* *Kniphofia uvaria*	p	red hot poker	HB
* ζ *Lagurus ovatus*		harestail	
* *Lolium perenne*		perennial ryegrass	
ζ *Microlaena stipoides*		rice grass	
* *Monstera deliciosa*	p	fruit salad plant	HB
*ζ *Musa* x*paradisiaca* 'Lady Fingers'	p	banana	HB
Oplismenus hirtellus		bush panic grass	
*ζ *Parapholis incurva*		sickle grass	SB
* *Paspalum dilatatum*		paspalum	
*ζ *P. distichum*		mercer grass	
* *Pennisetum clandestinum*		kikuyu	
* *Phyllostachys aurea*	p	walking stick bamboo, fishpole bamboo	HB
Phormium tenax		flax, harakeke	
Poa anceps		broad-leaved poa	
*ζ *P. annua*		annual poa	
* *Pseudosasa japonica*	p	arrow bamboo	HB
* *Rytidosperma racemosum*		danthonia	
ζ *Spinifex sericeus*		hairy spinifex	
* *Sporobolus africanus*		ratstail	
* *Stenotaphrum secundatum*		buffalo grass	
*ζ *Vulpia bromoides*		brome fescue	
* *Yucca gloriosa*	p	Spanish dagger	HB

Rushes (11) (N:7 E:4)	
Apodasmia similis	oioi, jointed wire rush
*ζ *Juncus articulatus*	jointed rush
ζ *J. australis*	leafless rush
*ζ *J. bufonius*	toad rush
J. edgariae	wiwi
*ζ *J. effusus*	soft rush
*ζ *J. flavidus*	rush
ζ *J. pallidus*	giant rush, leafless rush
ζ *J. planifolius*	grass-leaved rush
ζ *J. sarophorus*	rush
ζ *Triglochin striata*	arrow-grass

Sedges (12) (N:10 E:2)	
ζ *Carex dissita*	carex bush sedge
# *C. flagellifera*	Glen Murray tussock
ζ *C. lambertiana*	
ζ *C. lessoniana*	rautahi
ζ *C. pumila*	sand sedge
ζ *C. virgata*	swamp sedge
* *Cyperus eragrostis*	umbrella sedge
# * *C. rotundus*	purple nut sedge, nut grass
C. ustulatus	giant umbrella sedge, coastal cutty grass
Ficinia nodosa (syn. *Isolepis nodosa*)	knobby clubrush
ζ *Gahnia lacera*	cutty grass
Isolepis cernua	slender clubrush
ζ *I. prolifera*	three square
*ζ *I. sepulcralis*	

A trip to Totara North, Whangaroa Harbour

Maureen Young

In January 1992 Anthony Wright led one of his inimitable Bot Soc camps at Lanes Cove, Whangaroa Harbour. The aluminium dinghy belonging to Auckland Museum was used to ferry supplies to the cove, and to ferry people to islands and bays for botanising purposes. This area of Northland is a botanist's delight, but unfortunately a camp report was not written up in the Journal.

On the weekend of 2-3 September 2006 three participants on that trip, Helen Cogle, Anne Fraser and myself, were hosted by Michael Winch with the

aim of joining a Forest & Bird outing in the area. Michael lives high in the volcanic hills on the north side of the harbour – so high in fact that a 4WD is needed to get to his house, and mains electricity has never made it so far. What a delight to find that one could put a hand out of a window and touch a kauri tree, and that a large species list could be compiled without leaving the deck. Michael co-owns 100 ha of forest, which is contiguous with 2500 ha administered by DOC. The area has been well botanised and over 300 indigenous vascular plants have been listed.

Within cooee of the house grow *Clematis paniculata* (in flower)*, Libocedrus plumosa, Halocarpus kirkii, Pittosporum umbellatum* and *P. cornifolium* (both in flower), *P. virgatum, Hebe ligustrifolia, Alseuosmia banksii, Brachyglottis kirkii* var. *angustior, Coprosma parviflora* and plentiful *Pseudopanax gilliesii.* The north side of Whangaroa Harbour is the type locality for this latter plant. A short walk down the driveway leads to an area overhung with large plants of *Colensoa physaloides*, with clusters of purple/blue berries hiding under the leaves at this time of the year.

***Pseudopanax gilliesii*, taken near Lanes Cove, Whangaroa Harbour, 16 Apr 1995 (Photo: Ewen Cameron).**

Michael led the walk past a sapling of *Manoao colensoi,* the only plant of this species that could be found here, then down a ridge where some quite large kauri remain. On one of the largest of these the flaking bark supports a population of the seldom seen orchid *Adelopetalum* (*Bulbophyllum*) *tuberculatum*. Although this seems the most precarious of perches, the plant is able to maintain a toehold there for many years. A search around the base of the tree revealed orchids on several fallen bark flakes.

