

Opawa Bush

Mark C. Smale

Opawa Bush was notable as the largest stand of podocarp forest east of Lake Taupo in a district largely deforested by a long fire history. There was a 10-km wide belt of fern and scrub between the lake and the forested Kaimanawa Ranges to the east, dominated on steeper ground by bracken (*Pteridium esculentum*) and by manuka (*Leptospermum scoparium*) on flatter sites, with open communities of monoao (*Dracophyllum subulatum*) and silver tussock (*Poa cita*) or hard tussock (*Festuca novae-zelandiae*) on frosty valley floors. Elder (1962) noted widespread evidence of recent fire but also – with the advent of rural fire control after the Second World War – invasion in places by *Pittosporum* species, araliads (*Pseudopanax* species) and tutu (*Coriaria* species), marking the beginning of succession back to forest.

The rapid growth of towns and cities in the post-war boom saw a huge demand for timber of all kinds. Sawmilling companies eager to supply the demand scoured the country for millable native forest in all tenures, and the mature podocarp stands on easy pumice terrain on the central plateau were a prime target. Little wonder then that magnificent Opawa Bush – like so many others – fell victim to the timber-hungry times.

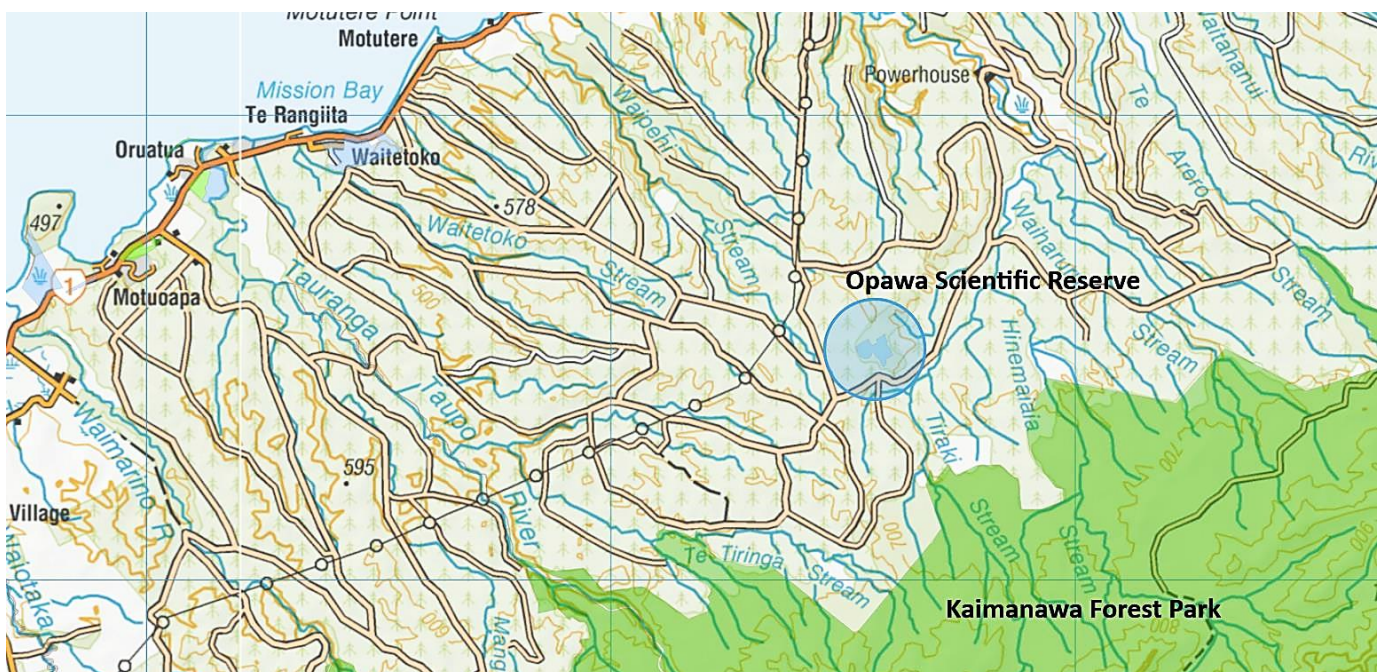


Photo: A truckload of podocarp logs from Opawa Bush *en route* to Fletcher's mill at Te Rimu on the Tauranga-Taupo River one autumn day in the 1950s.

The Opawa-Rangitoto block was logged partly by the Fletcher Timber Company, which had a mill 1945–1961 at Te Rimu, 10 km inland of Te Rangitita, on the Tauranga-Taupo River (thence shifted to Grace Road, Turangi, closing in 1971), and obtained cutting rights for many blocks of Maori land in the central North Island, and partly by Huka Timber Mills (Woodward's), which had a mill in the same era at Nukuhau near Taupo.

