

1915.  
NEW ZEALAND.

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DEPARTMENT OF LANDS AND SURVEY:  
**SCENERY - PRESERVATION.**

REPORT FOR THE YEAR ENDED 31st MARCH, 1915: TOGETHER WITH STATEMENT OF ACCOUNTS  
AND SCHEDULE OF LANDS ACQUIRED AND RESERVED DURING THE YEAR UNDER THE  
SCENERY PRESERVATION ACTS.

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*Presented to both Houses of the General Assembly pursuant to Section 17 of the Scenery Preservation  
Act, 1908*

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SIR,—

Department of Lands and Survey, Wellington, 1st June, 1915.

I have the honour to submit herewith report on scenery-preservation for the twelve months ended the 31st March, 1915.

Regarding the question of scenery-preservation generally in this my last annual report, I would like to impress upon all concerned the necessity, wherever opportunity offers, of securing while they exist as many as possible of the few remaining beauty spots of the Dominion, if for nothing else than preserving for the generations who follow a few samples of the primeval scenery that existed in the country at the advent of European occupation. Much has and is being done by willing helpers, and the State has given liberal encouragement financially and otherwise, but, notwithstanding this, more assistance would be welcomed.

I have, &c.,

JAMES MACKENZIE,

Under-Secretary for Lands.

The Right Hon. W. F. Massey, P.C.,

Minister in Charge of Scenery-preservation.

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**REPORT.**

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IN accordance with the provisions of the Scenery Preservation Act, 1908, the question of scenery-preservation has been kept steadily in view, and, when a suitable opportunity offered, areas of land, whether Crown or private, were set apart under the Act. During the twelve months ended 31st March, 1915, sixty-seven reserves, of a total area of 60,303 acres, were so set apart; but the reservation was cancelled over areas totalling 638 acres previously proclaimed, but, through destruction of the forest thereon, proved to be unsuitable for permanent reservation. The net area reserved, therefore, together with that set apart up to the end of March, 1914, now amounts to 430 reserves, of a total area of 274,061 acres.

In the majority of cases the lands set apart were Crown lands that had not been dealt with. In a few cases small areas of Native lands have been acquired under the Public Works Act, as was also done in the case of some private freehold lands desired for scenic and historic reservation. It may here be noted that no land can be reserved for scenic purposes until its reservation has been recommended by the Scenery Preservation Board, consisting of the Surveyor-General (Chairman); the General Manager of the Department of Tourist and Health Resorts; the Under-Secretary, Native Department; and the Commissioner of Crown Lands for the district in which is situated the land proposed to be dealt with. Before submitting any recommendation the Board has a most careful inspection made of the lands brought under its notice, and the Board's recommendation is then considered by the Government prior to His Excellency the Governor proclaiming the land under the Act. It will thus be seen that every care is taken to ensure that only suitable lands are reserved, and that the interests of land-settlement, of the Natives, and the country generally are respected and safeguarded.

#### RESERVATIONS DURING THE YEAR.

As will be seen by a glance at the schedule appearing in Appendix A of this report, the reserves made include areas situated in all parts of the Dominion.

In the *Auckland District* the beautiful Waiharakeke Inlet, situated in the Kawhia Harbour, was taken and set apart, as was also the Ngahuinga Bluff, near the mouth of the Marakopa River, south of the Kawhia Harbour, and a most curious natural tunnel in the same district. On account of its historic associations, the land on which was situated the Ruapekapeka Pa, not far from the Bay of Islands, was also secured and reserved.

In the *Hawke's Bay District* the only land reserved during the year is that on which is situated the Mangatutu Thermal Springs, in the Pohui district.

In the *Taranaki District* several small areas adjoining the Wanganui River were reserved, and a fine section of bush land on the Whangamomona Saddle was set apart.

In the *Wellington District* a beautiful bush area at the Township of Rangataua, on the Main Trunk Railway, was reserved, and on the road from Awahuri to Feilding the well-known Riddiford's Bush was finally secured and reserved. An area of steep bush-clad land at the Makatote Gorge, also situated on the Main Trunk Railway, was added to the existing reservation, and a few small areas on the Wanganui River were acquired.

In the *Marlborough Sounds* three small islands at Tennyson Inlet were reserved.

In the *Nelson District* several areas of hilly Crown land covered with mixed bush were reserved, amongst them being Okiwi Bay near the Croixelles, the Huia Cave near Tadmor, not far from the Midland Railway route, and some fine mountain scenery in the Motupiko district, on the St. Arnaud Range.

In the *Westland District* the magnificent Franz Josef Glacier and surrounding lands, comprising nearly 50,000 acres, was permanently reserved for scenic purposes; and several areas along the Punakaiki, Waiho, and Atupau Rivers.

In the *Canterbury District* two pretty scenic areas in the Four Peaks Settlement near Geraldine, and a similar area on the Claremont Settlement near Timaru, were reserved, whilst six additional areas were added to that well-known chain of reserves along the Summit Road (or King Edward VII Drive), extending from the hills at the back of Lyttelton, around Governor's Bay, and towards Banks Peninsula. A special report upon these reserves appears in Appendix D.

In the *Otago District* three small areas along the McLennan River, Catlins district, together with Table Hill, in the Clutha district, and areas along the Glenomaru and Tahakopa Streams, were reserved.

In the *Southland District* an area of hilly country known as "Glen Allen," near Kingston, Lake Wakatipu, together with two areas in Stewart Island, were also added to the permanent scenic assets of the Dominion.

#### SUPERVISION OF SCENIC RESERVES.

The chief difficulty which confronts the Department in dealing with areas reserved for scenic purposes is in ensuring their continuance in a state of nature, so that their botanical wealth and beautiful flora are not detrimentally affected or destroyed by the spread of fires, vandalism, or accident. A constant endeavour is being made to ensure the co-operation of local residents. Where a suitable opportunity offers, Scenic Boards, comprised of residents who are willing to look after the reserves in their locality, are set up, and adequate powers entrusted to them to provide for the maintenance of the reserves, and improvement where necessary. Where, owing to the sparseness of settlement, this is not possible, honorary inspectors may be appointed, and wherever possible periodical visits are made by Government officers whose duties take them to the locality.

It is difficult to overestimate the value of these scenic reserves for future generations. Great credit is due to those men who in the past have assisted the Government, or are at the present time endeavouring to assist it, in acquiring and preserving good specimens of our forest inheritance. The unfortunate prevalence of bush-fires is a continual menace to the greater number of the scenic reserves, but it is gratifying to record that the damage suffered has hitherto been comparatively small.

#### EXPENDITURE.

The expenditure during the year amounted to £7,887 3s. 10d., as set forth in the statement of accounts appearing in Appendix A.

Every care has been taken to expend the funds of the scenery-preservation vote to the utmost advantage, and no land has been recommended for reservation until it has been carefully viewed and reported upon, and every precaution taken that the interests of settlement are not detrimentally

affected, but that the land is well worthy of preservation on account of its picturesqueness, and calculated to remain a permanent asset to the scenic beauty of the Dominion.

Comparison of Expenditure.

Year.	Compensation for Land.	Fencing and Maintenance.	Surveys, Valuations, &c.	Board's Expenses.	Salaries.	Total.
	£	£	£	£	£	£
1904-5 .. ..	216	Nil	52	1,822	*	2,090
1905-6 .. ..	3,336	„	527	1,221	*	5,084
1906-7 .. ..	7,856	304	801	185	*	9,146
1907-8 .. ..	4,286	382	555	86	175	5,484
1908-9 .. ..	3,813	1,063	540	24	325	5,765
1909-10 .. ..	1,688	1,159	2,603	Nil	325	5,775
1910-11 .. ..	1,066	685	1,643	11	325	3,730
1911-12 .. ..	2,619	715	2,237	22	345	5,938
1912-13 .. ..	12,997	798	2,697	6	345	16,843
1913-14 .. ..	10,467	627	1,547	3	365	13,009
1914-15 .. ..	6,253	758	476	12	388	7,887
Grand total .. .. .						80,751

\* Included in Board's expenses.

APPENDICES.

Attached to this report are the following appendices :—

- A. Schedule of reserves made during the year, accompanied by a statement of accounts.
- B. Report of the Inspector of Scenic Reserves.  
Report of the Caretaker of Reserves in Queen Charlotte Sound.
- C. Report of the Scenery Preservation Board.  
Report of Summit Road Scenic Board.
- D. Report on Christchurch scenic reserves.

A perusal thereof will show that the provisions of the Act have been carried out in a very satisfactory manner.

APPENDICES.

APPENDIX A.

RESERVES MADE IN 1914-15 UNDER THE SCENERY PRESERVATION ACT, 1908, AND ITS AMENDMENTS

Recommend- ation No.	Local Name.	Description.	Area.	Date of Proclamation in Gazette.
Auckland Land District.			A. R. P.	1914.
2	Ngahuinga Bluff .. ..	Part Marakopa No. 4, Block X, Kawhia South S.D.	128 0 24	30 April.
333	Kakopuku Mountain .. ..	Section 1A, Block IX, Puniu S.D.	210 3 3	25 June.
192	Waiharakeke Inlet .. ..	Section 8, Block II, Kawhia South S.D.	16 2 0	
366	„ .. ..	Section 13, Block XIV, Kawhia North S.D.	5 1 24	13 Aug.
365	Hukatere .. ..	Section 17, Block II, Hukatere S.D.	73 1 37	
368	Te Wai-o-te Marama .. ..	Eastern Part Section 25, Block IX, Waoku S.D.	34 3 13	3 Sept.
331	Ruapekapeka Pa .. ..	Part Section 32, Ruapekapeka Parish, Block I, Hukerenui S.D.	1 0 9	
69	„ .. ..	Part of Huiaarau Block, Block I, Hukerenui S.D.	5 2 19	26 Nov.
81	Marakopa Natural Tunnel	Part Subdivision 2 of Section 3, Block XII, Kawhia South S.D.	21 0 5	
		Part Section 5 of subdivision of part Taumatotara Block, Block XI, Kawhia South S.D.	84 3 35	17 Dec.
			581 3 9	

