

Cockayne's 'two Lucys' were of course Dr. Crenwell-Smith and Dr. L.B. Moore, both of whom have done much work and won much fame in the world of botany, as Cockayne in this same letter prophesied they would.

It was with some nostalgic expectation therefore that I recently attended the Cockayne Memorial Lecture at the Auckland Museum, which for this year 1965 was given by Dr. Moore. Nor was I disappointed. Miss Moore told the story of Cockayne's life and work from the double viewpoint of a personal friend and a fellow botanist. His unfolding interest in the ecological aspect of the local vegetation. His long and often arduous journeys in search of information and material. His brilliant perception of the facts of the case in a period when such things were largely shrouded in fog - a fog which Cockayne himself helped greatly to dispel. His voluminous correspondence and subsequent friendship with top flight botanists in Germany, Sweden and England. Their interest in and high opinion of his work. The honours conferred upon him. The many books, reports and papers he wrote, all of which remain classics to the present day. His financial independence, which enabled him to devote to botany the long hours which so many of us spend earning a living. His interest in and efforts toward the setting aside of suitable areas of mountain and forest as National Parks and Reserves. The Otari open air plant museum, which he founded and where he and Mrs. Cockayne are buried. His many colleagues, friends and helpers, both professional and amateur. People like H.H. Allan, T.F. Cheeseman, Diels, Engler, Goebel, M.C. Gude (until recently a member of this Society), Sir Arthur Hill, Jas. Hunter, Donald Petrie, Phillips Turner, Geo Simpson, Skottsberg, the 'two Lucys' and many others. I was particularly pleased to hear Dr. Moore mention the sustaining labours of Mrs. Cockayne, that self-effacing lady without whom I am sure the science of ecology would have been the poorer. The lecture was most interestingly illustrated by slides - old photos of Cockayne and his colleagues, letters manuscripts etc.

Cockayne's greatest monument is the 'Vegetation of N.Z.' but of almost equal importance are his State Forest Reports and his several papers on wild hybrids and form changes in juvenile and adult plants. E.D.H.

OLIVE AND SANDALWOOD - - - M.W. Crookes

The difficulty in plant identification comes when we meet plants much alike. It is easy to distinguish an adult kauri from an adult miro, but not so easy to distinguish the adult miro from an adult matai. Certainly the miro fruit is crimson and the matai fruit black, and male miro flowers are solitary whereas in the matai both male and female flowers are in spikes. But suppose your specimen has neither flowers nor fruit? You would then note that the matai leaves were glaucous (blue-green) below, while those of the miro were green. Of course if your matai is juvenile there is no worry for the juvenile matai with its long wavy, sparsely leaved branches with a collection of light green leaves at the tip is unmistakable. One is not surprised if closely allied plants are alike but is sometimes

confused by plants which are not closely related at all. This is particularly noticeable in connection with divaricating shrubs, but large leaved trees can also give trouble. Olea lanceolata and Mida salicifolia often give rise to argument on our excursions. It is comforting to know in this connection that O. lanceolata "probably first discovered by Allan Cunningham - was confounded by him with one of the species of his genus Mida". How then can one distinguish between these two smallish trees when both have adult foliage and lack flowers and fruit?

(1) Leaf arrangement. Olive leaves are always opposite. The leaves of Mida are characteristically alternate, though sometimes one comes across opposite pairs.

(2) Twigs and branchlets. The young branchlets of Olea lanceolata have a straight axis. In Mida salicifolia the axis is sometimes zigzag or wavy, the leaves emerging from the angles. The zigzag character is by no means invariable but is something to watch for. The bark of young branchlets in Olea lanceolata is light fawn, in Mida salicifolia it is green. If you look carefully at the M. salicifolia axis, you will note that a distinct ridge runs down it from the little cushion on which the petiole sits, giving the axis an angled appearance. This little ridge is quite visible to the naked eye and is lacking in Olea lanceolata.

(3) Leaves. The leaf texture of Mida is much thinner than that of Olea lanceolata and the surface is much shinier. (Even the under surface has a satiny sheen). Also the midrib is more prominent. You may test this by running the ball of your thumb across the leaf.

If our trees are in flower or fruit there is no trouble. In Olea lanceolata the stamens and pistils are on separate flowers, whereas in Mida salicifolia they are on the same flower. These latter flowers have little tufts of hair on the floral segments at the base of the stamens. In Mida salicifolia var. myrtifolia which the Society collected at Awhitu on 18 September these hairs were noticed to form a little fringe round the entrance to the flower. In Mida the ovary is inferior and we find a characteristic scar on the bright red fruit, formed by the remains of the floral receptacle. Olea lanceolata has no such scar and its ovary is superior. The fruit is red or orange-red.

We have 4 species of Olea in New Zealand, three of which grow about Auckland. There is the small-leaved olive (Olea montana which by the way is not a mountain plant), and O. lanceolata, both of which are common. O. cunninghamii the largest form, is less so. Intermediates are found between these last two species and Allan considers that they hybridise. All three species are endemic. Incidentally can anyone tell me anything about the grove of introduced olives (Olea europaea) that grow on the lower slopes of One Tree Hill near the hospital? Was the fruit ever used commercially? Our New Zealand sandalwood, Mida salicifolia and its variety, is also endemic and Allan thinks the two forms hybridise - at any rate intermediates are found.

If you are seeking popular names it is well to know that the name maire has been applied to Olea lanceolata, Olea cunninghamii and also Mida salicifolia. It is better then to call O. lanceolata white maire, O. cunninghamii black maire, and Mida New Zealand sandalwood. Thus you will avoid confusion. M.C.

AN UNEXPECTED FIND - - - M.W. Crookes

Recently Mr. A.D. Mead directed my attention to a pile of lopped-off branches in the vicinity of some trimmed pohutukawa trees. Blackberry was growing through the branches, but also one noticed a considerable wealth of ferns, I was not surprised to note such species as Cyclosorus penniger, Histiopteris incisa, Pteris scaberula and P. saxatilis, Cyathea dealbata and C. medullaris, Blechnum capense and B. filiforme, nor yet in the vicinity Polystichum richardii and Lastreopsis microsora. But what really did astonish me was to discover Athyrium australe and A. japonicum. These two species have not been to my knowledge reported previously from the Waitakeres, though Miss Kibblewhite once found A. australe on a stream bank in the vicinity of Woodhill, and A. japonicum has been reported from different places in Mt. Albert by both Katie Wood and Mr. W. Fisher. The two species of Athyrium I found were on the property of Mrs. Ussher on the Piha Road not far from the turnoff to the beach. They were certainly not in the sort of location I would have expected. I hope members will keep their eyes open for these two species and not fail to publish any of their discoveries in the Newsletter. M.C.
