

## THE HERBARIUM

by Mary C. Barker

Interest in the Natural Sciences in the past has been generally centred in museums and these still house the Herbaria of early botanists. Access to valuable collections such as these is normally limited as the specimens may be a hundred or more years old and deteriorate easily through frequent handling.

For the purpose of teaching and research, Universities have herbaria which cover some or all of the Phylla (plant divisions). The Herbarium of the Botany Department at the University of Canterbury has been concentrated upon the indigenous flora of New Zealand and it has been housed in the following order. According to H.H. Allan, 1961, Flora of New Zealand (dicotyledonae, gymnospermae, ferns) T.F. Cheeseman (monocotyledonae - with amended nomenclature), and G.O.K. Sainsbury, for mosses. We are working now on collections of cryptogamic and adventive plants. The Herbarium has been listed with the International Association For Plant Taxonomy at Utrecht, and the abbreviation CANU, has been accepted. We are fortunate to have collections of G.M. Thomson and R.M. Laing, there also being specimens from the herbaria of L. Cockayne, D. Petrie, T.F. Cheeseman and T. Kirk. While recently, many hundreds of specimens have been added by staff and senior students.

While trained botanists know the likely locality, usual habitat and nature of the plant when referring to herbarium specimens, the learner, seeing just a portion of the plant mounted on a sheet, may not know whether it is a tree or shrub, climber or prostrate, or in what locality or habitat it can be expected to be found. Therefore, field experience is essential for any person wishing to recognise native plants. In the field, I collect very sparingly, only doing so when a particular specimen is needed in the Herbarium, as I am acutely aware of the need to conserve our dwindling areas of native flora. When collecting it is wise to remove only a portion of a plant, flowers, and/or fruit being necessary for accurate determination in many species, the plant can then be left to grow on as undisturbed as possible.

Specimens are numbered and field notes taken giving brief details of - locality, habitat and date. An example is:-

Locality: Peel Forest, South Canterbury, N.Z.  
Habitat: beside stream  
Altitude: . . . . . Date: . . . . .  
Collectors name: it may be other than self.  
Determination: may be made by yet another person present at the time of collecting, or consulted later.

For the preparation of dried specimens, humidity must be considered. In the low humidity of Christchurch specimens may be left in presses indoors for two weeks or so - just opening and shifting the specimens around to facilitate evenness of drying. For drying, the specimens are placed between sheets of newspaper and pressed flat. Plant presses can be especially made for the purpose with straps or two pieces of flat board (core board is suitable) and pulled tight with twine. Slow drying usually retains the natural colour better and can be done in the sun. For more speedy drying the presses can be placed in a clothes drier for a few hours more. If the specimens are fleshy, then thorough drying with heat is required and frequent changes of paper.

Selected specimens can be mounted with P.V.C. glue on stiff paper, weighted while setting and kept in loose leaf folders. In our Herbarium, specimens are generally mounted on sheets of white cardboard, 17" x 10½", and are placed in folders according to purpose - such as teaching or reference, having family, genus, species and page number, in respective authority for easy access. In the past botanists listed their specimens in a rather cumbersome though impressive method of Orders and Classes. Generally, the current method in a simplified way, cites family, genus, species, variety and authority, such as - Scrophulariaceae Hebe salicifolia variety stricta (Benth.) Ckn. et Allan.

Indexing and detailing specimens is a continuing task in herbaria and now some of the larger herbaria overseas are being computerized and can supply information as to localities species and collectors. We are living in a fast moving age and while more or less fifty years ago, T.F. Cheeseman

and L. Cockayne could produce floras of New Zealand, it now takes a team of trained botanists, much assistance and co-operation and many years of work to produce a Flora covering the mass of facts provided by scientific study and research.

However, for the layman, there are excellent handbooks provided by National Parks Boards, there are books by early botanists and recent publications by eminent botanists today, are readily available.

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SOME MEMORIES OF BUSH RAMBLES IN THE NORTH ISLAND

by C.J. Callaghan

At Morere Hot Springs ( on the Gisborne road from Wairoa, H.B.) is a reserve in which two trees can be seen at their best. The kohekohe (*Dysoxylum spectabile*) has there the shelter and the shade to develop its leaf beauty. The large pinnate leaves are in three or four pairs, with a larger terminal one over six inches. They are of a rich glossy green, a delight to gaze at. In season the white cupped flowers hanging on the trunk and later, the clusters of orange berries give further pleasure. To add to the sub-tropical effect, the nikau (*Rhopalostylis sapida*) is abundant and equally lush in its growth. The gracefully spreading palm growth is its chief asset; but the straight smooth bole, pale green and picturesquely ringed with the scars of fallen branches, the long swelling sheaths of branches clasping the upper trunk and the clusters of red fruits hanging below them, add to its attraction.

Beside Lake Waikaremoana is another outstanding tree - the tawari (*Ixerba brexioides*). Its beauty is in its leaves - narrow, thick, glossy and toothed and slightly folded - and its clusters of white starry blossom. This tree is flat-topped, so that in thick bush on level ground, its show