## APPENDIX A—continued.

## RESERVES MADE IN 1914-15 UNDER THE SCENERY PRESERVATION ACT, 1908, ETC.—continued

Recommendation No.	Local Name.	Description.	Area.	Date of Proclamation in Gazette.
Hawke's Bay Land District.				
361	Mangatutu Thermal Springs	Section 1, Block V, Pohui S.D.	A. R. P. 28 2 4	1914. 20 Aug.
Taranaki Land District.				
394	Whangamomona Saddle	Section 19, Block I, Mahoe S.D.	524 0 0	19 Nov.
387	Piopiotea	Section 6, Block II, Piopiotea West S.D.	9 2 0	
387	"	Section 7, Block III, Piopiotea West S.D.	25 0 0	7 Jan.
387	"	Section 8, Block III, Piopiotea West S.D.	60 2 0	
387	"	Section 9, Block III, Piopiotea West S.D.	8 2 0	
387	"	Section 2, Block IV, Piopiotea West S.D.	11 3 0	
387	"	Section 5, Block IV, Piopiotea West S.D.	4 2 0	21 Jan.
388	Aukopae	Section 12, Block XVI, Ohura S.D.	23 0 0	
388	"	Section 13, Block XVI, Ohura S.D.	34 0 0	11 Mar.
388	"	Section 1, Block IV, Heao S.D.	106 3 0	
386	Opatu	Parts Opatu Block, Block VII, Heao S.D.	60 2 0	11 Mar.
			11 0 0	
			197 0 0	
			20 0 0	
			134 2 0	
			1,230 2 0	
Wellington Land District.				
302	Rangataua	Section 45, Block V, Karioi S.D.	144 1 18	1914. 28 May.
155	Makahau	Part Section CCLXXV, Rangitikei R.D., Block X, Wangaeahu S.D.	19 1 30.3	4 June.
315	Riddiford's Bush	Part Section 149, Township of Sandon, Block XIV, Oroua S.D.	15 1 30	30 July.
316	Atene	Portion Tauakira 2N No. 2 Block, Block III, Waipakura S.D.	5 2 0	10 Sept.
344	Mangaweka	Section 55, Block X, Hautapu S.D.	99 0 23	12 Nov.
35	Makatote Gorge	Sections 9 and 12, Block VIII, Manganui S.D.	208 2 7	26 "
340	Ohoutahi	Part Ohoutahi Block, Block XIV, Rarete S.D.—		
		Part Subdivision No. 1A	23 3 27	26 Nov.
		Part Subdivision No. 2	44 2 18	
		Part Subdivision No. 1B	0 3 35	
			561 3 28.3	
Marlborough Land District.				
352	Tarakaipa Island	Section 5, Block VII, Tennyson S.D.	90 0 0	25 June.
352	Tawhitinui Islands	Section 6, Block VII, Tennyson S.D.	54 0 0	
352	"	Section 7, Block VII, Tennyson S.D.	3 0 0	
			147 0 0	
Nelson Land District.				
378	Pikikiruna	Sections 5 and 6, Block XI, Takaka S.D.	179 2 32	24 Sept.
380	Dee Creek	Section 36, Block V, Inangahua S.D.	74 2 21	
377	St. Arnaud	Section 18, Block XIV, Motupiko S.D.	2,270 0 0	
377	"	Section 3, Block XIII, Motupiko S.D.	220 0 0	
376	Okiwi Bay	Section 23, Block X, Wangamoa S.D.	546 0 0	
375	Anatoki	Section 7, Block VIII, Waitapu S.D.	175 0 0	
381	Huia Cave	Section 22, Block X, Tadmor S.D.	57 0 0	1 Oct.
383	Tokomoana	Section 9, Block V, Kongahu S.D.	8 3 0	
384	Hiwinui	Section 6, Block IV, Kongahu S.D.	31 3 0	
382	Oparara	Section 22, Block XIV, Oparara S.D.	20 0 32	
379	Ururakau	Section 2, Block I, Section 7, Block IV, Maungatapu S.D.	1,200 0 0	22 "
			4,783 0 5	
Westland Land District.				
357	Punakaiki	Section 966, Block I, Punakaiki S.D.	53 0 0	20 Aug.
357	"	Section 967, Block I, Punakaiki S.D.	134 2 0	
357	"	Section 968, Block II, Punakaiki S.D.	58 0 0	
357	"	Section 969, Block I, Punakaiki S.D.	19 2 35	
357	"	Section 970, Block I, Punakaiki S.D.	48 0 0	
359	Waiho and Atupau Rivers	Reserve 1020, Block VII, Waiho S.D.	129 0 0	
359	"	Reserve 1369, Block VII, Waiho S.D.	46 2 8	
358	Franz Josef Glacier	Reserve 1461, Waiho, Waitangi-taona, and Mount Cook S.D.s	48,500 0 0	
			48,988 3 3	

APPENDIX A—continued.

RESERVES MADE IN 1914-15 UNDER THE SCENERY PRESERVATION ACT, 1908, ETC.—continued.

Recommend- ation No.	Local Name.	Description.	Area.	Date of Proclamation in Gazette.
<i>Canterbury Land District.</i>			A. R. P.	1914.
349	Hae-Hae-to-Moana .. ..	Reserve 3883, Block XV, Four Peaks S.D.	86 0 0	} 28 May.
349	" .. ..	Reserve 3884, Block XV, Four Peaks S.D.	41 0 5	
350	Claremont .. ..	Reserve 3891, Block III, Otaio S.D.	44 3 10	
346	Ahuriri Bush (Summit Road) ..	Reserve 3950, Block VII, Halswell S.D.	2 3 36	} 23 July.
346	" .. ..	Reserve 3920, Block VII, Halswell S.D.	36 3 0	
347	" .. ..	Reserve 3948, Block VII, Halswell S.D.	26 3 28	
351	Gravenor Bush (Summit Road) ..	Reserve 3954, Block XII, Halswell S.D.	11 3 25	20 Aug.
348	Cass Peak (Summit Road) ..	Reserve 3921, Block VII, Halswell S.D.	6 3 32	} 27 Aug.
360	Kennedy's Bush Extension ..	Reserve 3956, Block III, Halswell S.D.	28 2 29	
			286 0 5	
<i>Otago Land District.</i>				
278	McLennan River .. ..	Part Section 2, Block IX, Woodland S.D.	{ 5 3 6 7 0 12 6 3 23	} 18 June.
279	Table Hill .. ..	Part Section 3, Block V, Woodland S.D.	42 3 15	
279	" .. ..	Part Section 27, Block VI, Woodland S.D.	92 1 25	} 2 July.
355	Glenomaru Stream .. ..	Sections 40 and 41, Block X, Glenomaru S.D.	331 0 14	
356	Tahakopa River .. ..	Section 23, Block IV, Tautuku S.D.	209 1 28	} 3 Sept.
			695 2 3	
<i>Southland Land District.</i>				
*		Section 1, Block XIII, Paterson S.D.	20 0 0	} 30 July.
364	Kaipipi .. ..	Section 1, Block XV, Paterson S.D.	91 3 27	
363	Ta-Kere-Haka .. ..	Section 1, Block X, Kingston S.D.	418 0 0	} 20 Aug.
363	Glen Allen .. ..	Sections 2, Block V, and 2, Block X, Kingston S.D.	2,470 2 27	
			3,000 2 14	

\* Previous Land Act reservation.

REVOCATION OF RESERVATIONS.

Recommend- ation No.	Local Name.	Description.	Area.	Date of Proclamation in Gazette.
			A. R. P.	1914.
133	Pukekura .. ..	Part Scenic Reserve 1190, Block XV, Waitaha S.D. (Westland)	1 0 0	30 July.
*	" .. ..	Part Reserve 11, Block XVI, Howard S.D. (Nelson)	135 0 0	} 3 Sept. 1915.
*	" .. ..	Part Scenic Reserve 638, Block XIII, Hononu S.D. (Westland)	489 0 26	
*	" .. ..	Part Scenic Reserve 638, Block XIII, Hononu S.D. (Westland)	12 3 14	} 21 Jan.
			638 0 0	

\* Previous Land Act reservation.

Summary of Reserves.

		Number.	Area.	
			A. R. P.	
Auckland .. ..	..	8	581	3 9
Hawke's Bay .. ..	..	1	28	2 4
Taranaki .. ..	..	15	1,230	2 0
Wellington .. ..	..	7	561	3 28·3
Nelson .. ..	..	10	4,783	0 5
Marlborough .. ..	..	2	147	0 0
Westland .. ..	..	8	48,988	3 3
Canterbury .. ..	..	6	286	0 5
Otago .. ..	..	6	695	2 3
Southland .. ..	..	4	3,000	2 14
Totals, 1914-15 .. ..		67	60,303	2 31·3
Reserved up to 31st March, 1914 .. ..		363	214,395	3 24·5
		430	274,699	2 15·8
Less reservations revoked .. ..		..	638	0 0
Grand totals .. ..		430	274,061	2 15·8

APPENDIX A—continued.

STATEMENT OF ACCOUNTS, SHOWING THE AMOUNTS EXPENDED, AND THE PURPOSES TO WHICH THE MONEY SO EXPENDED HAS BEEN APPLIED, FOR THE YEAR ENDED 31ST MARCH, 1915.

		Vote 113.		
		£	s.	d.
Item 1.—Salaries .. .. .		387	15	2
Item 2.—Administration of reserves and historic spots (including fencing and other work)		608	11	7
Item 3.—Compensation, &c., in connection with lands taken under the Scenery Preservation Act, 1908 .. .. .		1,495	16	3
Item 4.—Compensation for land acquired for scenic purposes along Wanganui River..		542	13	1
Item 5.—Compensation for Native lands taken for scenery purposes (including historic spots) under the Public Works Act, 1908, and the Native Land Act, 1909		2,504	5	8
Item 6.—Contribution towards purchase of scenic reserve, Kaituna, Banks Peninsula (subsidy, £2 for £1) .. .. .		69	1	3
Item 7.—Day's Bay Bush, purchase of .. .. .				
Item 8.—Expenses of Scenery Preservation Board .. .. .		12	6	6
Item 9.—Government Loans to Local Bodies Account: Payment of capital value, land reserved, East Puketoi Loan Block .. .. .				
Item 10.—Kennedy's Bush: Erection of caretaker's cottage (subsidy, £1 for £1) ..		150	0	0
Item 11.—Lands for Settlement Account, payment to, for capital value, scenic reserves: Four Peaks, £1,205; Claremont, £436 .. .. .		1,641	0	0
Item 12.—Road reserve at Ohura Falls, Wanganui River: Purchase and fencing ..				
Item 13.—Surveys, valuations, and incidental expenses .. .. .		475	14	4
		£7,887	3	10

Item 2.—Administration of Reserves and Historic Spots (including Cost of Fencing and other Work).

		£	s.	d.
Salaries of caretakers .. .. .		104	0	0
Advertising re penalties of trespass and notices of intention to take land ..		22	7	6
Eradication of noxious weeds on reserves and historic spots .. .. .		83	11	1
Providing and upkeep of fences and other works on reserves .. .. .		264	14	0
Rabbiting scenic reserves .. .. .		5	0	0
Travelling and other expenses .. .. .		128	19	0
		£608	11	7

Item 3.—Compensation, &c., for Land taken under Scenery Preservation Act, 1908.

Name of Reserve.	Particulars of Block, &c.	Amount.
McLennan River .. .. .	Part Sections 3, 5, 7, 8, 9, 10, Block XV, Rimu; part Sections 5, 6, 7, Block IX, Woodland	£ 247 s. 15 d. 0
	Part Section 3, Block II, Horohoro .. .. .	300 0 0
	Reserve, Awahuri Road, Feilding .. .. .	771 17 6
Makahau .. .. .	Part Block X, Wangaehu .. .. .	176 3 9
		£1,495 16 3

Item 4.—Compensation for Land acquired along the Wanganui River.

