. Threatened-Naturally Vulnerable  
 2. Te Pohonui B. At Risk-Declining

### Indigenous species

|                                  |                                              |        |
|----------------------------------|----------------------------------------------|--------|
| Ruru/morepork                    | <i>Ninox novaeseelandiae novaeseelandiae</i> | (1)    |
| Koekoeā/long-tailed cuckoo (A)   | <i>Eudynamys taitensis</i>                   | (1)    |
| Korimako/bellbird                | <i>Anthornis melanura</i>                    | (1,2)  |
| Tūī                              | <i>Prothemadera novaeseelandiae</i>          | (2)    |
| Riroriro/grey warbler            | <i>Gerygone igata</i>                        | (1, 2) |
| Miromiro/North Island tomtit     | <i>Petroica macrocephala</i>                 | (1)    |
| Toutouwai/North Island robin (B) | <i>Petroica longipes</i>                     | (2)    |
| Tauhou/silvereye                 | <i>Zosterops lateralis</i>                   |        |
| Pōpokatea/whitehead              | <i>Mohoua albigilla</i>                      | (1,2)  |

### Introduced species

|                    |                          |       |
|--------------------|--------------------------|-------|
| Eurasian blackbird | <i>Turdus merula</i>     | (1,2) |
| Song thrush        | <i>Turdus philomelos</i> | (2)   |