

preserved, its destruction seems certain as the valley walls are very steep, and thus erosion would be inevitable once the natural covering suffered serious interference. The area has been visited by the President of the Botanical Society, Mr. Cooper, the Museum Botanist, and Mr. Jollie representing the Institute of Horticulture. All have written in to the Birkenhead Borough Council urging the importance of preserving this very beautiful remnant, which is, incidentally, not only a lovely area of bush, but a bird sanctuary as well.

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PROPAGATING OUR NATIVE PLANTS FROM SEED

by F. Jollie.

Most of our native seeds may be collected from January to April, and such a natural means of propagation is dependent upon the provision of the most suitable and natural seed bed that we are able to provide for any plant requiring specific treatment. If we always keep this before us, then raising our natives from seed is not really difficult. Artificial means of propagation can never totally exclude the means that nature has devised to reproduce her kind. We may hurry these requirements, or even change the kind of medium etc., but always we come back to realise the value of reproducing natural conditions to gain the best results. The importance of this consideration cannot be stressed too highly because there is bound up in such a theory, the elements of success as set over against poor results or perhaps failure.

It is possible to provide these natural conditions even under refined conditions, i.e., by sowing in pots or seed boxes, under glass, and in sheltered positions, and it is here that we triumph over nature, in that we obtain a higher germinating percentage than the chance conditions of nature.

At this stage of our talk then, let us consider the kinds of seeds we will have to deal with.

Types of seeds.

Large seeds like the Karaka (Corynocarpus lavigata) tend to lose their viability rather quickly, hence they should be sown soon after harvesting. The fleshy covering of the seed helps to insulate the seed against excessive drying out until the rains come, for you

will recall that Karaka berries are ripe in February, our hottest month, and though they will not germinate naturally until early Spring (unless sown artificially) they must be protected meantime from drying out. They may be successfully stored in slightly damp sawdust if they are to be held over until a more suitable sowing time. Tawa berries also should be treated similarly. Smaller seeds like Corokia, Hymenanchera and Pernettya, having a fleshy outer covering, should be soaked for several days in a jar of water until they ferment, when the water should be drained away and some sharp sand added. Macerate the berries well and then sow in the ordinary way. This will hasten the germination considerably, and they may be potted off, or lined out in the Spring to produce sizeable plants a year from seed sowing.

Most leguminous seeds should be soaked in very warm water for a few hours prior to sowing. This will considerably help forward germination. Clianthus (Kaka Beak) and Kowhai (Sophora tetraptera) are good examples of types which readily respond to this treatment. The Pittosporum group may be easily handled by first putting the capsules containing the seed into a flour bag with a good sprinkling of dry sand and then beating the bag with a heavy piece of wood until the capsules are thoroughly broken up. Sieve out the seeds and put them into an earthen or glass vessel containing neat Sulphuric acid. After ten minutes, remove the seeds and wash thoroughly, then sow. Pittosporums so treated will be germinated in three to four weeks instead of months.

Pohutukawa may be sown in boxes of light sandy soil or broadcast on clay banks where they will germinate quite freely. Pachystegia and similar seeds are best sown on end in sandy soil in a box, leaving the wisp of down projecting out of the soil. Protect from heavy rains. Most composites are best sown as soon as harvested, as they contain a natural volatile oil which dries the seed out very quickly. Most coniferous seeds should be sown as soon as they come out of the cone, as they too, dry out quickly.

Lacebarks if sown when ripe will germinate in a few days, so watch the trees closely in April and May, as the seed soon falls. Marsh plants, and those from alpine meadows, having very fine seeds, will often germinate more easily and with better results if sown on Spagnum moss under a sheet of glass. When the second leaf appears, put a very light dusting of sand just to firm up the little plants until they are large enough to handle some weeks later.

Seed Sowing mixture.

Use two parts soil sieved through $\frac{1}{4}$ " sieve, to 1 part leaf mould (Kie Kie leaf is good), and one part fresh water sand, to which should be added 1 oz. Superphosphate per bushel of mixture. If sowing in trays, put down a layer of leaf mould and then soil. Press the soil in firmly, and be sure the seed bed is level. Sow thinly and cover lightly with more sieved soil. Over the whole surface put a $\frac{1}{4}$ " light dressing of $\frac{1}{8}$ " grit siftings to prevent excessive drying out, slime formation and frost erosion. The seedlings will come up through this grit quite well. Place the boxes under a frame of light scrim or in a shady place where the boxes get a little morning sun. Very fine seeds do better if covered with a sheet of glass until germination. It is not necessary to have a glasshouse for such seed sowing, but protection with scrim or glass frame does certainly help and give a better percentage of germination.

NAME	SOW	HOW TREATED		
Corokia	May to July	Macerate berries with sand after soaking, and sown in pots or boxes with grit on top		
Hymenanchera				
Poro pora				
Rama-rama				
Supplejack				
Nikau				
Nothopanax				
Native passion				
Coprosma				
Titoki				
Fuchsia				
Puriri				Sow in Spring - soak first.
Kohe Kohe				Sow as soon as they fall off the tree.
Whau	April to May	Sow in sandy soil in pots or boxes in sheltered position.		
Hibiscus trionum diversifolius				
Hoheria	April to May	Soak in warm water.		
Native brooms	Spring			
Kaka Beak				
Kauri	April to May	Sow on harvesting in boxes or pots.		
Totara				
Kawaka etc.				

NAME	SOW	HOW TREATED
Pimelia	Autumn or	Sow in ordinary way.
Tainui	Spring	
Veronica (Hebe)		
Flax		
Arthropodium		
Libertia		
Manuka	Spring	
Rewa Rewa	Spring	
Karo (Pittosporum)		Soak cleaned seed in Sulphuric acid 10 minutes, then wash and sow.
Matipo etc.		
Pohutakawa	Autumn or	Sow in boxes or on clay banks. Sow in boxes, protect from weather until established.
Ratas etc.	Spring	
Pachystegia	Autumn	Sow seeds on end in very sandy soil immediately on harvesting. Sow on harvesting.
Celmisia		
Senecio		
Olearias		

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THE WAIPOUA KAURI FOREST OF NORTHERN NEW ZEALAND

by W. R. McGregor, 1948

Price 5/-. Abel Dykes Ltd. Auckland

Though some will not agree with all set down in his book, nevertheless Mr. McGregor is to be congratulated on presenting the case for a National Park of Kauri in such an attractive form. He speaks with conviction and his map and illustrations are excellent. The print is large and clear and the price of 5/- is surprisingly low, and readers are reminded that it is the only available work on the Kauri forest published in book form.

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