of the flora and vegetation of forests of the Canterbury Plains, cannot be overemphasized. Except for Riccarton Bush in Christchurch it contains almost the only living evidence for the species-composition of the once more extensive forests of the lower Plains. The species list shows a composition similar to that of Riccarton Bush, but less varied.

A few species (Myrsine divaricata, Pseudopanax anomalus, Clematis sp. cf. marata, C. foetida) do not occur at Riccarton Bush. No doubt many species had been lost from the Bush before 1977 but nevertheless a good impression of the original forest composition can be gained.

The illustration (Fig. 2) and historical accounts show that in the 1850s and 60s a tall forest was present, dominated by matai, kahikatea and probably totara, (Podocarpus totara). It is to be hoped that at least a small patch of such forest can be maintained at Arowhenua. The dedicated work of the South Canterbury Forest and Bird Society members in striving for this is outlined in the next article and is a fine example to us all.

PROGRESS ON RESTORATION OF AROWHENUA BUSH

FRASER ROSS

An area of about one hectare was fenced in 1981 and extensive planting, started in 1979, has been done within it, mainly of Hoheria, Plagianthus and some Pittosporum propagated from seed for this purpose. Growth has been slow but steady and some trees are now over 2m high. One kohuhu has seed capsules this year.

The two Podocarpus spicatus and one P. dacrydioides have responded very well since choking growth of Muehlenbeckia was removed. The matais are malformed and have had to be supported with posts, but they have been fruiting. This year one has about 40 drupes, the other 4. Last year 3 seeds germinated in the nursery and the seedlings are being carefully fostered. There are no male trees nearby so the pollen must come from

Waitohi (10 km away) or further afield. The kahikatea fruited well 2 years ago and again this year. I have about 200 young seedlings in the nursery and several seedlings which germinated naturally are growing under the parent tree. One, germinated in the summer of 1979/80, is now over 40 cm tall. Others have been transplanted from the nursery to the swampy central area and are growing well.

Since 1977, I have found an additional shrub species, Myrsine divaricata, (4 specimens, 1 lying prostrate). One has flowered but no fruit were produced so I am trying to propagate it by stem cuttings and aerial layering. Other species being propagated from seed in the Bush are:

Coprosma crassifolia, Podocarpus spicatus*, Sophora microphylla, Lophomyrtus obcordata, Melicope simplex* and Elaeocarpus hookerianus. Those marked * are also being propagated from cuttings, as are Pittosporum tenuifolium and Pseudopanax crassifolius.

We are contemplating, also, the planting of young Cordyline australis, Hebe salicifolia, Melicytus ramiflorus and Phormium tenax. All of these can be found growing naturally within 5km of the Bush. We have raised plants from nearby provenances. These species are almost certainly among those which originally grew in the Bush and it seems reasonable to reintroduce them.

Losses since 1977 have included the fallen lancewood and 4 of the 5 adult kohuhu; unfortunately one of them carried the only Tupeia antarctica specimen. The droughts of 1982 and 1983 were difficult to cope with, but most of the planted and natural trees survived. Intensive efforts to water the newly-planted young trees pulled most of them through. This year has been much better for rainfall. The weed problem (hawthorn and Muehlenbeckia mainly) is being tackled but still needs constant vigilance.

From a visual point of view the area is still in a very sorry and devastated condition. There is a lot more to be done and a long way to go before it starts resembling a piece of bush. However the start has been made and we feel that we are making good progress. Assistance and encouragement has been received from many sources, particularly local Department of Lands and Survey Staff.

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