

FLOWERING AND FRUITING OF SOUTHERN RATA (METROSIDEROS UMBELLATA)

M.J.A. Simpson

Surely the summer of 1979-80 has been the year of the rata (Metrosideros umbellata). Peter Wardle (1971) says of this species that while flowering occurs every year, in some years it can be concentrated into a few weeks and in others spread over several months. I don't know exactly when flowering started this year but in early December when visiting Stewart Island with Ian Tweedy's party of fellow Botanical Society members, the bright bursts of colour on headlands and elsewhere enlivened all our walks. In particular the small islets off the south coast of Ulva Is. were beautifully highlighted with trees in full bloom. Hugh Wilson tells me that there was still plenty of colour on Stewart Island in late March when trees at higher altitudes were at their best.

Rata is not common on the eastern foothills of the South Island but flowering trees delineated the rocky water courses through beech forest on the lower slopes of Mt. Hutt when I took a visitor from Kew to see alpine flowers there in January.

In February trees in the Lewis Pass area were flowering well as were those at St. Arnaud, Nelson Lakes National Park in late February. I was told that the yellow flowered form growing at Whisky Falls, Lake Rotoiti had flowered prolifically.

In late March stories of the spectacular flowering at Arthur's Pass inspired Janet Moss to arrange a visit there and we (Janet, Edith Shaw, Daphne Banks and M.J.A.B.) drove slowly from the top of the Pass to Otira and back savouring every kilometre. Trees at lower levels had practically finished flowering by then but those at mid-altitude and higher were still in full bloom and the hillsides were ablaze.

There were still occasional flowers to be seen on a return visit (13.5.1980) made to check on the progress of developing capsules and seeds. But the capsule set in fact had been very poor. On trees at lower levels a large proportion of immature whole fruits, with attached peduncles, had dropped off. In some inflorescences where three cymes had each borne three flowers, only one to two capsules still remained; others had none and most trees examined had a very sparse cover of still immature fruits. On trees at higher levels there was a good set of capsules with many inflorescences bearing six to nine fruits. However, when handled a large proportion of these capsules fell off easily and on inflorescences gathered for further examination most capsules separated from the twig in a short time. Whether this was due to lack of fertilisation or to a mechanism to divert energy to the remaining fruits is not known. I was reminded of a population of pohutukawa (Metrosideros excelsa) at Whale Bay, North Auckland where the whole of the season's crop (1977-8) of immature fruits was shed by mid-January.

The only older capsules on trees at Arthur's Pass were dry and open with all seeds shed. I think they were from the 1977-8 season. We have marked some trees and will watch the development

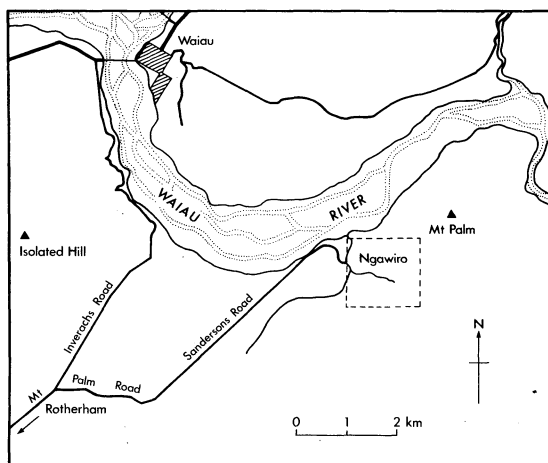
to ripening from this year's flowering. Seeds should be maturing from March to May 1981.

REFERENCE

- Wardle, P. 1971: Biological Flora of New Zealand.6.
Metrosideros umbellata Cav. [syn.
M. lucida (Forst.f.) A. Rich]
(Myrtaceae) Southern rata.

"NGAWIRO", WAIAU, NORTH CANTERBURY, 23.1.1980

M.J.A. Simpson, J.M. Macfarlane, B.H. Macmillan,
B.A. Matthews, J. Elix



Four of us, Bryony Macmillan, Barbara Matthews, Jack Elix and M.J.A.S., accepted an invitation to look at remnant indigenous vegetation in a short stream valley at "Ngawiro" the North Canterbury property of Mr. and Mrs. A.A. Macfarlane on the north end of the Lowry Peaks Range. On a lovely day in late January 1980, guided by Mrs. Macfarlane and accompanied by her granddaughter Jane Gerard, we made our way from the homestead at c. 400' up a boulder strewn stream (shown in Fig.1) to a height of c. 1000'. Mrs. Macfarlane told us that the name "Ngawiro" means "warm place", possibly referring to the burning of the original bush in pre-European times. Logs of Podocarpus totara have been found on nearby Mt. Palm (a shortened version of the original name, Mt. Palmerston). A swampy area on the property once supported white pine, Dacrycarpus dacrydioides, and in more recent times the valley we investigated was dominated by manuka, Leptospermum scoparium, until this was killed off with blight. Today the stream banks support scattered clumps of twiggy shrubs with occasional bushes of Olearia and small stands of Pseudopanax and kowhai, Sophora microphylla. Lianes and scrambling plants are common but ferns were surprisingly few. In the modified pasture on the surrounding slopes there are few native