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Appendix

Bot Soc members on the Nov-Dec 1993 trip to Lord Howe and Norfolk Islands (Helen Cogle pers. comm.): *Dorothy Bagnall, Catherine Beard (collected 58 vascular specimens for the AK herbarium while on Lord Howe Island), Daphne & Quentin Blackshaw, Helen Cogle (organiser), Anne Fraser, Graeme Hambly, Fran Hintz, Gordon Perry, Juliet Richmond, Marie & Lawre Taylor, Alison Wesley, Barbara & Bob White.*

Field Trip to Woodcocks Kawaka Reserve, Woodcocks Road, Warkworth, 14 March 2015

Maureen Young

Participants: *Colleen and Warren Brewer, Lisa Clapperton, Bev and Geoff Davidson, Frances Duff, Sharen Graham, Leslie Haines, Philip Moll, Colleen Pilcher, Juliet Richmond, Joshua Salter, Jenni Shanks, Doug Shaw, Doug Shephard, Bryony Smart, Lydia and Ian Smith, Vijay Soma, Lyn Wade, Maureen Young (leader).*

This 12.14 ha reserve, lying on the NW side of Woodcocks Road 9 km from Warkworth, was given to the Rodney County Council by Mr E. J. Woodcock's estate in 1979. The name of the reserve reflects the pride felt by the donor in the kawaka (*Libocedrus plumosa*) trees found growing quite commonly therein (Figs. 1, 2). Bot Soc has visited on three previous occasions; a brief visit in 1958 (Anon. 1958) when the undergrowth was recovering from cattle

grazing; in 1966 (Horsman 1967) when it was explained that the area of young pole trees resulted from a fire c. 100 years previously; and briefly in 1989 (Baker & Young 1989) when three areas in Kaipara Flats were explored in one day.

The reserve is divided by a low ridge into two contrasting vegetation types. To the west is a steepish slope on the flanks of Conical Hill with mixed podocarp/broadleaf forest with emergent kahikatea (*Dacrycarpus dacrydioides*) and rimu (*Dacrydium cupressinum*) (Fig. 3). To the east the bush consists of a dense stand of pole conifers, mainly rimu, but with some kauri (*Agathis australis*) and tanekaha (*Phyllocladus trichomanoides*), and the kawaka for which the reserve is named. The forest floor of this part of the reserve is remarkable for the

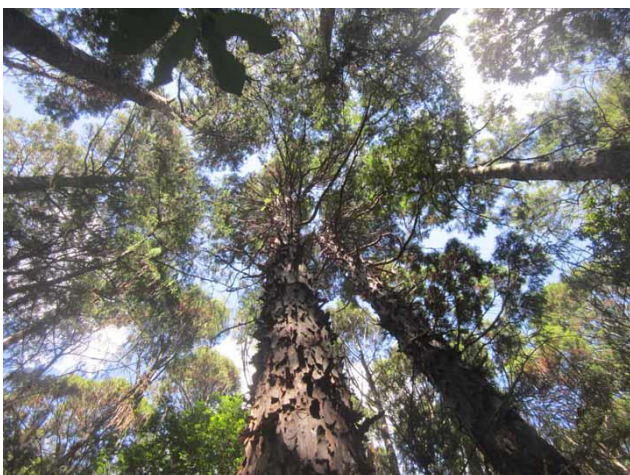


Fig. 1. Tall kawaka amongst other pole conifers. Photo: Vijay Soma. All photos taken on 14 Mar 2015.

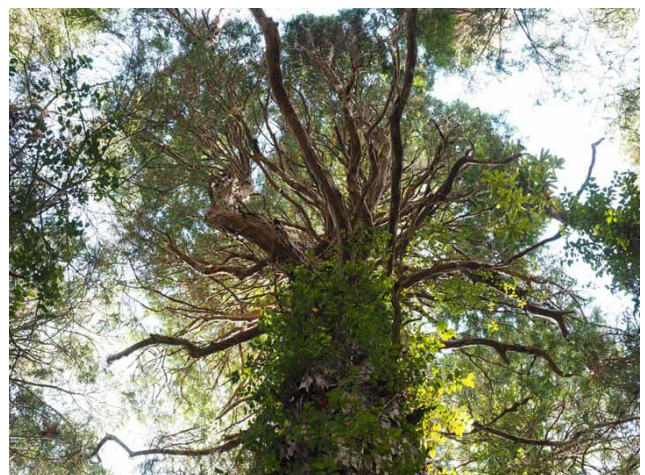


Fig. 2. Characteristic branches of a large kawaka, its trunk clothed with supplejack. Photo: Philip Moll.



Fig. 3. Vijay Soma and Jenni Shanks measuring a large rimu. Photo: Philip Moll.



