



BOTANY DIVISION REPORT

BUSH REMNANTS AT TAWA

I. A. E. ATKINSON

7 FEBRUARY 1972

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SUMMARY

Tawa has few areas of suitable bush for recreation and education so it is of value to preserve what is left in these two areas. A species list is appended.

1. Redwood Bush

The bush is dominated by tawa-kohekohe forest with a kohekohe, supplejack, kawakawa, mahoe understorey. The upper margin is scrub with gorse further up the slopes. Opossum and sheep damage is present but most of the modification is caused by humans. If left the bush will deteriorate further and weeds could become more of a problem. It is recommended that the bush should come under public ownership and a sense of pride and interest be encouraged.

2. Wilfred Mexted Scenic Reserve (4 acres)

Tawa - kohekohe forest dominates with kohekohe mahoe - tawa in the valley floor. The understorey is dominated by kawakawa. Surrounding the bush is gorse and pasture. Human damage is evident and the bush will become further depleted and altered if left in its present condition. Recommendations are made to update the existing walking tracks, and planting of native species. If gorse covered land adjacent is acquired it could enlarge the reserve and help regeneration.

Plant Communities

kohekohe-mahoe-tawa forest
tawa-kohekohe forest
kohekohe-(tawa) forest
scrub
gorse
pasture

BUSH REMNANTS AT TAWA

1. REDWOOD BUSH

Position: On the hills south-west of and adjacent to the borough of Tawa: 371 351 (N.160).

Altitude: 250 - 450 ft.

Aspect: NE

Soil Type: Makara hill soils

Vegetation

Types:

Tawa-kohekohe forest on the slopes immediately behind the houses passes gradually into kohekohe - (tawa) forest on the higher slopes. The brownish-green of the tawa contrasts with the rather bright green of the kohekohe. The tawa are mostly 20-30 ft high with some trees up to 40 ft. Trunk diameters are commonly 8-18 in. at breast height. The kohekohe are a little smaller in size.

The understorey is mainly kohekohe, supplejack, kawakawa and mahoe. In gaps where trees have fallen there are dense growths of rangiora, fuchsia, pate, wineberry, kaurekau, karamu, mahoe and kawakawa. The forest is fairly easy to walk through except in the steep-walled gullies where there is much more supplejack and where a few large pukatea trees remain.

Towards the upper margin of the bush the kohekohe - (tawa) forest gives way to a scrub of mahoe, kohekohe, mapou and gorse, and above that again, pure gorse. Mamaku tree-ferns are present in some of the upper gullies.

Flora: A total of 66 native species, including 21 fern species, were listed during a two hour examination. The actual totals must be considerably in excess of these numbers. Native conifers are practically absent from the bush itself but a few kahikatea and one totara were seen around the edge.

Animals: Opossums are present but serious damage to trees was not seen. Other browsing animals, probably sheep, are penetrating the upper part of the area. Birds encountered during my brief visit were fantail, silvereye, warbler, chaffinch and blackbird.

Current
Changes:

Modification by people is evident throughout the bush: felled trees, severely barked and slashed trunks, 'tree ladders' and 'tree houses', and rubbish, mostly wood and tins. Near the lower forest edge much of the understorey has gone. There appears to be a continual removal of tree ferns from the forest - they are virtually absent from the lower slopes.

Modification decreases as one climbs to higher levels and there are many parts, particularly in the steep gullies, which have been little disturbed.

Regeneration of the main trees is occurring with the exception of tawa. Tawa has been regenerating up to at least 30 to 50 years ago but 'young' plants are now restricted to resprouts from old trees. This lack of young tawa has been seen occasionally elsewhere in the North Island but I do not know the explanation.

Most of the large pukatea trees are dead or moribund, possibly a result of changes in moisture supply or drainage.

The gorse scrub is changing to a scrubby forest.

Future Changes:

Assuming that no program of land acquisition and management is undertaken, it can be anticipated that the understorey as well as the total number of species present will be gradually depleted. Weed growth within the remnant is at present not serious but with continued disturbance it is likely that species such as Himalayan honeysuckle will spread and there could also be an invasion of introduced vines. The canopy trees, if not destroyed by fire or cutting, should persist for many years.

All the bush is vulnerable to fire and particularly the upper portion where gorse is present.