Scenes like that illustrated in the photo on the previous page were common in the central North Island at the time. The truck is an all-wheel-drive GMC, an American army surplus vehicle that was imported in its thousands after the Second World War and became a mainstay of the timber industry here.

Opawa Bush occupied a mostly rolling plateau at around 600-700 m asl on the interfluvium between the Hinemaiaia and Tauranga-Taupo Rivers. Elder's estimate of its size ("7 miles long by 1 mile wide" [11 km by 1.6 km]) and the first topographical map of the area suggest an original extent of some 1800 ha, so the remaining 26 ha of the Opawa Bush Scientific Reserve represents about 1.5 percent of the original forest. The rest – which would have consisted of a mosaic of residual old trees amidst a sea of regenerating secondary species like kanuka (*Kunzea* species) and fivefinger (*Pseudopanax arboreus*) – was cleared and planted in pine when Lake Taupo Forest was created in the 1970s.



Opawa Scientific Reserve (marked by a circle) east of Te Rangitita on the eastern shore of Lake Taupo.

Similar forest in the region that was heavily logged in the same period but left to recover, now has impressive podocarp regeneration and there is little doubt that, had it not mostly been cleared, Opawa Bush would also be well on the way to recovery by now. Elder (1962) described the forest as consisting mostly of tall (up to 45 m) matai (*Prumnopitys taxifolia*), rimu (*Dacrydium cupressinum*), miro (*Prumnopitys ferruginea*) and kahikatea (*Dacrycarpus dacrydioides*) – in that order of abundance – and occasional totara (*Podocarpus totara*) emergent over a lower canopy dominated by red beech (*Fuscopora fusca*) with plentiful black (*Nestegis cunninghamii*) and white maire (*N. lanceolata*). In a few places, there were pure stands of red beech. Thus it was actually podocarp/beech forest rather than podocarp forest. There was evidence of earlier selective felling of totara by Maori. Pigeons and kaka were plentiful.

The only records of visiting botanists appear to those of A.P. (Tony) Druce, who recorded 204 vascular indigenous species in 1950 in one of the earlier of his famous handwritten species lists (all now transcribed into current taxonomy and available on NZ Plant Conservation Network website <https://www.nzpcn.org.nz/>), and Norman Elder, the Hawkes Bay schoolteacher, pioneer tramper and naturalist, who described it in some detail and listed 45 characteristic species in his epic 1962 paper in the Transactions of the Royal Society of New Zealand, later republished by the Forest Research Institute as a Technical Paper. Excluding a few unlikely records, Elder recorded 5 additional species to Druce, making a total of 209 vascular species.

The Rotorua and Waikato Botanical Societies had hoped to visit Opawa Bush but because the area is now heavily used at weekends for hunting by its many owners, access by others is effectively restricted to weekdays.

Vascular plant species recorded in Opawa Bush

* denotes adventive

Species	Druce (1950)	Elder (1962)		
			<i>Anaphalioides subrigida</i>	y
			<i>Anaphalioides trinervis</i>	y
<i>Acaena anserinifolia</i>	y		<i>Aporostylis bifolia</i>	y
<i>Acaena microphylla</i> var. <i>microphylla</i>	y		<i>Aristotelia serrata</i>	y y
<i>Adiantum cunninghamii</i>	y		<i>Asplenium bulbiferum</i>	y
<i>Alseuosmia pusilla</i>	y	y	<i>Asplenium flaccidum</i>	y