Name of Reserve.	Particulars of Block, &c.	Amount.
Galatea .. .. .	Ohotu 5B Block .. .. .	£ 134 s. 7 d. 8
	Ahuahu, No. 2 Block .. .. .	4 11 8
	Subs. 1-3, Koiro Reserve, Blocks IV, VII, and VIII, Heao	403 13 9
		£542 13 1

APPENDIX A—*continued*.STATEMENT OF ACCOUNTS, ETC.—*continued*.*Item 5.—Compensation for Native Lands acquired for Scenery Purposes under the Public Works Act, 1908.*

Name of Reserve.	Particulars of Block, &c.	Amount.
		£ s. d.
Mamaku .. .. .	Part Okoheriki 2c No. 3 Block .. ..	52 19 10
Ohiwaru .. .. .	Lot 189, Waiohine Parish .. .. .	29 1 10
Waimarino .. .. .	Part Waimarino 4B2 Block .. .. .	6 1 4
Tongoio Falls .. .. .	Part Purahotangihia Block IV, Puketapu ..	6 1 0
Ngatira .. .. .	Part Whaiti Kuranui 1A Block .. ..	799 19 3
Hongi's Track .. .. .	Part Rotoiti Nos. 6 and 7 Blocks .. ..	3 19 1
Maungamaunu .. .. .	Part Maungamaunu No. 2 .. .. .	503 13 10
Hangatiki .. .. .	Part Hauturu E No. 1E, Section 5c, &c. ..	36 17 6
Mokau River .. .. .	Mangoira Blocks 1 and 2 .. .. .	1,065 12 0
		£2,504 5 8

*Item 13.—Cost of Surveys, &c., of Scenic Reserves undertaken during Year 1914–15.*

Name of Reserve.	Particulars of Block, &c.	Amount.
		£ s. d.
Otaupea .. .. .	Reserve Whitianga 2B 13, 14, 15, 16, and Whitianga No. 1 Block .. .. .	302 1 11
" .. .. .	Section 26, &c., Block VI, Hautapu .. ..	23 8 7
Valuations, legal expenses, &c. ..	.. .. .	150 3 10
		£475 14 4

## APPENDIX B.

## REPORT BY THE INSPECTOR OF SCENIC RESERVES.

DURING the last year my field-work has consisted of inspections of reserves at Kapiti Island, Paraparaumu, Moonshine Valley, Wanganui River, Wilton's Bush, Waiohine Valley, Ashley-Clinton, and Kauri Gully at Northcote. Owing to the necessity for the exercise of economy at the present time, my travelling on scenic matters has had to be restricted; so I have during the last year been chiefly occupied with office matters, and to a very large extent with afforestation-work; also some of my time has been taken up with sand-dune reclamation-work, and a special inspection of and report on the Waipoua Kauri Forest.

*Fires.*

Considering the abnormally dry season, not much damage from fires was observed.

The white-pine reserve near Tokatoka was considerably scorched; and the Natives on the Wanganui River had attempted to destroy some of the reserves on the river-banks, but their attempts have not resulted in serious injury.

To revive an interest in the matter, and to remind the public of their liability, notices were on several occasions in the summer put in all the principal newspapers throughout the Dominion, warning people of the penalty for lighting fires or allowing them to spread on the different kinds of State lands. Assistance in stopping this foolish and destructive practice of indiscriminate burning has also been promised by other Departments and some private persons; so there is reason to hope that it will not be long before an improvement is seen.

*Native Birds.*

It is pleasant to be able to state that in the forests visited by me during the year no decrease was noticed in the number of native birds. Up the Waiohine Valley (which is an interesting and beautiful place that could easily be made accessible to Wellingtonians) bell-birds and tuis are most numerous, as are also fantails, tomtits, and warblers. Pigeons are also fairly numerous.

On Kapiti Island sanctuary, as far as can be judged by the eye, the native birds are well holding their own. Mr. Bennett, the caretaker, says he has seen evidence of the presence of the kiwis that were liberated there two years ago. Endeavours are now being made to obtain for the island specimens of other native birds that are not at present there; but owing to the difficulty of capturing native birds without damaging them no success has so far been met with. In order to augment the food-supply for the birds on the island seeds of hinau, tawa, and miro were sent over to the caretaker, and they have been planted in places where they are likely to get established.

*General.*

One important matter in connection with the preservation of our scenic reserves that requires attention is fencing. At present, whilst there are such tremendously urgent calls on the public purse, this matter cannot be considered, but as soon as funds permit the most important small reserves should be fenced; for if they are going to be a free grazing-ground for stock their eventual destruction is certain, and their reservation has been in vain. Though stock should be excluded from the large reserves as well, the damage they receive is not nearly so serious as in the case of the small reserves.

The appointment of local Inspectors for those reserves in the more populous districts is an innovation that should prove very satisfactory, as would-be offenders are far less likely to commit offences if they know there is some one in the locality who may at any time come upon them. A man always on the spot has also opportunities for getting local residents to take an interest and delight in these reserves which are set apart for the enjoyment of the public.

The Forest and Bird Protection Society is proving a valuable aid in looking after our various reserves. The *School Journal* is also a valuable auxiliary, as in it are often to be found short articles on and references to the beauties and the value of our forests; and there is no doubt that child readers, acquiring from its pages an appreciation and understanding of the forest, will soon exercise an influence for its protection that probably their parents at present do not.

E. PHILLIPS TURNER,  
Inspector of Scenic Reserves.

## REPORT ON SCENIC RESERVES, QUEEN CHARLOTTE SOUND.

During the greater part of the year just past matters in connection with the above reserves have been of a normal character, though, owing to the exceptionally dry season—the driest this locality has ever experienced—much anxiety has been felt owing to the danger of fires being started in or spreading into the reserves. On two occasions the latter, unfortunately, occurred, and had it not been for a providential fall of rain a few hours after the starting of the fires the damage done must have been infinitely greater than was the case. I cannot too highly commend the care and thoughtfulness shown by the majority of campers and visitors in their carefulness in thoroughly extinguishing their camp fires previous to leaving, and in otherwise showing their appreciation of these beautiful spots. Neither can I condemn too strongly the action of some of the adjoining occupiers in their practice of starting fires adjacent to the reserves, taking no precautions as to spread of same, and altogether showing a total disregard as to the welfare of the reserves.

The number of visitors to the reserves during the past year was above the average, Ship Cove and Kumutoto Bay being the favourite resorts, the others being practically neglected, due chiefly, I believe, to unsuitable landings or lack of fresh water.

Several of the reserves suffered to quite a noticeable extent from the effects of the severe drought that existed for such an extended period, manuka, rangiora, and large birch trees dying from lack of rain. It is a matter of great congratulation that we have come through such a season with as little damage from fire as has occurred. Once a fire has secured a firm hold on this class of country it is practically impossible to deal with it, owing to the dense and tangled nature of the undergrowth. The amount of dead timber on the ground, and the manner in which the fire burns in under the roots of the standing timber, taken in conjunction with the prevailing steep nature of the country and absence of water, renders fire-fighting an impossibility.

Kaipupu and Kumutoto Reserves were both damaged by fire spreading into them from adjoining lands during the period of drought. In the former case the fire originated on Crown lands some distance from the boundary of the reserve, crossed the dividing-ridge, and crept down hill, destroying some 20 acres of bush; in the latter it started on private property immediately adjoining the boundary, drove across and down country, burning about 6 acres. Had it not been for a timely fall of rain a few hours after the commencement of the fires the two reserves must have suffered considerable damage.

Native birds appear to be holding their own in fair numbers. I have noticed quite a number of pigeons fairly distributed through the whole of the reserves, being particularly numerous in Ship Cove. Ducks are occasionally to be seen along the foreshores, while an odd ground-robin is sometimes to be met with. Blumine Island is the only locality where these friendly little birds are to be seen in any numbers. This I believe is due to the fact that the stoat and weasel have not yet reached there. On one occasion last winter I saw four of the latter on the beach of Kumutoto Bay engaged in a desperate encounter.

During the course of the year I have had to warn several parties against landing on the reserves with firearms. On one occasion while anchored in Ship Cove a party well armed, and accompanied by dogs, put in an appearance. Immediately upon sighting my launch they took a hasty departure. On another occasion I found a party already landed with dogs, and firearms in their possession. These were duly warned off, and the matter reported to the District Office.

On the 25th December a unique and interesting ceremony was held at Ship Cove, being a religious service in commemoration of the hundredth anniversary of the first sermon preached in New Zealand by the Rev. Samuel Marsden. Unfortunately the elements were not propitious in the earlier part of the day; consequently the attendance was limited, though appreciative.

During the course of the past year I visited the scenic reserves on 142 different occasions, varying the time of visit from 6 a.m. to 7 p.m., making many excursions to the tops of the ranges, and often anchoring by them for the night. I believe my efforts meet with a fair measure of success, though occasionally I have reason to believe a few irresponsibles do secure an advantage over me. Previous to my taking charge it was the common practice for any one requiring rough timber or firewood to procure it from the reserves; I am pleased to be able to report that this stopped in the first few months of my taking charge.

H. TURNER,  
Ranger, Scenic Reserves, Queen Charlotte Sound.



## APPENDIX C.

## REPORT OF THE SCENERY PRESERVATION BOARD.

DURING the year ended the 31st March, 1915, the following meetings of the Board were held: On the 18th May, 1914, to deal with lands in the Otago District; on the same date, to deal with lands in the Westland District; on the same date, to deal with lands in the Canterbury District; on the same date, to deal with lands in the Hawke's Bay District; on the same date, to deal with lands in the Southland District; on the 23rd June, 1914, to deal with lands in the Auckland District; on the 14th July, 1914, to deal with lands in the Wellington District; on the 20th July, 1914, to deal with lands in the Nelson District; on the 11th August, 1914, to deal with lands in the Taranaki District; on the 9th March, 1915, to deal with lands in the Canterbury District; and on the 29th March, 1915, to deal with lands in the Hawke's Bay District. All of the above meetings were held at the office of the Surveyor-General, Wellington; and the Commissioner of Crown Lands for the district in which were situated the lands dealt with attended the meeting of the Board in each case.

Forty-six recommendations were made by the Board and submitted to His Excellency the Governor for consideration. Many of them have since been given effect to, and others are still being dealt with. As has always been the case, the greatest care has been taken by the Board to ensure that land suitable for settlement is not recommended for reservation except in small areas, and when the circumstances of the case necessitated such action being taken. Mostly, the land recommended comprised hilly forest country more or less remote from centres of population, and not only suitable for scenic reservation, but also valuable for preservation in a state of nature owing to the needs of water-conservation and the prevention of the denudation of the soil. The retention of the majority of the lands reserved greatly benefits agriculture and the pastoral industries by preserving the bush along streams and rivers, and to a large extent preventing their silting up, as it is very essential to retain the natural cover at the headwaters and on the banks of many of the streams of the Dominion so that heavy rainfalls may not bring down soil from the steep hillsides.

