CELMISIAS.

Celmisias are perennial herbs usually tufted or with short creeping rhizomes, rarely with a procumbent or suberect branched stem. Leaves all radical and regulate or cauline and densely imbricated, narrowed into a sheathing base, usually clothed beneath with a pressed white or buff tomentum. Scapes or peduncles long or short, rarely almost wanting, bracteate. Heads large, solitary, radiate. Ray florets female in a single row, ligulate (strap shaped). Disc florets numerous, hermophredite (with stamens and pistil in the same flower) tubular, five lobed.

The genus Celmisia is confined to New Zealand with the exception of one species found in Australia and Tasmania. It forms one of the chief ornaments of montane and alpine flora of New Zealand, the various species forming a large proportion of the vegetation especially in the South Island where the mountain slopes and valleys are often whitened for miles with the abundance of large daisy-like flowers. With few exceptions the species are difficult ofdiscrimination expecially C. C.coriacea, C.discolor, C.petiolata and C.spectabilis, all of which run into many forms. The specific characteristics are almost wholly founded on the vegetative organs. The size, shape and texture of the leaves, the nature of the tomentum, the difference of the leaf sheaths, and the peculiarities of the bracts are all of importance. These areaall variable characters and can only be safely used in combination.

Among Celmisias according to Dr Cockayne, hybridism is more extensive than in any other New Zealand genus. In the published list of hybrids, Cockayne and Allan list 33 groups which is a surprisingly large quantity. In the North Island they are not so common but in the South Island discrimination is very difficult.

Some of the species are of extreme beauty and have flowers of large size. According to Cheeseman up to 4 inches across, in C.hookeri and C.verbascifolia, C.holosericea and C.coriacea 3 inches or more. In C.coriacea the leaves may be 24 inches long and 3 inches wide. Imagine a beautiful rosette shaped plant with leaves of this size and 3 inch flowers or larger. C.incana is one of the most beautiful in spite of its small size and with its bright silvery leaves it can be seen on the slopes of Tongariro or Ruapehu mountains for incredible distances. Of the Tararua Celmisias, C.hieracifolia is the prettiest, although it is out-classed for size by many of the Sout Island species. In National Park district C.glandulosa can be found in bogs, on heaths, or mountain slopes and it has many sizes of leaf. Groups of very tiny plants can be found flowering in great profusion. This is true also of C.spectabilis and many others. The smallest of plants may be found on a neighbouring ridge growing very robustly, alike in everything but size. On a recent trip to Arthur's Pass district with Max Roberts, every ridge or gully held for me something new and del ..tful in the shape of Celmisias, at least a doz en new species being noted. In such a place one can spend hours of pure delight and excitement even if the weather conditions are not of the best.

In the garden at home when a different Celmisia has flowered four the first time the sunny hours on the snow topped mountains are recalled and a different pleasure is experienced. I have have at different times had flowering in the garden, plants of C.incana, spectabilis, bonplandi, gracilenta, verbascifolia, glandulosa , major, munroi, coriacea, petiolata, hieracifolia, var. oblonga, sessiliflora, sinclairii, lindsayi and several others, including hybrids. The easiest grown are perhaps C.spectabilis, gracilenta, mackaui, lindsayi, major, and sinclairii. As I have no rock garden or large garden I get best results in pots; some of the long floppy branched plants do not look well in pots and are better planted out. C.sinclairii and C.bonplandi are of this type. Some kinds such as C.holosericea are better divided up every second year at least. They have a tendency to grow up out of the ground and they perish readily in dry weather.

Although mountain plants for the most part, Celmisias can also be found at or near sea level. Cheeseman records from sea level C.lindsayi, holosericea, rigida, hookeri, mackaui, major, gracilenta, graminifolia, linearis and argentea on the mainland and three others from Stewart, Auckland and Campbell Islands.

Mr McKay at Otari has had seedlings of C.mackaui growing naturally as has Mrs Martin. This plant can be increased vegetatively by breaking off portions of a large plant and the same thing applies to C.lindsayi, sinclairii, spectabilis and glandulosa and probably some of the others as many of them branch profusely and others form mats such as C.argentea, laricifolia, sessiliflora and others. Moisture seems to be a necessity in the summer months for these plants and hosing has to be resorted to in the drier periods. C.ramulosa seems to be the only Celmisia which grows as a shrub although others are woody at the base. As mentioned at a previous meeting several species are well known as "fire weeds" and are increasing largely to the sorrow of the sheep farmer who would in many cases kill them out wholesale if possible in favour of gracing plants.

In my own garden I have growing more species of Celmisia than of any other genus and if I had to confine myself to growing one genus only there is no possible doubt as to what that genus would be.

A.D.Beddie.

WALLACEVILLE FIELD DAY.

The forethought displayed some 40 years ago by the late Dr Gilruth, has preserved for us a small remnant of the bush which once grew in that part of the Hutt Valley, and his appreciation of trees has made the Wallaceville Animal Research Station grounds a very pleasant place today. Besides the area of bush preserved there, many of the original totaras were left standing in the paddocks, and many exotics were planted as boundaries, and also around the caretaker's cottage. Dr Gilruth's wise discrimination has left for posterity a heritage both useful and interesting.

Members of the Society had the opportunity of visiting this locality on the 18th September and though heavy rains had fallen just before everyone managed the damp conditions easily. The party had mixed interests, but all found something worth while, the moss-gatherers, those seeking exotic conifers, and those interested in the lowland forest.

No stock is allowed to run in the bush area which is fenced off from the rest of the farm. Some exotics have crept in, the most troublesome being Berberis vulgaris. But lately the undergrowth has been coming away more rapidly and it may in time oust some of the intruders.

The dominant tree of the upper canopy is Nothofagus solandri. The very mixed middle canopy includes Pittosporum eugenioides, P.tenuifolium, Nothopanax arboreum, Suttonia salicina, Olearia rani, Myrtus bullata, Olea cunninghamii, and several species of Coprosma, the possible hybrids between the last mentioned giving much material for thought. Shaded by these shrubs are Asplenium of several species (one particularly fine specimen being seen with a close bulbiferum affinity), Pellaea rotundifolia, Polypodium diversifolium, Cardamine sp., Ranunculus hirtus, Dianella intermedia, and Lagenophora pumila. The mosses and liverworts were most attractive after the rain. It was amongst the green freshness of Trichocolea australis that the tiny Corysanthes triloba was seen, with its deep purple and green flowers quite hidden.

There were a few patches of young forest trees, Podocarpus totara, Beilschmidia tawa and matai. A very fine specimen of Olea cunninghamii near the old orchard was in full flower, as was also Paratrophis microphylla.

Throughout the bush there are occasional clumps of Eletranthe tetrapetala growing on Nothofagus solandri and they are a gay sight when in bloom during the summer. But just at this time of the year this mistletoe was seen at its best perhaps on a strange host, an exotic, Betula alba, a silver birch planted near the outskirts of the bush. The five green clumps of mistletoe showed clearly through the bare branches and appeared to be finding conditions there most suitable.

M.Sinclair.