At the foot of the ridge are streams flowing through a tumble of andesitic conglomerate rocks. The main stream, the Wairakau, which gives its name to these volcanic rocks (Wairakau andesite), has many small waterfalls and deep, clear pools. The rocky gorge is green with mosses and filmy ferns, including *Hymenophyllum cupressiforme,* with tiny fronds of *Grammitis ciliata* scattered therein. *Cortaderia fulvida* and *Loxsoma cunninghamii* grow on the stream's edge, an area that was in danger of being completely overtaken by mist flower (*Ageratina riparia*), until the release of a white smut fungus (*Entyloma ageratina*), which has successfully acted as a biological control.

Plants of note on the steep climb out of the gorge include *Dracophyllum latifolium, Helichrysum lanceolatum, Cordyline pumilio* with the short trunk that is a feature of this species in the north, *Libertia grandiflora* in early flower, *Pterostylis agathicola,* a rata/pohutukawa hybrid, and the fan fern, *Schizaea dichotoma*. Very common components in the undergrowth are thickets of *Alseuosmia banksii* and *Brachyglottis kirkii* var. *angustior.*

On the second day Michael showed us some of the highlights that we had missed on the previous day. After a hair-raising climb up a large rock, we sat in the sunshine and admired the view out over the steep hills to the sea. The pattern of past burning can clearly be seen, with many of the slopes covered in scrub of various heights, with taller vegetation, including early flowering kowhai, in the gullies. A rata, *Metrosideros robusta*, clings to the side of the rock, and tiny patches of *Cheilanthes sieberi* grow in lichen-filled hollows.

About a dozen plants of *Pimelea tomentosa* grow under short scrub, but the population looks to be stressed, and much pig rooting around the site is rather an ominous sign. Some shrubs of *Leionema* (*Phebalium*) *nudum* were seen. A hunt down the drive to try to find a previously known plant of *Calystegia marginata,* resulted in one tiny heart-shaped leaf being spotted – alas, it is unlikely to survive. Several plots of this rather rare plant were seen on the 1992 trip.

We saw a couple of shrubs of *Coprosma neglecta* "Whangaroa". The specimens of this plant that are lodged in the Auckland Herbarium (AK) are all from the north of the Whangaroa Harbour, except for a possible voucher from Cape Brett (AK 282420). Although it is said that Bot Soc stalwart, Katie Reynolds, first discovered this plant in 1970, there is a Harry Carse specimen in the herbarium (AK 36897) dated April 1921. At that time he named it *Coprosma*

gracilis (A.Cunn.) W.R.B.Oliv. The shiny leaves are intermediate in size between the large leaved and small leaved coprosmas. A specimen in AK from the garden of AP Druce (AK 278451) notes "Similar to *Coprosma repens* x *C. rhamnoides*, but stipules different". Tony Druce felt that it is closely related to the North Cape endemic, *C. neglecta,* and perhaps should be a subspecies of that plant, and the one found at Maunganui Bluff should be another subspecies.

As always, it was difficult when the time came to leave the tranquillity of Northland and the diversity of the flora.

Acknowledgements
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Flowering time in *Coprosma macrocarpa* subsp. *minor* (Rubiaceae)

Rhys Gardner

A few years ago, in the course of describing the "coastal karamu" *Coprosma macrocarpa* subsp. *minor*, I examined herbarium specimens and plotted their flowering and fruiting with respect to month. I did a similar thing for *C. robusta*, on collections that came from within the distributional range of the former, that is, north of lat. 38 deg. S.

I see now that the table as printed (table 2, Gardner & Heads 2003) contains an error: in its *C. robusta* data, the figures for "flower" have advanced to the left a month from their correct position, making it appear that these two coprosmas have their peak flowering together in August. The correct version of the table is given below (Fig. 1), showing that *C. robusta* has a September peak. This difference of a month is carried through to the fruiting stage.

Hybrids between these two coprosmas are common enough, and would no doubt be even more plentiful if both taxa did flower mainly in the same month. In fact, pure populations of *C. macrocarpa* subsp. *minor* around Auckland are hard to find, and every now and then, when I look at the type specimen I chose, from the Mt Eden rock forest, I wonder whether it is as "typical" as it looks. Perhaps a better population to have gone to would have been the one at Mt Smart, in the planted native forest inside the perimeter fence at Church St, where this subspecies dominates the understorey. A type from Mt Smart would have been an especially appropriate choice, since this is the locality for the earliest collection, made by Thomas Kirk in 1865 (he called it *C. grandifolia*).

Also seen around Auckland now, in plantings, is *C. macrocarpa* subsp. *macrocarpa*, found naturally only on the Three Kings Islands. Its fruits are almost twice as large as those of subsp. minor, a difference foreshadowed in the diameter of the ovary (3 mm versus 1 mm). Peter de Lange has pointed out that subsp. *macrocarpa* seems to have its peak flowering in May, even in cultivation on the mainland, and so is reproductively isolated from subsp. *minor*. Strictly speaking, this would favour specific status for the two taxa, but I feel that a late-flowering taxon that is not to be differentiated on characters other than those of size can conveniently kept at infraspecific level, with the trinomial nomenclature useful to indicate its (probable!) nearest relative.