Another class of land recommended for reservation is comprised in lands situated near towns and cities, often belonging to private persons, where it is desirable to acquire and retain specimens of the native flora in proximity to centres of population. In many cases assistance to this desirable object is given to the public and local bodies, and every endeavour has been made, where advisable, to preserve suitable and sufficient areas for the benefit of townspeople. Two well-known instances of this may be mentioned, one being the popular Day's Bay bush, situated on Wellington Harbour, where the provisions of the Scenery Preservation Act assisted the Wellington City Council in obtaining a magnificent playground for the people, and the other being areas of land along the Summit Road, from the Port Hills, Lyttelton, towards Banks Peninsula, where the public have for some years past assisted to secure several sites from which magnificent views of the surrounding scenery are obtainable.

Since the formation of the Board under the provisions of the Scenery Preservation Act, 1906, it has submitted four hundred recommendations for the setting-aside of land under the Act; and a glance at the various reserves that have been made in consequence thereof will show that the views and suggestions of the Board have met with most favourable consideration, and have been given effect to as far as has been found practicable.

E. H. WILMOT,  
Chairman of Board.

## REPORT OF SUMMIT ROAD SCENIC BOARD.

The above Board and Kennedy's Bush Board were amalgamated by notification in the *New Zealand Gazette* dated the 1st October, 1914, the first meeting of the Board being fixed for the 3rd November, 1914.

The area administered by both Boards on the 31st March, 1914, was 208 acres. This area has been increased by 114 acres by gift and exchange, the donors being Messrs. R. M. D. Morten, 37 acres, Ahuriri Bush, and R. H. Rhodes, 7 acres, Cass Peak; Mr. A. E. G. Rhodes paid £50 towards the purchase of 12 acres, Gravenor Bush; 29 acres were purchased from Messrs. McDonald and Gibson; and 39 acres by exchange between the Hon. R. H. Rhodes and the Crown. All these areas have been gazetted as scenic reserves and placed under the control of the Board, the area now totalling 322 acres.

The sum of £24 3s. 6d. has been expended on the fencing-in of Gravenor Bush; and Mr. H. Blyth, of Ata-ahua, has been appointed honorary caretaker. The sum of £59 19s. 2d. has been expended on fencing the Hoon Hay Reserves, which enabled them to be let to bring in some revenue.

All the reserves are securely fenced. The only patch of blackberry in the Ahuriri Bush Reserve has been removed. From the Kennedy's Bush Reserve a considerable quantity of elderberry has been cut out, through a kind donation of £10 by the Hon. R. H. Rhodes. All the areas of bush upon the different reserves are in a state of preservation. Bird-life is plentiful. The reserves are regularly visited by the caretaker, who is resident at Kennedy's Bush. Enlarged accommodation was very much needed at Kennedy's Bush to provide for an increasing number of visitors. Through a donation of £100 by Mr. Andrew Fairburn, of Christchurch, on which the Government granted a subsidy of £1 for £1, and a donation of £10 10s. by Mr. A. G. Allom, an accommodation-room has been provided, a large kitchen erected, and the house connected with the drainage system. The growth of noxious weeds is being kept well in hand.

*Kennedy's Bush.—Receipts and Expenditure for the Year ended 31st March, 1915.*

	£	s.	d.		£	s.	d.
Dec. 31, 1913. To balance .. ..	24	11	9	Jan. 1, 1914, to Mar. 31, 1915. Expenditure .. ..	123	19	5
Jan. 1, 1914, to Mar. 31, 1915. Receipts .. ..	120	9	6	March 31, 1915. Balance .. ..	21	1	10
	£145	1	3		£145	1	3

C. R. POLLEN,  
Chairman, Summit Road Scenic Board.

## APPENDIX D.

## NOTES ON THE PLANT COVERING OF KENNEDY'S BUSH AND OTHER SCENIC RESERVES OF THE PORT HILLS (CANTERBURY), BY DR. L. COCKAYNE, F.R.S.

KENNEDY'S Bush is the most important example of that particular class of forest which originally occupied the gullies and hollows of the Port Hills. Although no longer in its virgin condition, the reserve contains examples of probably all the flowering-plants and most of the ferns which formed the primitive forest. It is therefore an important natural museum wherein is saved from destruction a portion of primeval New Zealand which but for its reservation would have vanished, never to be replaced. The number of species of vascular plants, most of which are found only in New Zealand, preserved in this open-air museum is about 119. These belong to no less than forty-three families and seventy-two genera. Using an equally scientific but much more popular classification, there are two kinds of tall trees, nineteen kinds of low trees, some of which are also at times shrubs, seventeen kinds of shrubs, thirteen different climbing-plants, two kinds of woody parasites, fifty-one herbs, including grasses and rushes, and fifteen ferns.

The forests of New Zealand may be classified according to the species of tall trees that are the most abundant, for it is found that associated with these is a fairly uniform combination of smaller trees, shrubs, and ferns. Thus, to mention a few classes, there are kauri, rimu, kahikatea, and southern-beech forests. Kennedy's Bush falls into the category where the totara (*Podocarpus totara*) and the matai (*Podocarpus spicatus*) are the dominant tall trees, and to the special form of that class of forest which occupied at one time almost the whole of Banks Peninsula. Amongst the commonest smaller trees, or tall shrubs, are the following: The putaputaweta (*Carpodetus serratus*), the yellow-wood (*Coprosma linariifolia*), the New Zealand fuchsia (*Fuchsia excorticata*), the broadleaf (*Griselinia littoralis*), the lacebark (*Hoheria angustifolia*), the white tea-tree (*Leptospermum ericoides*), the mahoe (*Meliccytus ramiflorus*), the rohutu (*Myrtus obcordata*), the ivy-tree (*Nothopanax arboreum*), the kaikomako (*Pennantia corymbosa*), the tarata (*Pittosporum eugenoides*), the tawhiwhi (*Pittosporum tenuifolium*), the lancewood (*Pseudopanax crassifolium* var. *unifoliatum*), the milk-tree (*Paratrophis microphylla*), the mapau (*Rapanea Urvilleani*), and the kowhai (*Sophora microphylla*). Amongst the shrubs are several species of *Coprosma*, the red-blotched horopito (*Drimys colorata*), the slender fuchsia (*Fuchsia Colensoi*), which is also a climbing-plant, the manuka (*Leptospermum scoparium*) in more than one variety, and *Melicope simplex*. The woody climbing-plants include several species of lawyer (*Rubus*), two species of *Clematis*, two species of *Muehlenbeckia*, two species of *Parsonsia*, the supplejack (*Rhipogonum scandens*), and one climbing-rata (*Metrosideros hypericifolia*). Owing to the inroad of cattle in the days before the reserve was acquired, ferns are not greatly in evidence, but they should now increase in numbers year by year. There are also various species of mosses, liverworts, and lichens in the forest, but no list of these has been prepared as yet, though they are of quite as great importance from the museum standpoint as their more highly organized relatives.

On the other reserves of the Port Hills, in many places, tussock-grasses dominate. Now, a tussock-covered hillside is an extremely characteristic feature of many New Zealand landscapes; but, equally with the forests, the tussock pastures are being replaced by a plant-covering of greater economic value; indeed, before long, except for such reserves as those on the Port Hills, one of the most remarkable plant-forms of the Dominion would be confined to the distant mountains, and even there, day by day, the tussock is being eradicated. The tussocks of the Port Hills are almost exactly alike in appearance, but they are quite unrelated, one belonging to the genus *Poa* (*P. caespitosa*) and the other to the genus *Festuca* (*F. novae-zealandiae*). Speaking of the Port Hills in general, the tussocks, through burning and grazing, are being rapidly eradicated and replaced by an indigenous turf-forming grass, *Danthonia pilosa*. The new plant-association, although dominated by a native species, did not occur in primitive New Zealand, and its presence is entirely due to the unpremeditated act of man. Generally such acts spell disaster, but in this case the sheep-runs of the South Island have benefited to no small degree through the replacement of the tussocks by *D. pilosa*. However, on the Port Hills reserves the *Danthonia*, except it be well kept in hand, is an intruder, for the museum standard demands the natural plant covering.

Where rocks occur, on their more shaded faces are two of the most remarkable plants of New Zealand, from the point of view of plant distribution and rarity. One, which would be treasured in any flora, is the extremely beautiful *Veronica Laxaudiana*. It is absolutely confined to Banks Peninsula, of which the Port Hills form an outlying portion. The other is a species of groundsel (*Senecio saxifragoides*), possessing extremely large leaves, closely covered beneath with a dense mat of hairs,

It also is a most striking plant. Now, an almost identical species, named *Senecio lagopus*, also occurs on the main mass of Banks Peninsula, which differs from *S. saxifragoides* merely in the possession of numerous bristles on the leaf, whereas in the latter such are absent. Yet, so far as is known, *S. lagopus* does not occur on the Port Hills, nor *S. saxifragoides* on Banks Peninsula proper. If this is truly a fact the distribution of these two species, each equally well suited to the rock-conditions of the area, is one of the most remarkable cases of plant-distribution in the world. To return to the tussock-association, there are certain plants which demand brief mention: such are the lowly *Cotula Haastii*, only known elsewhere on the Canterbury Plains and the Awatere Valley, the wild-irishman (*Discaria toumatou*), the tutu (*Coriaria sarmentosa*), one of the New Zealand brooms (*Carmichaelia subulata*) and the speargrass (*Aciphylla squarrosa*). At the margin of forest or on rocky ground one of the shrubby speedwells (*Veronica leiophylla*) is common, and, like all its congeners, is a pleasing feature of the vegetation.

There are most of the other species listed below, but not dealt with here, in one or other of the Port Hills reserves, but enough has been said to prove that these latter are open-air museums of no mean order, which, prized as they are at present, will increase greatly in educative value year by year.

