

1875.

NEW ZEALAND.

SIXTH ANNUAL REPORT OF THE BOTANIC GARDEN
BOARD.*Presented to both Houses of the General Assembly by Command of His Excellency.*

MEETINGS of the Board were held during the past year, for the transaction of business, on 21st December, 1874, 11th March, 31st March, and 4th August, 1875.

The ordinary expenditure on the garden has been increased this year by the fencing required for the extension of its area to include land conveyed to the Board by the Provincial Government, and the unused blocks of the Church of England and Public Cemeteries, of which the provisional annexation has been sanctioned by the respective trustees.

The fence on the east side next the town has been removed back to the line of road laid off in that direction, a wire fence has been erected between Moxham's farm and the gardens, and a four-rail fence around the added reserves, making in all 89 chains of fencing.

New roads have been formed to the extent of 92 chains, opening up the new ground to the public; all the old roads have been cleaned, several bridges renewed and others repaired, the late severe rains having caused considerable damage.

A large amount of necessary work has been done in clearing scrub, repairing and making new drains, and in nursery work including transplanting.

A cottage removed from the Museum site has been re-erected near the nursery pits, and will prove of great use.

There have been about 3,000 trees planted out during the past year; of this number 688 have been purchased in the Australian colonies and New Zealand, of which lists are appended.

The crop of conifers raised from seed sown in 1874, and which should have been available for planting out in 1875, proved to a great extent a failure.

The new portion of the ground lately fenced has been planted with a fine collection of the different varieties of the silver fir, also araucarias and cedars.

The greater part of the seeds in question when received here from North America were imperfectly filled, or, in other words, they were shrivelled and light. Whether this arose from the seed having been gathered unripe, or from imperfect fertilization, matters little, as in either case the result would be weekly constitutioned plants; such plants proving this in a few years by flowering and bearing cones at an age that would result in short life and the production of bad timber. Great care should therefore be taken to prevent the introduction of bad pine seed to New Zealand.

LIST of PINES raised from Seed.

					In pots.	In beds.
Cupressus macrocarpa	...	...	...	...	250	450
Pinus insignis	...	...	...	...	100	
„ tuberculata	...	...	...	...	20	
„ longifolia	...	...	...	...	74	
„ pinea	...	...	...	...	31	
Abies excelsa	...	...	...	...	350	
„ menziesii	...	...	...	...	80	
„ douglasii	...	...	...	...	22	
Wellingtonia gigantea	...	...	...	...	40	
Frenella	...	...	...	...		150
Totals	...	...	...	...	967	600

SUMMARY of PLANTS and SEEDS purchased for and presented to the Garden during the past Year.

Purchased Plants.

Ferguson and Son, New South Wales, trees and shrubs	...	...	153
Duncan and Son, Christchurch, New Zealand, trees	...	...	92
T. Lang and Co., Melbourne, trees	...	...	219
Mr. R. Donald, Wellington, trees	...	...	200
Mr. McNab, Wellington, trees	...	...	24
Mr. Batchelor, Nelson, trees	...	...	200

Donations.

Mr. Ludlam, 250 pine trees and parcels of pine seeds.
 Mr. Drake, 30 Native trees and *Cupressus macrocarpa* seed.
 Mr. Harding, Napier, 6 packets broom seed.
 Mr. Mantell, a large collections of pine trees, shrubs, and seeds.
 Mr. Guilfoyle, Melbourne, 1 packet seeds.
 Mr. Mason, Hutt, 24 shrubs
 T. Lang and Co., Melbourne, 71 trees.
 His Honor Sir Redmond Barry, Chancellor of the University of Melbourne, 3 cases plants, 124 sp.
 also seeds.
 Royal Gardens, Kew, 12 cases plants.
 Mr. R. Donald, Wellington, 50 Native trees (totara).
 Mrs. Kyngdon, New Plymouth, 1 *Gaultheria rupestris*.
 Colonial Government, 23 species of conifer seeds from California and India.

PLANTS sent from the Gardens.

3 cases New Zealand plants, Sir R. Barry, Melbourne.
 1 case ferns, Hon. J. Bonar, Westland.
 1 case New Zealand plants, Major Palmer.
 5 cases New Zealand plants, Royal Botanic Gardens, Kew.
 2 cases New Zealand plants, Dr. Hector (for Kew).
 1 case New Zealand plants, Colonel Feilding.
 71 pine trees, Lunatic Asylum, Wellington.
 144 New Zealand plants, ditto.
 50 pines, W. Wray, for Cemetery Reserve, Patea.
 25 pines, Wellington Gaol.

List of Plants purchased from T. Lang and Co., Melbourne, 22nd April, 1875.

