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Colour photography by Keith Holmes

THUMB-NAIL OR TONGUE ORCHID

THE CULTIVATION OF QUEENSLAND ORCHIDS is given from page 18
QUEENSLAND WILDFLOWERS and their cultivation in YOUR GARDEN

The cultivation of AUSTRALIAN ORCHIDS in Queensland

CONTENTS OF THIS ISSUE

The principal theme of this issue is the cultivation of wildflowers in Queensland and the use of Queensland wildflowers in gardens in other States. Following issues will present the wildflowers of Tasmania, South Australia, N.S.W., W.A. and Victoria, possibly in that order. The eight issues of two years are bound and offered for sale as a book and as such are complete without it being necessary to have the preceding volumes to take full advantage of the information published. This issue is the first of Volume No. 5 and for those who would like to know what is in Volume No. 4, the index is on pages 23-26.

QUEENSLAND WILDFLOWERS

It would be impossible to present the flora of Queensland (or those species of horticultural value) in a small book. Previous issues have presented many hundreds of them and those described in this issue are:

- ACACIA—"Wattle Trees"—The Cultivation of Queensland Species of Acacia—page 15—44 species.
 BOTTLE TREE—*Brachychiton australe* and *B. rupestre*—page 14.
 DROSEREA—SUNDEWS—Growing *Drosera binata* and *D. pycnaea*—page 33.
 EUGENIA WILSONII—A very fine red "lily-pilly"—page 20.
 OREOCALLIS—QUEENSLAND WARATAH—The Genus, page 5; TREE WARATAH, page 4.
 QUEENSLAND NUTS, Macadamia—page 29. Fine trees with commercial value.
 RHAPHIDOPHORA PINNATUM—page 10. A climber of the rain forests.
 RHODODENDRON—Australia's only *Rhododendron*—page 48.
 ROCK GARDEN PLANTS—Fourteen small plants for a rock garden are described—page 13.
 SCAEVOLA TACCADA—A large bush from the north—page 12.

QUEENSLAND ORCHIDS

In this sphere Queensland surpasses all other States. The articles on three species of *Dendrobium* is the first in a series on all the Australian *Dendrobium* species.
 DENDROBIUM ORCHIDS—*D. cucumerinum*, *D. linguiforme* and *D. wassellii*—page 16, 18 & 19.
 PTEROSTYLIS IN BRISBANE—page 19.

OTHER AUSTRALIAN WILDFLOWERS

- ANNUALS—Blue flowered. *Brachycome*, *Trachymene*—page 9.
 EVERLASTINGS, *Helipterum manglesii*, *H. roseum*, *Helichrysum*—page 8.
 EUCALYPTUS CINEREA—A "gum" suitable for street planting or as a specimen—page 35.
 JACKSONIA—Yellow pea-flowered trees of W.A.—*Jacksonia floribunda*, *J. furcellata*, *J. lehmannii*—page 47.
 SCAEVOLA AEMULA—A wildflower of Victoria that has proven itself in gardens—page 11.
 STURT'S DESERT PEA—page 9.

GROWING WILDFLOWERS

This is the principal objective of this publication. All articles have a section on the cultivation of the plants described. Of particular interest are the following articles:
 GROWING WILDFLOWERS IN QUEENSLAND—page 3.
 PHYSIOLOGY OR IRON CHLOROSIS—page 27. A serious problem in the establishment of many wildflowers appears to be iron chlorosis as mentioned on page 4 on *Oreocallis*.

PROPAGATION OF WILDFLOWERS

Although nurserymen specialising in the supply of wildflowers are listed readers are urged to try propagation of their own plants. Many are quite easy. Advice on propagation is given in the articles for the species described there but special articles for your advice are:
 PROPAGATION OF NATIVE PLANTS—page 21.
 WILDFLOWERS FROM SEED—page 7.

Dendrobium linguiforme

(Cover Plate)

by Keith Holmes, Kempsey, N.S.W.

The plant of *Dendrobium linguiforme* shown on the front cover was fastened with fencing staples to the bark of a "Small Leaved Fig", *Ficus eugenioides*, over twenty years ago. The original plant consisted of two stems with a dozen or so leaves. Today the plant covers over ten square feet of the fig tree and in early November is covered with hundreds of feather-like sprays of fragrant flowers.