#### PROVISIONAL LIST OF FERNS AND FLOWERING-PLANTS OF THE PORT HILLS.

Species, Family, &c.	Maori Name.	English Name.	Habitat.
<b>FERNS (FILICES).</b>			
<i>Hymenophyllum rarum</i> R. Br. .. ..	.. ..	Thin-leaved filmy fern ..	Forest; recorded by Potts, but probably now extinct.
— <i>dilatatum</i> Sw. .. ..	.. ..	Broad-leaved filmy fern	Forest; recorded by Potts, but probably now extinct.
— <i>tunbridgense</i> Sm. .. ..	.. ..	Tunbridge filmy fern ..	Shaded rock; forest.
<i>Trichomanes venosum</i> R. Br. .. ..	.. ..	Veined bristle fern ..	Forest; on tree-fern trunks, but possibly extinct.
<i>Cyathea dealbata</i> Sw. .. ..	Ponga ..	Silver tree-fern ..	Forest.
<i>Dicksonia squarrosa</i> Sw. .. ..	Weki ..	Slender tree-fern ..	Forest; but now perhaps extinct.
<i>Hypolepis tenuifolia</i> Bernh. .. ..	.. ..	Thin-leaved hypolepis ..	Forest.
<i>Cheilanthes Sieberi</i> Kunze .. ..	.. ..	Sieber's fern ..	Rock.
— <i>tenuifolia</i> Sw. .. ..	.. ..	Thin-leaved cheilanthes	Rock.
<i>Pellaea rotundifolia</i> Hook. .. ..	.. ..	Round-leaved fern ..	Forest, in dry ground.
<i>Pteridium esculentum</i> Cockayne .. ..	Rauaruhe ..	Common bracken ..	Hillsides, in open.
<i>Histiopteris incisa</i> J. Sm. .. ..	Matata ..	Water-fern ..	Forest.
<i>Blechnum lanceolatum</i> Sturm .. ..	.. ..	Lance-leaved hard fern	Forest.
— <i>discolor</i> Keys .. ..	.. ..	Common hard fern ..	Forest.
— <i>capense</i> Schlecht .. ..	Kiokio; piu ..	Long hard fern ..	Forest; swamp.
— <i>fluviatile</i> Lowe .. ..	Kiwikiwi ..	Creek-fern ..	Forest.
— <i>membranaceum</i> Mett. .. ..	.. ..	Membrane-leaved fern ..	Moist rock; forest.
<i>Asplenium flabellifolium</i> Cav. .. ..	.. ..	Drooping-spleenwort ..	Rock, where plenty of soil.
— <i>obtusatum</i> Forst. f. .. ..	Tuturanga ..	Sea spleenwort ..	Coastal cliff.
— <i>Hookerianum</i> Col. .. ..	.. ..	Hooker's spleenwort ..	Forest, on stony ground.
— <i>bulbiferum</i> Forst. f. .. ..	Mauku ..	Common spleenwort ..	Forest.
— <i>flaccidum</i> Forst. f. (several vars.) .. ..	.. ..	Drooping-spleenwort ..	Forest; rock.
<i>Polystichum vestitum</i> Presl. .. ..	Puniu ..	Prickly shield-fern ..	Forest.
— <i>Richardi</i> J. Sm. .. ..	Tutoki ..	Black shield-fern ..	Rock; forest.
— <i>hispidum</i> J. Sm. .. ..	.. ..	Hardy-stemmed fern ..	Forest.
<i>Dryopteris glabella</i> C. Chr. .. ..	.. ..	Smooth boss-fern ..	Forest.
— <i>punctata</i> C. Chr. .. ..	.. ..	Hairy polypody ..	Forest.
— <i>pennigera</i> C. Chr. .. ..	Pakauroharoha ..	Feather-fern ..	Forest; recorded by Potts.
<i>Polypodium diversifolium</i> Willd. .. ..	Paretao ..	Common polypody ..	Forest; rock.
<i>Notholaena distans</i> R. Br. .. ..	.. ..	Woolly cloak-fern ..	Rock.
<i>Gymnogramme rutaefolia</i> Hook. & Grev. .. ..	.. ..	Rue-leaved fern ..	Rock.
— <i>leiophylla</i> Desv. .. ..	.. ..	Jersey fern ..	Rock.
<i>Leptopteris hymenophylloides</i> Presl. .. ..	Heruheru ..	Single crape-fern ..	Forest.
<i>Ophioglossum coriaceum</i> A. Cunn. .. ..	.. ..	Adder's-tongue ..	Tussock pasture.
<i>Botrychium australe</i> R. Br. .. ..	.. ..	Moonwort ..	Tussock pasture.
<b>FLOWERING-PLANTS (SPERMOPHYTES).</b>			
<b>TAXACEAE.</b>			
<i>Podocarpus totara</i> A. Cunn. .. ..	Totara ..	.. ..	Forest.
— <i>spicatus</i> R. Br. .. ..	Matai ..	Black-pine ..	Forest.
<b>GRAMINEAE.</b>			
<i>Microlaena avenacea</i> Hook. f. .. ..	.. ..	Forest rice-grass ..	Forest.
— <i>polynoda</i> Hook. f. .. ..	.. ..	.. ..	Forest.
<i>Dichelachne crinita</i> Hook. f. .. ..	.. ..	Long-haired plume-grass	Tussock pasture.
<i>Calamagrostis Forsteri</i> Steud. .. ..	.. ..	Toothed bent-grass ..	Tussock pasture.
<i>Trisetum antarcticum</i> Trin. .. ..	.. ..	Shining oat-grass ..	Rock.
<i>Danthonia semiannularis</i> R. Br. (probably several varieties)	.. ..	Common oat-grass ..	Rock; tussock pasture.
— <i>pilosa</i> R. Br. var. .. ..	.. ..	Hairy oat-grass ..	Tussock pasture.
<i>Arundo conspicua</i> Forst. f. .. ..	Toetoe ..	New Zealand reed ..	Hillsides, in open.
<i>Poa caespitosa</i> Forst. f. .. ..	.. ..	Silver-tussock ..	Tussock pasture; rock.
— <i>Colensoi</i> Hook. f. .. ..	.. ..	Blue-tussock ..	Tussock pasture.
— <i>imbecilla</i> Forst. f. .. ..	.. ..	Weak poa ..	Shaded rock.
<i>Festuca novae-zealandiae</i> Cockayne .. ..	.. ..	Tussock-fescue ..	Tussock pasture.
— <i>multinodis</i> Petrie .. ..	.. ..	Drooping-fescue ..	Shaded rock.
<i>Agropyron scabrum</i> Beauv. var. .. ..	.. ..	Blue-grass ..	Tussock pasture.

PROVISIONAL LIST OF FERNS AND FLOWERING-PLANTS OF THE PORT HILLS—*continued*.

Species, Family, &c.	Maori Name.	English Name.	Habitat.
<b>FLOWERING-PLANTS (SPERMOPHYTES)—<i>continued</i>.</b>			
<b>CYPERACEAE.</b>			
<i>Eleocharis Cunninghamii</i> Boeck. ..	..	Slender spike-rush ..	Wet ground.
<i>Uncinia uncinata</i> Kükenth. ..	Matau-a-Maui ..	Broad-leaved uncinia ..	Forest.
— <i>leptostachya</i> Raoul ..	Matau-reriki ..	Tall uncinia ..	Forest.
<i>Carex secia</i> Boott ..	..	Niggerhead ..	Swamp.
— <i>inversa</i> R. Br. ..	..	..	Tussock pasture.
— <i>dissita</i> Sol. ..	..	..	Forest.
— <i>ternaria</i> Forst. f. ..	..	Cutting-grass ..	Swamp; forest.
— <i>lucida</i> Boott ..	..	Shining-sedge ..	Tussock pasture.
<b>JUNCACEAE.</b>			
<i>Juncus pauciflorus</i> R. Br. ..	..	Slender rush ..	Tussock pasture.
— <i>effusus</i> L. var. ..	..	Common rush ..	Tussock pasture.
<i>Luzula campestris</i> D.C. var. <i>migrata</i> Buchen. and other vars. ..	..	Wood-rush ..	Rock.
<b>LILIACEAE.</b>			
<i>Rhipogonum scandens</i> Forst. ..	Kareao ..	Supplejack ..	Forest.
<i>Cordylone australis</i> Hook. f. ..	Ti ..	Cabbage-tree ..	Tussock pasture.
<i>Astelia nervosa</i> Banks & Sol. ..	..	Bush-flax ..	Forest.
<i>Phormium tenax</i> Forst. var. ..	Harakeke ..	New Zealand flax ..	Gullies; stony ground.
<i>Arthropodium candidum</i> Raoul ..	..	..	Base of shaded rocks.
<b>AMARYLLIDACEAE.</b>			
<i>Hypoxis pusilla</i> Hook. f. ..	..	..	Tussock pasture.
<b>IRIDACEAE.</b>			
<i>Libertia ixioides</i> Spreng. var. ..	Tikauki ..	Common libertia ..	Rock where soil is deep.
<b>ORCHIDACEAE.</b>			
<i>Earina mucronata</i> Lindl. ..	Peka-a-waka ..	Pointed-leaved carina ..	Forest; rock.
<i>Thelymitra longifolia</i> Forst. var. ..	Makaika ..	Common thelymitra ..	Tussock pasture; rock where soil is deep.
<i>Microtis unifolia</i> Reichenb. ..	..	Onion-leaved orchid ..	Tussock pasture.
<i>Pterostylis Banksii</i> R. Br. ..	..	Common hooded orchid ..	Forest.
<i>Corysanthes triloba</i> Hook. f. ..	..	Common spider-orchid ..	Forest, on moist banks.
<b>PIPERACEAE.</b>			
<i>Macropiper excelsum</i> Miq. ..	Kawakawa ..	..	Forest.
<b>URTICACEAE.</b>			
<i>Paratrophis microphylla</i> Cockayne (= <i>P. heterophylla</i> Bl. as defined in Man. N.Z. Flora, p. 632) ..	Turepo ..	Milk-tree ..	Forest.
<i>Urtica ferox</i> Forst. f. ..	Ongaonga ..	Tree-nettle ..	Forest, or forming thickets.
— <i>incisa</i> Poir ..	..	Forest-nettle ..	Forest.
<b>LORANTHACEAE.</b>			
<i>Loranthus micranthus</i> Hook. f. ..	..	Common New Zealand mistletoe ..	Parasitic in forest on many trees.
<i>Korthalsella salicornioides</i> Van Tiegh. ..	..	..	Parasitic on <i>Leptospermum scoparium</i> .
— <i>Lindsayi</i> Engler ..	..	..	Forest (according to J. F. Armstrong). Probably parasitic on <i>Melicope simplex</i> .
<b>POLYGONACEAE.</b>			
<i>Rumex flexuosus</i> Sol. ..	..	New Zealand dock ..	Tussock pasture.
<i>Mitelenbeckia australis</i> Meissn. ..	..	..	Forest; climbing over shrubs in open.
— <i>complexa</i> Meissn. ..	Pohuehue ..	..	Forming open cushions on rocky ground and tussock pasture; forest.
<b>CHENOPODIACEAE.</b>			
<i>Rhagodia nutans</i> R. Br. ..	..	..	Rock.
<b>CARYOPHYLLACEAE.</b>			
<i>Scleranthus biflorus</i> Hook. f. ..	Kohukohu ..	..	Rock; tussock pasture.
<i>Stellaria parviflora</i> Banks & Sol. ..	..	Small-flowered chickweed ..	Forest.
<i>Colobanthus Billardieri</i> Fenzl. var. ..	..	..	Rock.
<b>RANUNCULACEAE.</b>			
<i>Clematis indivisa</i> Willd. ..	Pikiarero ..	New Zealand clematis ..	Forest.
— <i>foetida</i> Raoul ..	..	..	Forest.
— <i>afoliata</i> Buch. ..	..	Leafless clematis ..	Rocky ground; forest.
<i>Ranunculus hirtus</i> Banks & Sol. var. ..	..	Common New Zealand buttercup ..	Tussock pasture.
— <i>multiscapus</i> Hook. f. ..	..	..	Tussock pasture.
<b>MAGNOLIACEAE.</b>			
<i>Drimys celcrata</i> Raoul ..	Horopito ..	Blotched-leaved pepper-tree ..	Forest.

PROVISIONAL LIST OF FERNS AND FLOWERING-PLANTS OF THE PORT HILLS—*continued*.