6	<i>Abies canadensis</i> .	2	<i>Picea flexilis</i> .
6	" <i>menziesii</i> .	3	<i>Pinus rigidus</i> .
6	<i>Cedrus deodara</i> .	6	<i>Retinospora filifera</i> .
6	" <i>atlantica</i> .	6	" <i>squarrosa</i> .
6	" <i>libani</i> .	6	" <i>pisifera</i> .
12	<i>Cupressus benthamiana</i> .	6	" <i>plumosa</i> .
12	" <i>undeana</i> .	6	<i>Thujaopsis dolabrata</i> .
6	<i>Picea balsamea</i> .	6	" <i>latevirens</i> .
6	" <i>fraseri</i> .	6	" <i>borealis</i> .
3	" <i>cephalonica</i> (<i>apollonia</i>).	6	<i>Araucaria imbricata</i> .
12	" <i>nordmanniana</i> .	6	<i>Prumnopitys elegans</i> .
12	" <i>pectinata</i> .	6	<i>Taxus elegantissima</i> .
6	" <i>pinsapo</i> .	12	<i>Pinus austriaca</i> .
4	" <i>pindrow</i> .	12	" <i>laricio</i> .
2	" <i>magnifica</i> .	25	<i>Abies excelsa</i> .
Total ...		... 219	

Purchased from Ferguson and Son, New South Wales, 17th, June, 1875.

<i>Araucaria raoulii</i> ...	...	...	...	...	12
" <i>cookii</i> ...	...	...	...	...	20
" <i>cunninghami</i> ...	...	...	...	...	25
" <i>glauca</i> ...	...	...	...	...	12
" <i>bidwillii</i> ...	...	...	...	...	20
<i>Ficus macrophylla</i> ...	...	...	...	...	44
<i>Magnolia grandiflora</i> ...	...	...	...	...	20
Total ...	...	...	...	...	153

From Duncan and Son, Christchurch, 28th April, 1875.

<i>Pinus macrocarpa</i> ...	...	...	...	...	12
<i>Abies hookeriana</i> ...	...	...	...	...	3
" <i>alba</i> ...	...	...	...	...	3
<i>Pinus austriaca</i> ...	...	...	...	...	50
" <i>resinosa</i> ...	...	...	...	...	12
" <i>pungens</i> ...	...	...	...	...	6
" <i>rigida</i> ...	...	...	...	...	6
Total ...	...	...	...	...	92

From R. Donald: 100 <i>Pinus halepensis</i> , 100 <i>Pinus sylvestris</i> ...	...	...	...	200
" Mr. McNab: 24 <i>Araucaria excelsa</i> ...	...	...	...	24
Total ...	...	...	...	224

LIST of PLANTS in 12 Ward's cases for New Zealand, per ship "Collingwood," from Kew.