	Druce	Elder		
			<i>Carex zotovii</i>	y
<i>Asplenium hookerianum</i> var. <i>hookerianum</i>	y		<i>Carmichaelia australis</i>	y
<i>Asplenium polyodon</i>	y	y	<i>Carpodetus serratus</i>	y
<i>Astelia fragrans</i>	y		<i>Celmisia gracilentia</i>	y
<i>Astelia microsperma</i>	y		<i>Centella uniflora</i>	y
<i>Astelia hastata</i> ¹		y	<i>Clematis forsteri</i>	y
<i>Astelia solandri</i>	y	y	<i>Clematis paniculata</i>	y
<i>Austroblechnum colensoi</i>	y	y	<i>Clematis</i>	y
<i>Austroblechnum lanceolatum</i>	y		<i>quadribacteolata</i>	
<i>Austroblechnum penna-marina</i>	y		<i>Coprosma foetidissima</i>	y
<i>Austroderia fulvida</i>	y		<i>Coprosma grandifolia</i>	y y
<i>Blechnum deltoides</i>	y	y	<i>Coprosma lucida</i>	y y
<i>Blechnum filiforme</i>		y	<i>Coprosma microcarpa</i>	y
<i>Blechnum procerum</i>		y	<i>Coprosma propinqua</i> var. <i>propinqua</i>	y
<i>Brachyglottis repanda</i>	y	y	<i>Coprosma rhamnoides</i>	y y
<i>Caladenia atradenia</i>	y		<i>Coprosma rigida</i>	y
<i>Caladenia bartlettii</i>	y		<i>Coprosma robusta</i>	y
<i>Carex breviculmis</i>	y		<i>Coprosma tenuifolia</i>	y y
<i>Carex colensoi</i>	y		<i>Corokia cotoneaster</i>	y
<i>Carex dipsacea</i>	y		<i>Corybas macranthus</i>	y
<i>Carex echinata</i>	y		<i>Corybas rivularis</i>	y
<i>Carex forsteri</i>	y		<i>Corybas trilobus</i>	y
<i>Carex healyi</i>	y		<i>Cranfillia fluviatilis</i>	y
<i>Carex maorica</i>	y		<i>Craspedia minor</i>	y
<i>Carex megalepis</i>	y		<i>Cyathea dealbata</i>	y
<i>Carex secta</i>	y		<i>Cyathea smithii</i>	y y
<i>Carex testacea</i>	y		<i>Dacrycarpus dacrydioides</i>	y
<i>Carex uncinata</i>	y		<i>Dacrydium cupressinum</i>	y
			<i>Deyeuxia avenoides</i>	y
			<i>Dianella nigra</i>	y

¹Probably *Astelia microsperma*

	Druce	Elder			
			<i>Gonocarpus micranthus</i>	y	
<i>Dicksonia fibrosa</i>	y	y	<i>subsp. micranthus</i>		
<i>Dicksonia squarrosa</i>	y	y	<i>Griselinia littoralis</i>	y	y
<i>Dracophyllum strictum</i>	y		<i>Gunnera dentata</i>	y	
<i>Dracophyllum subulatum</i>	y		<i>Hakea sericea*</i>	y	
<i>Earina autumnalis</i>	y	y	<i>Herpolirion novae- zelandiae</i>	y	
<i>Earina mucronata</i>	y	y	<i>Histiopteris incisa</i>	y	
<i>Echinopogon ovatus</i>	y		<i>Hydrocotyle elongata</i>	y	
<i>Elaeocarpus dentatus</i> var. <i>dentatus</i>	y		<i>Hydrocotyle moschata</i> var. <i>moschata</i>	y	
<i>Elaeocarpus hookerianus</i>	y		<i>Hydrocotyle novae- zeelandiae</i> var. <i>montana</i>	y	
<i>Eleocharis acuta</i>	y		<i>Hymenophyllum</i>	y	
<i>Eleocharis gracilis</i>	y		<i>demissum</i>		
<i>Eleocharis sphacelata</i>	y		<i>Hymenophyllum</i>	y	
<i>Epilobium atriplicifolium</i>	y		<i>multifidum</i>		
<i>Epilobium hectorii</i>	y		<i>Hymenophyllum</i>	y	
<i>Epilobium pallidiflorum</i>	y		<i>nephrophyllum</i>		
<i>Epilobium tenuipes</i>	y		<i>Hymenophyllum</i>	y	
<i>Euchiton audax</i>	y		<i>sanguinolentum</i>		
<i>Euchiton limosus</i>	y		<i>Hymenophyllum scabrum</i>	y	
<i>Festuca novae-zelandiae</i>	y		<i>Hypericum pusillum</i>	y	
<i>Fuchsia excorticata</i>	y	y	<i>Icarus filiformis</i>	y	
<i>Fuscospora fusca</i>	y		<i>Ileostylus micranthus</i>	y	
<i>Gastrodia minor</i>	y		<i>Isolepis subtilissima</i>	y	
<i>Gaultheria antipoda</i>	y		<i>Juncus edgariae</i>	y	
<i>Gaultheria oppositifolia</i>	y		<i>Knightia excelsa</i>	y	
<i>Geniostoma ligustrifolium</i> var. <i>ligustrifolium</i>	y	y	<i>Kunzea ericoides</i> s.l.	y	
<i>Geranium potentilloides</i>	y		<i>Lachnagrostis filiformis</i>	y	
<i>Gleichenia dicarpa</i>	y		<i>Lagenophora pumila</i>	y	
<i>Gonocarpus aggregatus</i>	y		<i>Lepidosperma australe</i>	y	
			<i>Leptecophylla juniperina</i> <i>subsp. juniperina</i>	y	