Fig. 4. Small *Mida salicifolia* (its canopy indicated by arrows) beneath pole rimu. Photo: Joshua Salter.



Fig. 5. Kauri snail in the rimu duff, waiting for us to finish messing with him/her and leave. Scalebar = 1 cm. Photo: Philip Moll.

lush undergrowth of bryophytes, ferns and orchids. March was not a good month for the 14 species of ground orchids that have been recorded, but in July 2014 the tiny rare and endangered *Anzybas rotundifolius* could still be found in small numbers 30 years after it was first discovered there (pers. obs.).

When driving along Woodcocks Road approaching the reserve, it can be seen from bush remnants nearby that there is a dominance of rimu in the general area. On the farmed side of the fenced reserve is an eaten-out patch of pole rimu that contrasts with the lush growth on the other side of the fence – one could dream of adding it to the reserve and watching the regeneration occur.

On the day of the field trip in this untracked reserve a figure-of-eight course was followed; first along the low ridge, then a loop through the pole conifers, then a brief loop along the edge of a swamp forest in the western area.

Along the low ridge can still be discerned an old trail leading to a house that once existed behind the reserve in the 1800s. From the trail we found the remains of a patch of the fern *Loxsona cunninghamii* that was planted by Mr. Woodcock before his death, but there is no sign now of the *Sticherus flabellatus* that he also planted there. This area is remarkable for the dominance in the understory of *Mida salicifolia* (Fig. 4) and *Alseuosmia macrophylla*, and some saplings of *Quintinia serrata* indicate the surprising presence of this tree at such a low altitude (c. 80m). It was a good place to point out to learners the difference between kauri grass (*Astelia trinervia*) and cutty grass (*Gahnia xanthocarpa*), and also to compare the *Astelia solandri* and *Collospermum hastatum* that grew side by side on an old kanuka (*Kunzea robusta*). Geoff and Lisa both earned chocolate sprats here – Geoff for spotting a seedling mangeao (*Litsea calicaris*), a new addition to the species list, and Lisa, whose sharp eyes picked out a kauri snail (*Paryphanta busbyi*) which was alive but had withdrawn well into its shell (Fig. 5). At the fence line was a diminishing population of a variant of *Libertia grandifolia* with unusually long leaves (Fig. 6).

It was slow progress through the pole conifers, as the rich growth engaged our attention. The largest kawaka tree that we saw had a dbh (diameter at breast height) of 57 cm, or a circumference of 180 cm. Lyn searched for the Kirk's daisy (*Brachyglottis kirkii*) that I had previously found growing quite commonly on a low knoll, but only three seedlings were seen. This is indicative of the way that regenerating forest is a dynamic entity that rarely stands still, and the increasing growth of *Gahnia xanthocarpa* is another sign. Sadly, the only presence of the three shrubs of *Raukaua anomalus*



Fig. 6. Small population of *Libertia grandiflora*, with very long leaves (one 960 mm). Photo: Joshua Salter.



Fig. 7. A line of holes in a dead tree; possibly a "kingfisher hotel" as someone in the group remarked. Photo: Joshua Salter.



Fig. 8. The massive arched root of a northern rata that probably began life on a fallen log. Photo: Joshua Salter.

that were found in the past were a couple of piles of dead, divaricating twigs.

After eating lunch, and being reacquainted with slow-coaches Vijay and Josh, we took a look at the western side of the reserve, mainly to briefly check out the swamp forest on the lower flanks of Conical Hill. We didn't risk getting tangled in the multiple loops of supplejack (*Ripogonum scandens*), so only checked out the many large trees of pukatea (*Laurelia novae-zelandiae*) from afar. Swamp maire (*Syzygium maire*) is present there, but was not seen. In this area one dead emergent appears to have

provided homes for several generations of kingfishers (Fig. 7). We soon recognised the arched root of a big northern rata (*Metrosideros robusta*) (Fig. 8) that we had seen in the morning, so then found our way out of the reserve and back to the cars. All agreed that this is a remarkably weed-free reserve of outstanding beauty.

Acknowledgements

Brenda Osbourne visited the reserve with me a short time before the trip. The historical information came from Frank Hudson (1918-2003). Images organised by Joshua Salter.

References

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 Horsman, J. 1967: Woodcocks November. *Auckland Botanical Society Journal* 24: 13.

Appendix: Vascular indigenous plant species list for Woodcocks Kawaka Reserve.

This list is based on earlier lists from *Scenic Reserves near Warkworth* by AE Esler, WM Hamilton, F Hudson, M Young (1988). ABS = Plants added on the day.