			Remarks as to state on arrival.					Remarks as to state on arrival.	
			Total No.	Alive.				Total No.	Alive.
<i>Case I.</i>					<i>Case VI. (continued).</i>				
1. <i>Rhododendron hodgsoni</i> ...	...	1 row	7	1	3. <i>Quercus olivæformis</i> ...	...	5 rows	6	6
2. " <i>thomsoni</i> ...	...	"	7	3	4. " <i>castanea</i> ...	...	6 "	6	6
3. " <i>arboresum</i> ...	...	"	6	2	5. " <i>rubra</i> ...	...	"	6	6
4. " <i>barbatum</i> ...	...	"	7	0	6. " <i>fischeri</i> ...	...	"	6	6
5. <i>R. cinnabarinum blandfordia-florosa</i>	...	"	7	6	<i>Case VII.</i>				
6. <i>Rhododendron thomsoni</i> ...	...	1 1/2 "	4	3	1. <i>Quercus bicolor</i> ...	...	6 "	6	6
7. " <i>hodgsoni</i> ...	...	1 1/2 "	9	2	2. " <i>macrocarpa</i> ...	...	6 "	6	6
8. " <i>glaucum</i> ...	...	2 "	8	7	3. " <i>tinctoria</i> ...	...	6 "	6	6
9. " <i>barbatum</i> ...	...	1 1/2 "	3	2	4. " <i>cerris</i> ...	...	12 "	8	8
10. " <i>arboresum</i> ...	...	1 1/2 "	2	1	5. " <i>robur-pedunculata</i> ...	...	12 "	15	14
<i>Case II.</i>					<i>Case VIII.</i>				
1. <i>Rhododendron pendulum</i> ...	...	...	1	0	1. <i>Quercus ballota</i> ...	...	...	6	6
2. " <i>falconeri</i> ...	...	...	3	1	2. " <i>suber</i> ...	...	...	6	5
3. " <i>virgatum</i> ...	...	...	2	0	3. " <i>densiflora</i> ...	...	...	3	3
4. " <i>arboresum</i> ...	...	...	3	2	4. " <i>mirbecki</i> ...	...	...	3	3
5. " <i>campanulatum</i> ...	...	...	3	0	5. " <i>fontainesii</i> ...	...	...	5	5
6. " <i>camellia-florum or roylei</i>	...	...	8	4	<i>Case IX.</i>				
7. " <i>griffithianum</i> ...	...	...	9	4	1. <i>Quercus solimensis</i> ...	...	...	3	2
8. " <i>cinnabarinum</i> ...	...	...	13	9	2. " <i>nigra</i> ...	...	...	3	2
9. " <i>camellia-florum</i> ...	...	...	7	3	4. " <i>obtusiloba</i> ...	...	...	2	2
10. " <i>row of mixed seedlings</i>	...	...	4	0	10. " <i>alba</i> ...	...	...	6	1
<i>Case III.</i>					13. " <i>lobata</i> ...	...	...	2	0
1. <i>Picea balsamea</i> ...	...	...	4	0	15. " <i>falcata</i> ...	...	...	6	4
2. <i>Cedrus libani</i> ...	...	...	4	0	18. " <i>cinerea</i> ...	...	...	1	0
3. <i>Picea cephalonica</i> ...	...	...	4	1	5. " ...	...	...	1	0
4. <i>Pinus cembra</i> ...	...	...	4	4	6. " ...	...	...	1	1
5. " <i>inops</i> ...	...	...	6	1	7. " ...	...	...	1	0
<i>Case IV.</i>					8. " ...	...	...	1	1
1. <i>Picea pinsapo</i> ...	...	...	6	0	9. " ...	...	...	1	0
2. <i>Abies nigra</i> ...	...	...	6	0	11. " ...	...	...	1	0
3. " <i>alba</i> ...	...	...	6	0	12. " ...	...	...	1	1
4. <i>Pinus rigida</i> ...	...	...	6	1	14. " ...	...	...	1	1
5. <i>Abies canadensis</i> ...	...	...	5	4	16. " ...	...	...	1	0
6. <i>Pinus resinosa</i> ...	...	...	4	1	17. " ...	...	...	1	0
<i>Case V.</i>					<i>Case X.</i>				
1. <i>Gardenia thunbergi</i> ...	...	...	1	1	1. <i>Quercus coccifera</i> ...	...	...	6	3
2. <i>Illicium floridanum</i> ...	...	...	1	1	2. " <i>ilex</i> ...	...	...	6	2
3. <i>Bambusa fortunei-variegata</i> ...	...	...	1	1	3. <i>Schotia latifolia</i> ...	...	...	1	0
4. <i>Poinciana gilliesi</i> ...	...	...	1	1	4. <i>Argania sideroxylon</i> ...	...	...	1	1
5. <i>Parochetus thunbergi</i> ...	...	...	1	1	5. <i>Podalyria biflora</i> ...	...	...	1	0
6. <i>Picea nordmanniana</i> ...	...	...	6	0	6. <i>Smilax delorides</i> ...	...	...	1	1
7. <i>Arduina bispinosa</i> ...	...	...	1	1	7. <i>Abutilon darwini</i> ...	...	...	1	1
8. <i>Calceolaria violacea</i> ...	...	...	1	0	8. <i>Rhaphiolepis japonica</i> ...	...	...	1	1
9. <i>Araucaria braziliensis</i> ...	...	...	1	1	9. <i>Cyphomandra betacea</i> ...	...	...	1	0
10. <i>Colletia cruciata</i> ...	...	...	1	1	10. <i>Podalyria biflora</i> ...	...	...	1	1
11. <i>Desfontainia spinosa</i> ...	...	...	1	0	11. <i>Malva miniata</i> ...	...	...	1	0
12. <i>Benthamia fragifera</i> ...	...	...	1	0	12. <i>Solanum</i> sp. ...	...	...	1	1
13. <i>Teedia lucida</i> ...	...	...	1	0	13. <i>Rhaphiolepis japonica</i> ...	...	...	1	0
14. <i>Araucaria braziliensis</i> ...	...	...	1	1	14. <i>Duvana dependens</i> ...	...	...	1	1
15. <i>Chironia grandiflora</i> ...	...	...	1	0	15. <i>Olive seedlings</i> ...	...	...	1	1
16. " <i>frutescens</i> ...	...	...	1	0	16. <i>Schotia</i> sp. ...	...	...	1	0
17. <i>Juglans nigra</i> ...	...	...	6	6	17. <i>Arabia papyrifera</i> ...	...	...	1	0
18. <i>Eupatorium weinmannianum</i> ...	...	...	1	0	18. <i>Bougainvillea glabra</i> ...	...	...	1	1
19. <i>Araucaria braziliensis</i> ...	...	...	2	1	19. <i>Dasyllirion acrotichum</i> ...	...	...	1	1
20. <i>Fabiana imbricata</i> ...	...	...	1	0	20. <i>Calliandra tweediei</i> ...	...	...	1	1
21. <i>Ageratum riparium</i> ...	...	...	1	1	21. <i>Hibiscus pedunculatus</i> ...	...	...	1	1
22. <i>Rubus deliciosus</i> ...	...	...	1	0	<i>Case XI.</i>				
23. <i>Quercus austriaca</i> ...	...	...	3	2	Germanating seeds of sugar maple (seeds received from Dr. H. Gray)				
<i>Case VI.</i>					<i>Case XII.</i>				
1. <i>Quercus discolor</i> ...	...	6 "	6	6	<i>Sarracenia purpurea</i> ...				
2. " <i>hybrida</i> ...	...	6 "	6	6	About 12				