	Druce	Elder			
			<i>Myrsine salicina</i>	y	y
<i>Leptolepia novae-zelandiae</i>	y	y	<i>Neomyrtus pedunculata</i>	y	
			<i>Nephrolepis cordifolia*</i>	y	
<i>Leptopteris hymenophylloides</i>	y	y	<i>Nertera villosa</i>	y	
<i>Leptopteris superba</i>	y	y	<i>Nestegis cunninghamii</i>	y	
<i>Leptospermum scoparium</i> var. <i>scoparium</i>	y		<i>Nestegis lanceolata</i>	y	
<i>Leucopogon fasciculatus</i>	y		<i>Notogrammitis angustifolia</i> subsp. <i>nothofageti</i>	y	
<i>Leucopogon fraseri</i>	y		<i>Notogrammitis ciliata</i>	y	
<i>Lindsaea linearis</i>	y		<i>Olearia arborescens</i>	y	
<i>Lobelia angulata</i>	y		<i>Olearia rani</i> var. <i>colorata</i>	y	
<i>Lomaria discolor</i>	y	y	<i>Ophioglossum coriaceum</i>	y	
<i>Lophozonia menziesii</i>	y		<i>Paesia scaberula</i>	y	
<i>Lycopodium fastigiatum</i>	y		<i>Parablechnum novae-zelandiae</i>	y	
<i>Lycopodium volubile</i>	y		<i>Parablechnum procerum</i>	y	
<i>Machaerina rubiginosa</i>	y		<i>Parsonsia capsularis</i> var. <i>capsularis</i>	y	
<i>Melicope simplex</i>	y	y	<i>Pectinopitys ferruginea</i>	y	
<i>Melicytus ramiflorus</i>	y	y	<i>Pennantia corymbosa</i>	y	
<i>Metrosideros diffusa</i>	y		<i>Phlegmariurus varius</i>	y	
<i>Microlaena avenacea</i>	y		<i>Phyllocladus alpinus</i>	y	
<i>Microlaena stipoides</i>	y		<i>Phyllocladus trichomanoides</i>	y	
<i>Microsorium novae-zealandiae</i>	y	"Not recorded, probably present"	<i>Pimelea prostrata</i> subsp. <i>vulcanica</i>	y	
<i>Microsorium pustulatum</i> subsp. <i>pustulatum</i>	y	y	<i>Pimelea tomentosa</i>	y	
<i>Microtis unifolia</i>	y		<i>Pinus nigra</i> subsp. <i>nigra*</i>	y	
<i>Morelotia affinis</i>	y		<i>Pinus strobus*</i>	y	
<i>Muehlenbeckia australis</i>	y		<i>Pittosporum eugenioides</i>	y	y
<i>Muehlenbeckia axillaris</i>	y		<i>Pittosporum crassifolium</i>		y
<i>Myosotis forsteri</i>	y		<i>Pittosporum tenuifolium</i>	y	
<i>Myrsine australis</i>		y			

	Druce	Elder		
			<i>Ranunculus amphitrichus</i>	y
<i>Pneumatopteris pennigera</i>	y	y	<i>Ranunculus reflexus</i>	y
<i>Poa anceps</i>	y		<i>Raoulia albosericea</i>	y
<i>Poa cita</i>	y		<i>Raukaua anomalus</i>	y
<i>Podocarpus laetus</i>	y		<i>Rubus cissoides</i>	y
<i>Podocarpus totara</i> var. <i>totara</i>	y		<i>Rytidosperma clavatum</i>	y
			<i>Rytidosperma gracile</i>	y
<i>Polystichum vestitum</i>	y		<i>Schefflera digitata</i>	y y
<i>Potamogeton</i> <i>suboblongus</i>	y		<i>Schoenus maschalinus</i>	y
<i>Prasophyllum colensoi</i>	y		<i>Senecio wairauensis</i>	y
<i>Prumnopitys taxifolia</i>	y		<i>Sophora microphylla</i>	y
<i>Pseudognaphalium</i> <i>luteoalbum</i>	y		<i>Stackhousia minima</i>	y
<i>Pseudopanax arboreus</i>	y		<i>Sticherus cunninghamii</i>	y y
<i>Pseudopanax colensoi</i> var. <i>colensoi</i>	y	y	<i>Thelymitra longifolia</i>	y
<i>Pseudopanax crassifolius</i>	y		<i>Tmesipteris tannensis</i>	y
<i>Pseudopanax simplex</i>		y epiphytic only	<i>Trichomanes venosum</i>	y y
<i>Psilotum nudum</i>	y		<i>Veronica stricta</i> var. <i>stricta</i>	y
<i>Pteridium esculentum</i>	y		<i>Viola cunninghamii</i>	y
<i>Pterostylis banksii</i>	y		<i>Vittadinia australis</i>	y
<i>Pyrrosia elaeagnifolia</i>	y		<i>Wahlenbergia vernicosa</i>	y
			<i>Weinmannia racemosa</i>	y
			<i>Wolffia australiana</i>	y

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