Lycophytes (4)

Lycopodiella cernua
Lycopodium deuterodensum
Lycopodium volubile
Phlegmariurus varius (*Huperzia*)

Ferns (42)

Adiantum cunninghamii
Asplenium bulbiferum
Asplenium flaccidum
Asplenium oblongifolium
Asplenium polyodon

Blechnum chambersii
Blechnum discolor
Blechnum filiforme
Blechnum fraseri
Blechnum novae-zelandiae
Cardiomanes reniforme
Cyathea dealbata
Cyathea medullaris
Deparia petersenii
Dicksonia squarrosa
Gleichenia microphylla
Hymenophyllum demissum

Hymenophyllum dilatatum (ABS)
Hymenophyllum flabellatum
Hymenophyllum sanguinolentum
Hymenophyllum scabrum
Lastreopsis glabella
Lastreopsis hispida
Lindsaea trichomanoides
Loxogramme dictyopteris
Loxsoma cunninghamii (planted)
Lygodium articulatum
Microsorium pustulatum
Microsorium scandens

Notogrammitis heterophylla
Paesia scaberula
Pneumatopteris pennigera
Pteridium esculentum
Pteris macilentia
Pteris tremula
Pyrrhosia eleagnifolia
Tmesipteris elongata
Tmesipteris lanceolata
Tmesipteris tannensis
Trichomanes elongatum
Trichomanes endlicherianum
Trichomanes venosum

Gymnosperms (9)

Agathis australis
Dacrycarpus dacrydioides
Dacrydium cupressinum
Libocedrus plumosa
Phyllocladus trichomanoides
Podocarpus cunninghamii
Podocarpus totara
Prumnopitys ferruginea
Prumnopitys taxifolia

Dicotyledons (72)

Alectryon excelsus
Alseuosmia macrophylla
Aristolelia serrata
Beilschmiedia tarairi
Beilschmiedia tawa
Brachyglottis kirkii var. *angustior*
Brachyglottis repanda
Carmichaelia australis
Carpodetus serratus
Centella uniflora
Clematis cunninghamii
Clematis paniculata
Coprosma arborea
Coprosma grandifolia
Coprosma lucida
Coprosma rhamnoides
Coprosma robusta
Coprosma spathulata
Coprosma tenuicaulis
Coriaria arborea
Corynocarpus laevigatus (ABS)
Drosera auriculata

Dysoxylum spectabile
Elaeocarpus dentatus
Elatostema rugosum
Fuchsia excorticata
Geniostoma ligustrifolium
Gonocarpus incanus
Griselinia lucida
Haloragis erecta
Hebe stricta
Hedycarya arborea
Hoheria populnea (ABS)
Knightia excelsa
Kunzea robusta
Laurelia novae-zelandiae
Leptospermum scoparium
Leucopogon fasciculatus
Litsea calicaris (ABS)
Melicope simplex
Melicytus macrophyllus
Melicytus micranthus
Melicytus ramiflorus
Metrosideros diffusa
Metrosideros fulgens
Metrosideros perforata
Metrosideros robusta
Mida salicifolia
Myrsine australis
Myrsine salicina
Nertera dichondriifolia
Nestegis lanceolata
Nestegis montana
Olearia furfuracea
Olearia rani
Passiflora tetrandra
Piper excelsum
Pittosporum cornifolium
Pittosporum tenuifolium
Pseudopanax arboreus
Pseudopanax crassifolius
Quintinia serrata
Ranunculus reflexus
Rhabdothamnus solandri
Rubus australis
Rubus cissoides
Schefflera digitata
Sophora chathamica
Streblus heterophyllus

Syzygium maire
Toronia toru
Weinmannia silvicola

Monocotyledons (39)

Acianthus sinclairii
Anzcybas rotundifolius (*Corybas*)
Astelia solandri
Astelia trinervia
Collosporum hastatum
Cordyline australis
Cordyline banksii
Corybas cheesemanii
Cyrtostylis oblonga
Dianella nigra
Diplodium alobulum
Diplodium brumale
Diplodium trullifolium
Drymoanthus adversus
Earina autumnalis
Earina mucronata
Freycinetia banksii
Gahnia pauciflora
Gahnia setifolia
Gahnia xanthocarpa
Ichthyostomum pygmaeum
Libertia grandiflora
Machaerina tenax (ABS)
Microlaena avenacea
Nematoceras trilobum (*Corybas*)
Oplismenus hirtellus
Orthoceras novaezeelandiae
Pterostylis agathicola
Pterostylis banksii
Rhopalostylis sapida
Ripogonum scandens
Schoenus tendo
Simpliglottis cornuta
Singularybas oblongus (*Corybas*)
Thelymitra longifolia
Uncinia banksii
Uncinia uncinata
Uncinia zotovii
Winika cunninghamii