Out of 420 plants originally put in the cases at Kew, 242 only have arrived alive; of this latter number, I believe 25 per cent. will probably die within a few months under any circumstances.

List of Plants in No. 1 Case received from Sir Redmond Barry, Chancellor of the University of Melbourne, 20th July, 1875.

Acmena smithiana.	Kangaroo pear.
Banksia longifolia.	Lagenaria patersonii.
Brachychiton acerifolia.	Latania borbonica.
" populifolia.	Lophostemon macrophylla.
Bradleya australis.	Melaleuca ericoides.
Callistemon coccinea.	Native currant.
Cassia nereifolia.	New fruit from Queensland.
Cæsalpina, sp.	Palmus acuminata.
Clerodendron tomentosa.	Pittosporum acacioides.
Commersonia reticulata.	Sabal blackburniana.
Cissus bandiana.	" umbraculifera.
Cryptocarpa glauca.	Sambucus albicans.
Eugenia myrtifolia.	Seaforthia elegans.
Eriostemon nereifolia.	Solanum macrocarpa.
Eutaxia myrtifolia.	Tabernæmontana orientalis.
Ficus hartlandia.	Templetonia retusa.
Grevillea hillei.	Tristania nereifolia.
Hernandia bivalvis.	

List of Plants in No. 2 Case.

Abies orientalis.	Labonia floribunda.
" sitchensis.	Lemon thyme.
Azalea jenkinsonii.	Pinus ponderosa.
" colerans.	" torreyana.
" Empress Eugenie.	Retinospora ericoides.
" splendens.	Serissa foetida, variegata.
Boronia megastigma.	Statice fortunii.
Cupressus glauca.	" pteroclada.
" corneyana.	" incana hybrida.
" excelsa.	" saycheum.
" lindleyana.	Taxus baccata, elegantissima.
Coronilla glauca.	Thujopsis dolabrata.
" pentaphylla.	" lætvirens.
Epacris nivalis.	Widdringtonia cupressoides.
" impressa.	Chrysanthemum Alonzo.
Euonymus radicans, variegata.	" Finette.
Fitzroya patagonica.	" Mrs. W. H. Morgan.
Justicia carnea.	" ondine.
Juniperus macrocarpa.	" Rose pompone.
" turbinata.	" virginale.
" althea.	

Total species 76

Received from T. Lang and Co., Melbourne, 22nd April, 1875.

DONATION.

3 Cedrus deodara.	6 Picea balsamea.
3 " lebanii.	3 " pectinata.
3 Retinospora filifera.	3 " pinsapo.
2 " pisifera.	3 Thujopsis dolabrata.
3 " ericoides.	3 " lætvirens.
3 Araucaria imbricata.	6 Pinus laricio.
2 Taxus elegantissima.	6 Cryptomeria elegans.
10 Abies excelsa.	12 Pinus austriaca.
Total	71

ACCOUNTS OF BOTANIC GARDENS, from August, 1874, to September, 1875.

RECEIPTS.				EXPENDITURE.			
		£	s. d.			£	s. d.
Balance in hand, August 1874	...	207	13 6	Garden Work (including Keeper's salary and extra labour)	...	334	3 6
Vote by General Assembly for 1874-75	...	300	0 0	Purchase of Plants	...	66	15 6
Vote by Provincial Council of Wellington	...	300	0 0	Contracts for Fencing	...	120	2 3
Share of Rents from City Reserves	...	93	9 0	Contracts for Cutting Paths	...	29	4 4
Sale of Plants	...	37	10 0	Contracts for Digging Holes for Planting	...	57	15 7
Trespass	...	1	0 0	Contracts for Clearing Gorse, Cleaning Paths, Mowing Hay, and Under-brushing	...	29	10 0
				Miscellaneous Items, Freight, Cases, and Contingencies	...	58	17 0
				Balance	...	243	4 4
		£939	12 6			£939	12 6

Wellington, 11th October, 1875.

A. LUDLAM,
Treasurer.