Species, Family, &c.	Maori Name.	English Name.	Habitat.
<b>FLOWERING-PLANTS (SPERMOPHYTES)—<i>continued</i>.</b>			
<b>CRUCIFERAE.</b>			
<i>Cardamine heterophylla</i> O. E. Schulz var.	..	Hairy bitter-cress ..	Forest and outskirts ; shaded rock, &c.
<b>CRASSULACEAE.</b>			
<i>Crassula Sieberiana</i> Schultz] .. ..	..	..	Rock.
<b>SAXIFRAGACEAE.</b>			
<i>Carpodetus serratus</i> Forst. .. ..	Putaputawheta	New Zealand hawthorn..	Forest.
<b>PITTOSPORACEAE.</b>			
<i>Pittosporum tenuifolium</i> Banks & Sol. ..	Powhiwhi ..	Thin-leaved pittosporum	Forest.
— <i>eugenioides</i> A. Cunn. .. ..	Tarata ..	Lemonwood .. ..	Forest.
<b>ROSACEAE.</b>			
<i>Rubus australis</i> Forst. f. var. .. ..	Tataramoa ..	Lawyer .. ..	Forest ; thickets on hillside.
— <i>cissoides</i> A. Cunn. var. <i>pauperatus</i> T. Kirk ..	..	Leafless lawyer ..	Thickets on hillsides ; forest.
— <i>schmidelioides</i> A. Cunn. var. <i>coloratus</i> T. Kirk ..	..	..	Forest.
— <i>subpauperatus</i> Cockayne .. ..	..	..	Margin of forest.
<i>Acaena novae-zelandiae</i> T. Kirk var. <i>viridissima</i> Bitter ..	Piripiri ..	Red biddy-bid ..	Tussock pasture ; rock.
— <i>sanguisorbae</i> Vahl var. <i>viridior</i> Cockayne var. nov. ined. ..	Piripiri ..	Green biddy-bid ..	Tussock pasture.
<i>Potentilla anserina</i> L. var. <i>anserinoides</i> Raoul ..	..	New Zealand silver-weed	Moist ground.
<i>Geum urbanum</i> L. var. <i>strictum</i> Hook. f. ..	..	..	Tussock pasture.
<b>LEGUMINOSAE.</b>			
<i>Carmichaelia subulata</i> T. Kirk .. ..	..	..	Tussock pasture.
<i>Sophora microphylla</i> J. Mull. .. ..	Kowhai ..	New Zealand laburnum	Forest ; hillside in open.
— <i>prostrata</i> Buch. .. ..	..	Dwarf kowhai ..	Stony ground.
<b>GERANIACEAE.</b>			
<i>Geranium microphyllum</i> Hook. f. .. ..	..	Slender cranesbill ..	Tussock pasture.
<i>Pelargonium inodorum</i> Willd. .. ..	Kopata ..	..	Tussock pasture.
<b>OXALIDACEAE.</b>			
<i>Oxalis corniculata</i> L. var. .. ..	..	..	Tussock pasture ; rock.
<b>LINACEAE.</b>			
<i>Linum monogynum</i> Forst. f. .. ..	..	White flax .. ..	Rock.
<b>RUTACEAE.</b>			
<i>Melicope simplex</i> A. Cunn. .. ..	Poa-taniwha ..	..	Forest.
<b>CORIARIACEAE.</b>			
<i>Coriaria sarmentosa</i> Forst. f. .. ..	Tutu ..	..	Thickets in open.
<b>ICACINACEAE.</b>			
<i>Pennantia corymbosa</i> Forst. .. ..	Kaikomako ..	..	Forest.
<b>SAPINDACEAE.</b>			
<i>Dodonaea viscosa</i> Jacq. .. ..	Akeake ..	..	Forest.
<i>Alectryon excelsum</i> Gaertn. .. ..	Titoki ..	New Zealand ash ..	Forest.
<b>RHAMNACEAE.</b>			
<i>Discaria toumatou</i> Raoul .. ..	Tumatukuru ..	Wild-irishman ..	Tussock pasture.
<b>ELAEOCARPACEAE.</b>			
<i>Aristotelia racemosa</i> Hook. f. .. ..	Makomako ..	Wineberry .. ..	Forest.
<b>MALVACEAE.</b>			
<i>Plagianthus cymosus</i> T. Kirk* .. ..	..	..	Remains of old forest.
— <i>betulinus</i> A. Cunn. .. ..	Manatu ..	Lowland ribbonwood ..	Forest.
<i>Hoheria angustifolia</i> Raoul .. ..	Houhere ..	Lacebark .. ..	Forest.
<b>GUTTIFERAE.</b>			
<i>Hypericum gramineum</i> Forst. f. .. ..	..	..	Tussock pasture.
— <i>japonicum</i> Thunb. .. ..	..	Japanese St. John's wort	Tussock pasture.
<b>VIOLACEAE.</b>			
<i>Viola Cunninghamii</i> Hook. f. .. ..	..	Common New Zealand violet	Tussock pasture.
<i>Melicytus ramiflorus</i> Forst. .. ..	Mahoe ..	..	Forest.
— <i>micranthus</i> Hook. f. var. <i>microphyllus</i> Cheesem. ..	..	..	Forest.
<i>Hymenandra crassifolia</i> Hook. f. ..	..	..	Rock.

\* This wants confirmation ; the plant noted may have been only a juvenile form of *P. betulinus*. It was growing in a gully above Lyttelton.

PROVISIONAL LIST OF FERNS AND FLOWERING-PLANTS OF THE PORT HILLS—*continued*.

Species, Family, &c.	Maori Name.	English Name.	Habitat.
<b>FLOWERING - PLANTS (SPERMOPHYTES)—<i>continued</i>.</b>			
<b>PASSIFLORACEAE.</b>			
<i>Tetrapathaea australis</i> Raoul .. ..	..	New Zealand passion-flower	Forest.
<b>MYRTACEAE.</b>			
<i>Leptospermum scoparium</i> Forst. var. ..	Manuka ..	Red tea-tree ..	Forming patches of erect scrub.
— <i>ericoides</i> A. Rich. var. ..	Kanuka ..	White tea-tree ..	Forest; rock.
<i>Metrosideros hypericifolia</i> A. Cunn. ..	..	Slender climbing white-rata	Forest; moist rock.
<i>Myrtus obcordata</i> Hook. f. .. ..	Rohutu ..	..	Forest.
<b>ONAGRACEAE.</b>			
<i>Epilobium cinereum</i> A. Rich. .. ..	..	Narrow-leaved willow-herb	Tussock pasture; rock.
— <i>pubens</i> A. Rich. .. ..	..	Soft-leaved willow-herb ..	Forest; rock.
— <i>rotundifolium</i> Forst. f. .. ..	..	Round-leaved willow-herb	Forest.
— <i>nummularifolium</i> R. Cunn. .. ..	..	Creeping willow-herb ..	Rock.
— <i>nerterioides</i> A. Cunn. .. ..	..	Wrinkled willow-herb ..	Rock; tussock pasture.
<i>Fuchsia excortica</i> L. f. .. ..	Kotukutuku ..	New Zealand fuchsia ..	Forest.
— <i>Colensoi</i> Hook. f. .. ..	..	Shrubby fuchsia ..	Forest; thickets in open.
<b>HALORRHAGACEAE.</b>			
<i>Halorrhagus erecta</i> Schindler .. ..	..	Tall halorrhagus ..	Under manuka; rock.
<b>ARALIACEAE.</b>			
<i>Nothopanax arboreum</i> Seem. .. ..	Whauwhaupaku	Ivy-tree ..	Forest; rock.
<i>Schefflera digitata</i> Forst. .. ..	Pate ..	New Zealand fig ..	Forest.
<i>Pseudopanax crassifolium</i> C. Koch var. <i>unifoliatum</i> T. Kirk	Horocka ..	Lancewood ..	Forest.
<b>UMBELLIFERAE.</b>			
<i>Hydrocotyle elongata</i> A. Cunn. .. ..	..	Long-stemmed marsh-pennywort	Forest.
— <i>novae-zelandiae</i> D.C. .. ..	..	New Zealand marsh-pennywort	Tussock pasture.
— <i>americana</i> L. .. ..	..	American marsh-pennywort	Forest.
— <i>moschata</i> Forst. f. .. ..	..	Sharp-toothed marsh-pennywort	Forest; tussock pasture; rock.
<i>Aciphylla squarrosa</i> Forst. var. ..	Taramea ..	Speargrass ..	Tussock pasture.
<i>Anisotome aromatica</i> Hook. f. var. ..	..	..	Rock.
— <i>Enysii</i> Laing* .. ..	..	..	Rock.
<i>Angelica montana</i> Cockayne, nom. nov. (= <i>Gingidium montanum</i> Forst. in Char. Gen. Plant. 41, t. 2, and <i>Angelica Gingidium</i> Hook. f.)	..	New Zealand aniseed ..	Rock.
— <i>geniculata</i> Hook. f. .. ..	..	Climbing-aniseed ..	Forest; climbing over shrubs in open.
<i>Daucus brachiatus</i> Sieb. .. ..	..	Wild carrot ..	Tussock pasture.
<i>Schizaelema Hookeri</i> Domin .. ..	..	..	Forest.
<b>CORNACEAE.</b>			
<i>Corokia cotoneaster</i> Raoul .. ..	..	Wiry corokia ..	Rock.
<i>Griselinia littoralis</i> Raoul .. ..	Kapuka ..	Broadleaf ..	Forest; rock.
<b>EPACRIDACEAE.</b>			
<i>Styphelia acerosa</i> Sol. var. .. ..	Mingimingi ..	Sharp-leaved heath ..	Rock.
— <i>Fraseri</i> F. Muell. .. ..	Patotara ..	Dwarf heath ..	Rock; tussock pasture.
<i>Dracophyllum acicularifolium</i> Cockayne (according to R. M. Laing)	..	..	Cooper's knob; rock.
<b>MYRSINACEAE.</b>			
<i>Rapanea Urvillei</i> Mez. .. ..	Mapau ..	Red-maple ..	Forest; rock.
<b>APOCYNACEAE.</b>			
<i>Parsonsia heterophylla</i> A. Cunn. ..	Kaiwhiria ..	New Zealand jasmine ..	Forest.
— <i>capsularis</i> R. Br. var. <i>rosea</i> Cockayne var. nov. (= <i>P. rosea</i> Raoul in Choix, p. 17)	..	Pink New Zealand jasmine	Forest.
<b>CONVOLVULACEAE.</b>			
<i>Calystegia tuguriorum</i> R. Br. .. ..	..	New Zealand convolvulus	Forest.
<i>Convolvulus erubescens</i> Sims. .. ..	..	..	Tussock pasture.
<i>Dichondra repens</i> Forst. .. ..	..	Creeping-dichondra ..	Tussock pasture.
<b>BORAGINACEAE.</b>			
<i>Myosotis australis</i> R. Br. var. (probably an undescribed species)	..	..	Shaded rock.
<b>VERBENACEAE.</b>			
<i>Teucrium parvifolium</i> Hook. f. ..	..	..	Forest.