Recommendation:

This remnant of forest is potentially valuable to Tawa (and other suburbs) because its comparatively large size has allowed quite a diversity of plants to survive. More specifically this bush can provide:-

- (a) An interesting stand of forest for anyone wishing to see something of the type of forest that originally covered the hills surrounding Tawa, i.e. it has historical as well as natural history interest.
- (b) Areas suitable for school studies in New Zealand bush.
- (c) A scenic back-drop to part of the Tawa suburb.

In order to fulfill these functions the following action would be needed:-

- 1 Acquisition of privately-owned parts of the remnant into public ownership, or alternatively, legal agreement between the borough and the owner(s) not to change the present land use.
- 2 Construction of one good walking track through the lower part of the forest and up a major spur to a vantage point (there are several vantage points that provide excellent overlooks of the Tawa valley).
- 3 Stimulation of local interest to develop a sense of pride in the bush remnant. The possibility could be examined of asking some interested residents in the immediate neighbourhood to act as honorary rangers.
- 4 Fencing to exclude stock. Fencing does not appear to be urgently needed but financial provision for it would need to be made so that it can be carried out over a period of time.

2. WILFRED MEXTED SCENIC RESERVE

Position: On the hills east of Linden and Tawa: 397 367 (N.160).

Altitude: 300-460 ft.

Aspect: N

Soil Type: Makara hill soils

Vegetation Type:

Tawa-kohekohe forest dominates the upper slopes but the main valley, where the soils are more stony, is occupied by kohekohe-mahoe-tawa forest. Most of the tawa are between 30 and 40 ft high with trunk diameters of 10 to 20 in. The understorey, although consisting of kawakawa on the upper slopes, has practically all been destroyed in the valley. The margin of the remnant is surrounded by gorse or pasture.

Flora:

Some 44 native species were seen including 13 species of fern. Of native conifers there are one or two young kahikatea near the entrance to the reserve and one miro was seen in the reserve itself. Young nikau palms are present higher up the valley.

Animals:

Opossums are present but the extent of their influence could not be assessed.

Current Changes:

Some damage to trees is occurring from slashing of bark and cutting of young plants but the principal modification appears to be due to boys sliding down the slopes of the valley and destroying the understorey.

Tawa regeneration is again absent but the remaining trees appear to be maintaining themselves.

Future Changes:

If the present trend of use continues, this remnant also can be expected to become gradually more and more depleted and altered, though probably at a faster rate than "Redwood Bush" because of its smaller size (4 acres).

Recommendations:

1. Further work on the existing track through the valley bottom and its extension up one of the eastern 'side valleys' to a high knoll (beyond the

present reserve boundary) from where a view can be obtained.

2. Acquisition of gorse-covered country (or secondary forest) to enlarge the reserve. This will increase the size of the potential future forest since many young native trees are establishing in the gorse.

3. Stimulation of local interest so that the reserve is 'looked after'.

4. Planting of attractive native trees to provide shade and beauty at the entrance to the reserve together with provision of parking space.

General:

Tawa has so little in the way of bush suitable for recreational and educational purposes that a real effort to preserve what is left seems justified. If it is possible to increase the area of land in public ownership in these or other forest remnants, then attention should be directed firstly at second-growth forest or areas of gorse. Given protection from fire, gorse hillsides of this century will become hill forest of the next century.

The key point in implementing the recommendations is whether or not a sufficient number of Tawa residents can be persuaded that in these bush remnants they have something of value that is worth keeping as much as the local football field or bowling green.

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7th February, 1972.

APPENDIX: PARTIAL FLORA OF REDWOOD BUSH AND WILFRED MEXTED SCENIC RESERVE

The following list of vascular plants were recorded during three hours of field work in the two bush remnants. Some species will certainly have been missed.

Key to symbols used

- * = adventive plant
- + = present, plant seen in fewer than five places in the area
- m = many, plant occurs in less than half the places examined
- a = abundant, plant of general occurrence
- la = locally abundant, plants numerous in very localized areas

