

state of preservation. It was necessary to walk around the end of the fortification trenches in some places to avoid climbing or descending banks two and even three times the height of a person. Some trenches seemed as deep as twentieth century tank traps. We had our lunch among these trenches, and enjoyed a splendid view of highway SH1 far below, and a nearby rocky hill to the north. We were surrounded by a quite wide range of species, and the one pampas grass clump among them seemed to be the only invasive plant to cause comment along the route we took. As we rose to move on there was some excitement in the fungal field when someone noticed a spectacular red fructification of *Aseroa rubra*, in spite of fairly dry conditions.

As we made our way out of the forest on the east side, there were many tall *Coprosma areolata*. Thanks to our having a guide who knew the district our attention was drawn to some plants among these with a very similar habit but distinct foliage. We were informed that these were *Coprosma rigida*. Alongside the farm cow race where we had permission to come out, this observer thought there was an adventive fireweed. A plant taken to Ewen Cameron turned out to be a native species, *Senecio minimus*.

Though we climbed to 301 metres at the summit, the trip was easy and pleasant, and it promised much more interest if it was followed again or a variant taken on other ridges or gullies nearby. Many thanks to Maureen Young and Frank Hudson for leading us in this remarkable place so close to the modern highway where we could gain so much insight into things belonging to an older Northland. No doubt many of us would feel confident of learning much more if we returned.

Pukekaroro Scenic Reserve, near Kaiwaka ABS field trip 20 November 1993

Sandra Jones

A species list was compiled during the ABS field trip of 12 April 1986 and published in the ABS Newsletter 41 (2), 1986, with further additions recorded by Maureen Young in Newsletter 42(1), 1987. The following are additions (to the previously published 1986 & 1987 lists), recorded by Nigel Clunie / Alan Esler (April 1982) (NC), Maureen Young (October 1986) (MY) and during the ABS field trip on 20 November 1993 (ABS).

Gymnosperms

Podocarpus hallii (NC, as *P. cunninghamii*)

Ferns and fern allies

Deparia petersenii (NC)

Diplazium australe (NC)

Doodia media (NC)

Gleichenia microphylla (NC)

Grammitis ciliata (ABS)

Grammitis aff. *pseudociliata* (MY), voucher specimen in AK

Hymenophyllum revolutum (MY)

Lycopodium cernuum (MY)

Paesia scaberula (NC)

Pteris tremula (NC)

Sticherus cunninghamii (MY)

Tmesipteris tannensis (MY)

GRASSES

Rytidosperma gracile (NC)

Dicotyledons

Alectryon excelsus (NC)

Alseuosmia x quercifolia (NC)

Gonocarpus incanus (NC, as *G. montanus*)

Litsea calicularis (ABS)

<i>Beilschmiedia tawaroa</i> (NC)	<i>Lophomyrtus bullata</i> (ABS)
<i>Brachyglottis kirkii</i> (NC, as <i>Urostemon kirkii</i>)	<i>Metrosideros albiflora</i> (MY)
<i>Callitriche muelleri</i> (NC)	<i>Metrosideros robusta</i> (NC)
<i>Carmichaelia cunninghamii</i> (ABS)	<i>Muehlenbeckia australis</i> (NC)
<i>Coprosma rigida</i> (ABS, by farm road, east side)	<i>Parsonsia capsularis</i> (ABS, in flower, by farm road, east side)
<i>C. propinqua</i> (ABS, by farm road, east side)	<i>Parsonsia heterophylla</i> (NC)
<i>Cyathodes juniperina</i> (NC)	<i>Ranunculus reflexus</i> (NC, as <i>R. hirtus</i>)
<i>Epilobium rotundifolium</i> (ABS)	<i>Senecio minimus</i> (NC)
<i>Fuchsia excorticata</i> (NC)	<i>Sophora microphylla</i> (NC)
<i>Geranium homeanum</i> (NC)	<i>Streblus heterophyllus</i> (NC, as <i>Paratrophis microphylla</i>)
<i>Gnaphalium gymnocephalum</i> (NC)	<i>Vitex lucens</i> (NC)
Monocots (excl. grasses & orchids)	
<i>Astelia solandri</i> (NC)	<i>Gahnia pauciflora</i> (NC)
<i>Carex dissita</i> (ABS)	<i>Isolepis reticularis</i> (NC, as <i>Scirpus reticularis</i>)
<i>Carex ochrosaccus</i> (NC)	<i>Schoenus tendo</i> (NC)
<i>Carex virgata</i> (NC)	<i>Uncinia banksii</i> (MY)
<i>Cordyline australis</i> x <i>C. sp.</i> (NC)	<i>Uncinia zotovii</i> (NC)
Orchids	
<i>Caladenia</i> ? "green column" (ABS)	<i>Drymoanthus adversus</i> (ABS)
<i>Corybas macranthus</i> (ABS)	<i>Thelymitra longifolia</i> (ABS)

***Cyathea cooperi* naturalised in Auckland**

R.O. Gardner

While botanising at the Captain Springs Reserve in Onehunga last June I noticed a smallish tree fern on the edge of the willow-fringed stream here (just south of the railway line). It was in much the sort of place mamaku (*C. medullaris*) would grow but its leaf stalks were green rather than black and its croziers were covered in large, very pale, red-margined scales. The reserve had only recently been developed and was without any planting, so I was fairly sure that this fern would be worth crossing the stream for.

It turned out to be one of the Queensland-New South Wales species, *C. cooperi* (Hook. ex F.v.Muell.) Domin, and it was fertile, here showing another difference from its relative *C. medullaris* in that its sori are without an indusium. The figure below is based on my collection (R.O.G 6969, AK); it shows sterile and fertile pinnules (life size), and one large stipe scale (seta on margin enlarged) standing above a coat of hair-like setose red-brown scales and tiny stellate-setose hairs.

I did not find any likely nearby source for the plant. The species has been in cultivation in Auckland for perhaps fifteen years, and is somewhat more drought-tolerant than mamaku (Sandra Van Der Mast pers. comm.).