\* I am not at all satisfied as to this identification.

PROVISIONAL LIST OF FERNS AND FLOWERING-PLANTS OF THE PORT HILLS—*continued*.

Species, Family, &c.	Maori Name.	English Name.	Habitat.
<b>FLOWERING-PLANTS (SPERMOPHYTES)—<i>continued</i>.</b>			
<b>SOLANACEAE.</b>			
<i>Solanum nigrum</i> L. .. ..	.. ..	.. ..	Bare ground.
— <i>aviculare</i> Forst. f. .. ..	Poroporo .. ..	.. ..	Forest.
<b>SCROPHULARIACEAE.</b>			
<i>Veronica salicifolia</i> Forst. f. var. .. ..	Koromiko .. ..	Common veronica .. ..	Rocky ground; margin of forest.
— <i>leiophylla</i> Cheesem. var. .. ..	.. ..	Smooth-leaved veronica .. ..	Rocky ground; rock; margin of forest.
— <i>Lavandiana</i> Raoul .. ..	.. ..	Port Hills veronica .. ..	Rock.
<b>MYOPORACEAE.</b>			
<i>Myoporum laetum</i> Forst. f. .. ..	Ngaio .. ..	.. ..	Forest; in open on hillsides.
<b>RUBIACEAE.</b>			
<i>Coprosma robusta</i> Raoul .. ..	Karamu .. ..	Glossy coprosma .. ..	Forest.
— <i>lucida</i> Forst. f. .. ..	.. ..	.. ..	Forest; rock.
— <i>Cunninghamii</i> Hook. f. .. ..	.. ..	.. ..	Banks of streams.
— <i>rotundifolia</i> A. Cunn. .. ..	.. ..	Round-leaved coprosma .. ..	Forest.
— <i>areolata</i> Cheesem. .. ..	.. ..	Thin-leaved coprosma .. ..	Forest.
— <i>rhynchoides</i> A. Cunn. var. .. ..	.. ..	Red-fruited coprosma .. ..	Forest.
— <i>crassifolia</i> Col. .. ..	.. ..	Stiff-stemmed coprosma .. ..	Forest; rock.
— <i>propinqua</i> A. Cunn. .. ..	.. ..	Common coprosma .. ..	Bank of streams.
— <i>linearifolia</i> Hook. f. .. ..	.. ..	Narrow-leaved coprosma .. ..	Forest.
<b>CAMPANULACEAE.</b>			
<i>Wahlenbergia gracilis</i> A.D.C. .. ..	.. ..	Slender blue-bell .. ..	Tussock pasture.
<i>Pratia angulata</i> Hook. f. var. .. ..	.. ..	Creeping-pratia .. ..	Moist ground.
<b>COMPOSITAE.</b>			
<i>Lagenophora petiolata</i> Hook. f. .. ..	.. ..	Slender New Zealand daisy .. ..	Tussock pasture.
<i>Brachycome Thomsoni</i> T. Kirk var.* .. ..	.. ..	.. ..	Base of rocks in shale.
<i>Olearia fragrantissima</i> Petric .. ..	.. ..	Fragrant tree-daisy .. ..	Forest.
<i>Celmisia longifolia</i> Cass. var. .. ..	.. ..	Common celmisia .. ..	Base of rocks.
<i>Vittadinia australis</i> A. Rich. .. ..	.. ..	.. ..	Tussock pasture.
<i>Gnaphalium collinum</i> Lab. .. ..	.. ..	Hill cudweed .. ..	Tussock pasture.
— <i>luteo-album</i> L. .. ..	.. ..	White cudweed .. ..	Tussock pasture.
— <i>japonicum</i> Thunb. .. ..	.. ..	Japanese cudweed .. ..	Tussock pasture.
<i>Raoulia glabra</i> Hook. f. .. ..	.. ..	.. ..	Tussock pasture.
<i>Helichrysum bellidioides</i> Hook. f. .. ..	.. ..	Mountain-daisy .. ..	Tussock pasture.
— <i>filiacule</i> Hook. f. .. ..	.. ..	.. ..	Tussock pasture.
— <i>glomeratum</i> Benth. & Hook. f. .. ..	.. ..	Shrubby helichrysum .. ..	Rock; forest.
<i>Craspedia uniflora</i> Forst. f. var. .. ..	.. ..	.. ..	Tussock pasture; rock.
<i>Cotula Haastii</i> T. Kirk .. ..	.. ..	Haast's cotula .. ..	Tussock pasture; rock.
— <i>dioica</i> Hook. f. var. .. ..	.. ..	Common cotula .. ..	Tussock pasture.
<i>Erechtites prenanthoides</i> D.C. .. ..	.. ..	Common fireweed .. ..	Forest.
— <i>quadridentata</i> D.C. .. ..	.. ..	.. ..	Rock; tussock pasture.
<i>Senecio saxifragoides</i> Hook. f. .. ..	.. ..	Port Hills groundsel .. ..	Rock.
— <i>laetus</i> Forst. f. .. ..	.. ..	Coast groundsel .. ..	Rock.
— <i>sciadophilus</i> Raoul .. ..	.. ..	Climbing-groundsel .. ..	Forest.
<i>Microseris scapigera</i> Sch. Bip. (= <i>M. Fors- leri</i> Hook. f.) .. ..	.. ..	.. ..	Tussock pasture; rock.
<i>Taraxacum magellanicum</i> Comm. .. ..	.. ..	New Zealand dandelion .. ..	Tussock pasture.

\* This identification may be incorrect.

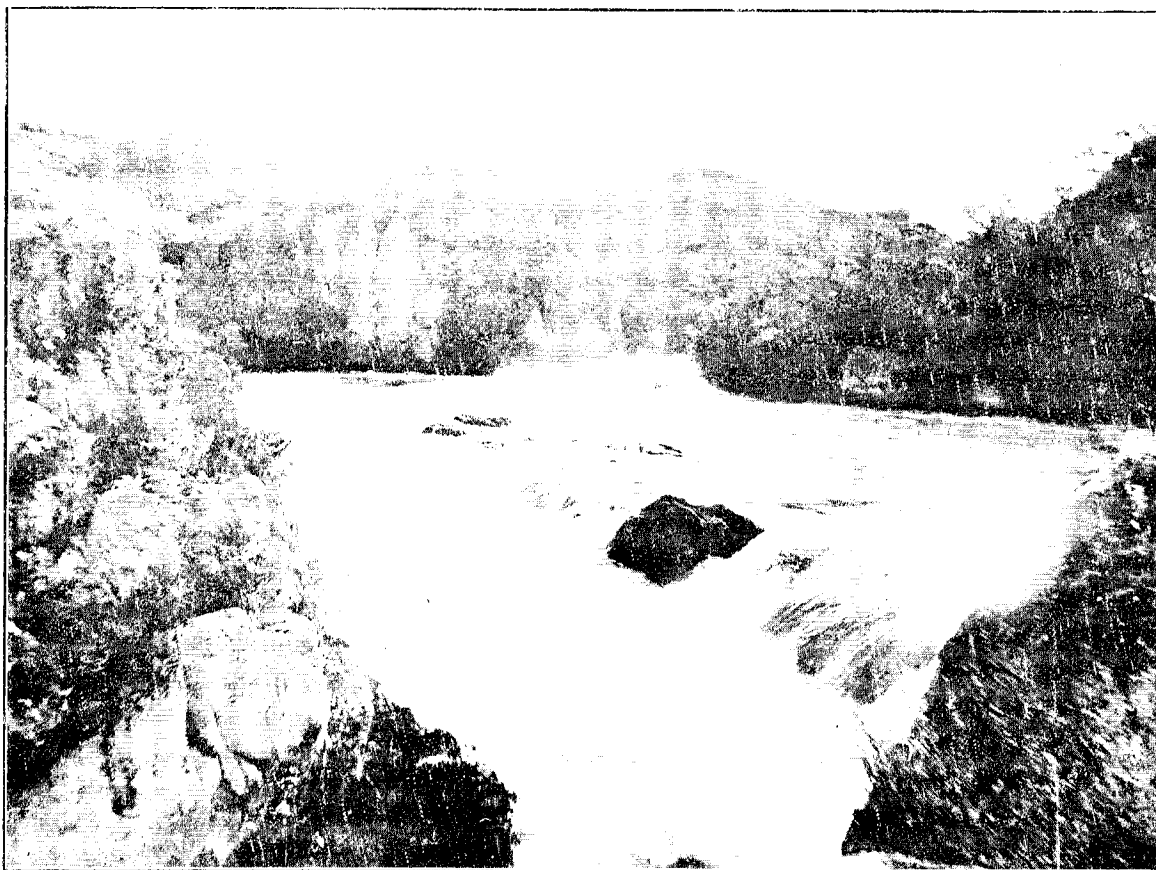
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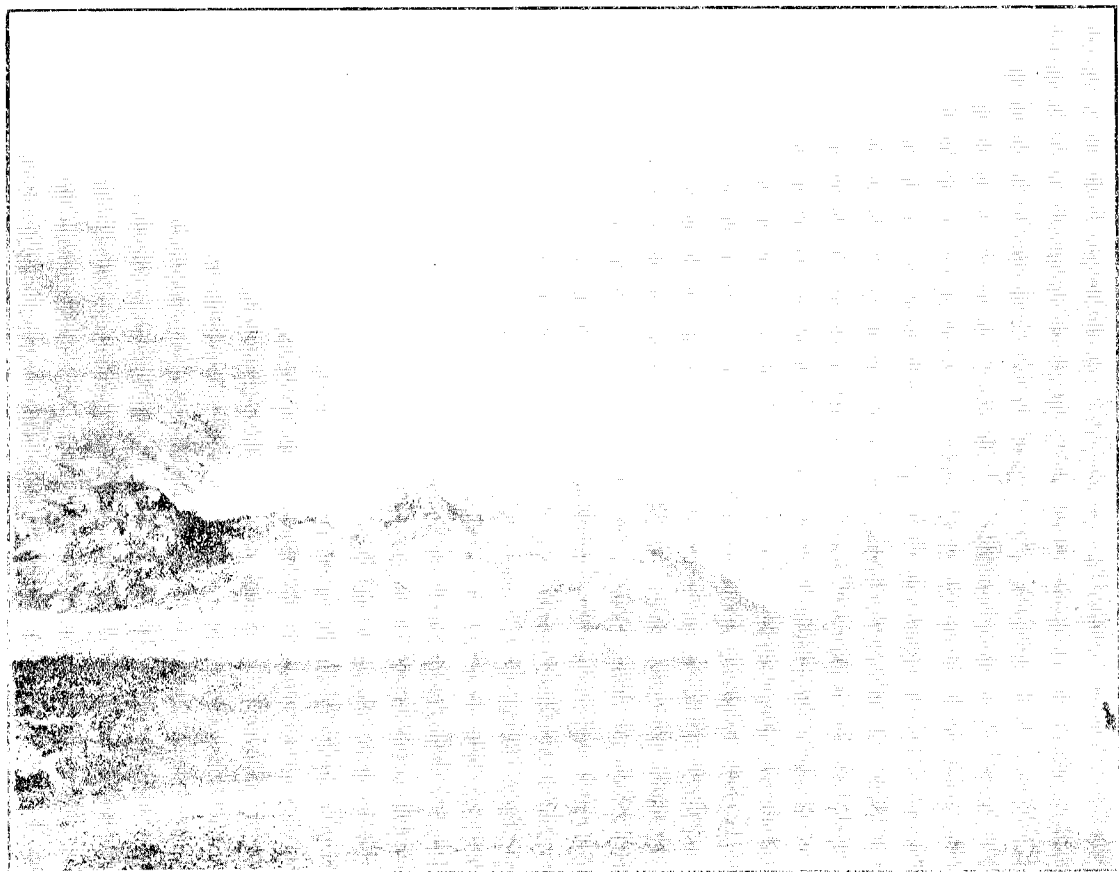
GOVERNOR'S BAY, LYTTELTON. VIEW FROM SUMMIT ROAD.