Scientific Name	Common Name	Redwood	Wilfred Mexted Reserve
TREES AND SHRUBS			
<u>Alectryon excelsum</u>	titoki	m	+
<u>Aristotelia serrata</u>	wineberry	a	
<u>Beilschmiedia tawa</u>	tawa	a	a
<u>Brachyglottis repanda</u>	rangiora	a	a
<u>Carpodetus serratus</u>	putaputaweta	+	
<u>Coprosma areolata</u>		a	
<u>C. australis</u>	raurekau	a	a
<u>C. rhamnoides</u>		m	+
<u>C. robusta</u>	karamu	a	m
<u>C. robusta x C. propinqua</u>		+	
<u>Dysoxylum spectabile</u>	kohekohe	a	a
<u>Elaeocarpus dentatus</u>	hinau	+	+
<u>Eugenia maire</u>	swamp maire	+	
<u>Fuchsia excorticata</u>	fuchsia	a	a
<u>Geniostoma ligustrifolium</u>	hangehange	a	a
<u>Griselinia lucida</u>	puka	+	+
<u>Hedycarya arborea</u>	pigeonwood	m	+
<u>Knightia excelsa</u>	rewarewa	m	
<u>Laurelia novae-zelandiae</u>	pukatea	m	+
<u>Leycesteria formosa</u>	Himalayan honeysuckle	+	
<u>Lophomyrtus bullata</u>	ramarama	+	
<u>Macropiper excelsum</u>	kawakawa	a	a
<u>Melicytus ramiflorus</u>	mahoe	a	a
<u>Myrsine australis</u>	mapou	a	m
<u>Olearia rani</u>	heketara	m	
<u>Pennantia corymbosa</u>	kaikomako	m	
<u>Podocarpus dacrydioides</u>	kahikatea	+	+
<u>P. ferrugineus</u>	miro		+
<u>P. totara</u>	totara	+	(1 tree 10" d.)

		Bush	Wilfred Mexted Reserve
<u>Pseudopanax arboreum</u> (=Neopanax arboreum)	fivefinger	+	
<u>P. crassifolium</u>	lancewood	+	+
<u>Rhopalostylis sapida</u>	nikau		m
<u>Schefflera digitata</u>	pate	+	+
<u>Solanus laciniatum</u>	poroporo	+	
* <u>Ulex europaeus</u>	gorse	a	a

LIANES

<u>Freycinetia banksii</u>	kiekie	+	
<u>Metrosideros diffusa</u>	climbing rata		+
<u>M. fulgens</u>	red climbing rata	+	+
<u>M. perforata</u>	climbing rata	m	m
<u>Muehlenbeckia australis</u>	pohuehue	a	+
<u>Parsonsia heterophylla</u>	parsonsia	m	m
<u>Ripogonum scandens</u>	supplejack	a	a
<u>Rubus cissoides</u>	bush lawyer	+	m
<u>Tetrapathea tetrandra</u>	native passion flower	m	

FERNS

<u>Asplenium bulbiferum</u>		a	a
<u>A. falcatum</u>		+	
<u>A. flaccidum</u>		m	
<u>A. lucidum</u>		m	
<u>Cyathea dealbata</u>	silver tree fern	m	m
<u>C. medullaris</u>	mamaku	m	+
<u>Blechnum filiforme</u>		m	m
<u>B. lanceolatum</u>		a	m
<u>Dicksonia squarrosa</u>	wheki	m	a
<u>Histiopteris incisa</u>		+	+
<u>Hymenophyllum sanguinolentum</u>		m	
<u>Lastreopsis glabella</u>		m	
<u>Pellaea rotundifolia</u>		+	m
<u>Phymatodes diversifolium</u>		m	+
<u>P. scandens</u>		m	
<u>Polystichum hispidum</u>		m	
<u>P. richardii</u>		a	
<u>Pteridium aquilinum</u>	bracken	la	+
<u>Pteris macilenta</u>		+	a
<u>Pyrrosia serpens</u>		+	+
<u>Thelypteris penniger</u>		a	m
<u>Todea hymenophylloides</u>		+	+
		+	+

GRASSES

<u>Dactylis glomerata</u>	cocksfoot	m	
Unidentified species		+	+

Bush
 Wilfred
 Mexted
 Reserve

SEDGES

<u>Carex dissita</u>		m	
<u>Uncinia banksii</u>	hook grass	m	
<u>U. uncinata</u>	hook grass	a	+

OTHER HERBACEOUS PLANTS

<u>Astelia solandri</u>		+	
* <u>Cirsium vulgare</u>	Scots thistle	m	
<u>Collospermum hastatum</u>		m	+
* <u>Conyza canadensis</u>	Canadian fleabane	a	
* <u>Digitalis purpurea</u>	foxglove	m	m
<u>Hydrocotyle moschata</u>			+
<u>Senecio jacobaea</u>	ragwort	m	
<u>Solarum nigrum</u>	black nightshade	a	m