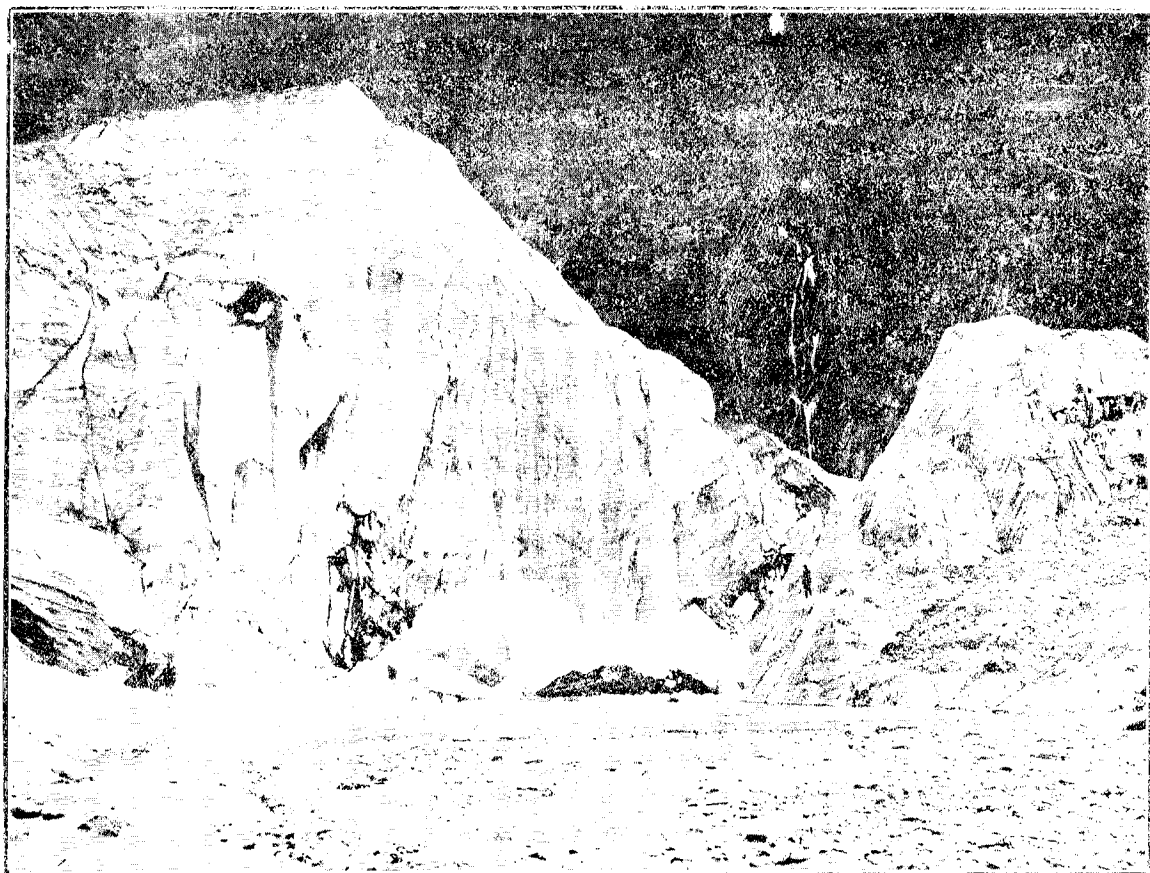
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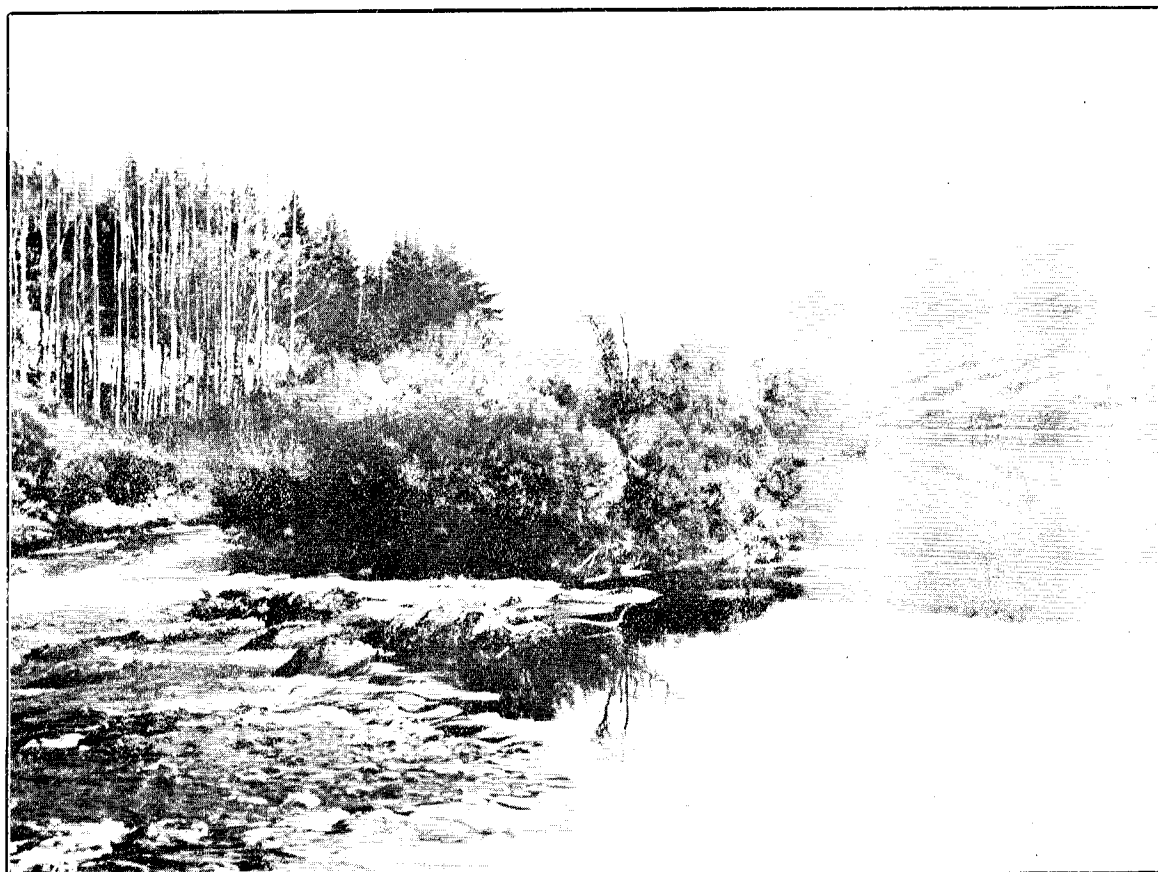
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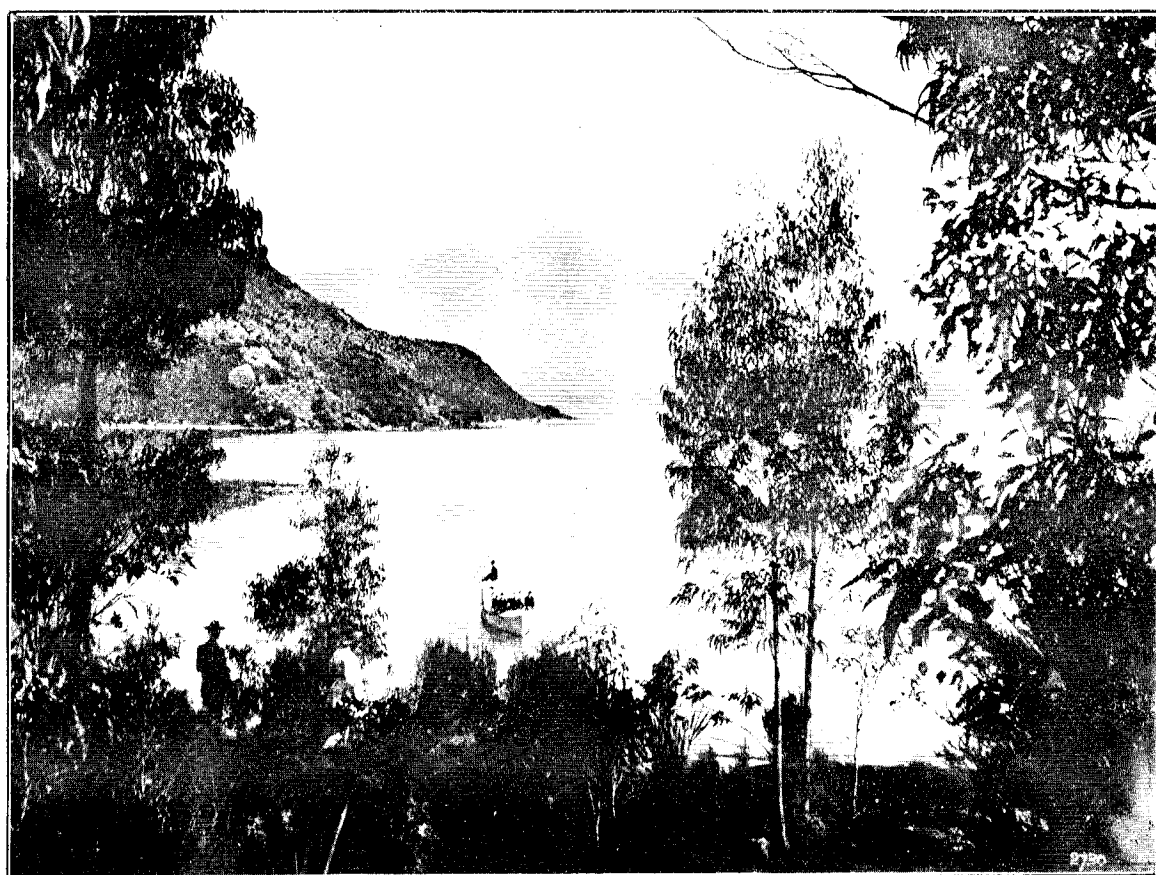
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BOB'S COVE, LAKE WAKATIPU.