This species of fig has proved a good host for many species of *Dendrobium*, particularly *D. speciosum* var. *hillii* and var. *gracillimum*, *D. gracilicaule*, *D. pugioniforme*, *D. teretifolium* and *D. aemulum*.

For further details on *Dendrobium* turn to page 16.

AUSTRALIAN ORCHID PHOTOGRAPHERS

It seems a tragedy but Alice Dockrill's book "Australian Orchids" due to be released next year will not be adequately illustrated in colour because I cannot get suitable colour slides. Please photograph rare orchids at every opportunity. There must be some good slides if the owners would only stand by us. The next article in the series on *Dendrobium* will describe and illustrate the section *Lataurea* containing *Dendrobium batrdianum* and *D. bifalce*. Please forward slides of these—Editor.

GROWING WILDFLOWERS

IN QUEENSLAND by *David Hockings*

Queensland broadly speaking, has 3 wet Coastal belts (1) The Border to Noosa; (2) Mackay, Proserpine and (3) Innisfail, Cairns. There are also two dry Coastal sections, (1) around Rockhampton and (2) around Townsville. There are the Coastal Ranges and the Great Dividing Range and then there is the Inland, west of the Divide, which can of course be further divided into several Sections.

On the coast the soils vary from deep sands through gravels and gravelly clays to shallow soil overlying heavy clay and to low-lying poorly aerated soils subject to waterlogging. There are areas of red soil on the ranges and Coastal hills and where these drain freely they are ideal for a large range of native plants.

The inland soils range from heavy clays such as the black soil plains to deep sands and here and there the old eroded remnants of hills or ranges that are mostly sandstone or ironstone gravel.

The Coastal soils are mainly acid in reaction. The limiting factors to cultivating native plants seem to be mainly physical, in other words drainage or aeration. The high humidity however limits some of the species from low rainfall areas, particularly the low rainfall parts of West Australia. Possibly the reason some of these plants are so susceptible to foliage diseases here in our hot wet summer is due to the fact that they are normally dry in summer. These plants, the flowering gums, *Verticordias*, some of the *Melaleucas* and so on, also suffer on the ranges and Coastal hills for the same reason—high rainfall and humidity.

West of the Divide you find the heavy soils are mainly alkaline, the sands along the waterways may also be alkaline because of the high lime content of the water. The cypress sand ridges and gravel ridges are mainly acid to strongly acid. These gravel ridges carry a wealth of top quality flowering shrubs as do some of the sandy areas.

Unfortunately though understandably the human population dwells mostly on the heavy soils because of their greater fertility and productivity both agriculturally and pastorally. From a gardening point of view these soils pose several problems. Firstly they are alkaline and the majority of our shrubs prefer acid soil conditions. There appears to be more scope or more tolerance to alkalinity amongst trees such as some of the flowering eucalypts. Secondly, the physical conditions of these heavy clays are very hard on plant life. They are extremely wet in the wet season, extremely dry in the dry with periodic droughts and dryness may be accompanied by deep and extensive cracking. A third factor is the temperature range, high summer temperatures and very low humidity and yet heavy frosts in winter. Many of our Coastal plants are quite useless west of the Divide even though some of them survive Coastal frosts reasonably well.

If you look at a temperature graph you will see that coastal frosts here are of short duration—the temperature drops down to freezing and quickly back up again. Inland the temperature may drop below freezing at 9 or 10 at night and stay below freezing until daybreak. It is the duration of the frost that does the damage. In spite of this where soil conditions west of the Divide suit the plants there has been a greater measure of success with a

TREE WARATAH

OREOCALLIS IN SYDNEY by H. M. Hewett, Plant Recording Officer, N.S.W. Region

Both *Oreocallis wickhamii* and *O. pinnatum* have been grown to a limited extent in Sydney where they form small trees up to 25 ft in height with dense crowns of attractive foliage. During the flowering period of late spring to mid-summer when they adorn themselves with masses of brilliant crimson terminal "Spider" flowers, like giant blossoms of *Grevillea punicea* they are truly magnificent and fully justify the colloquial name of "tree Waratah".

The best example of *Oreocallis wickhamii* with which I am acquainted has been grown in the Sydney Royal Botanic Gardens. It is approximately sixteen years old and grows in a sunny and relatively protected area in a soil of sandstone parentage enriched by application of humus, although no



Photography by M. Hodge

OREOCALLIS PINNATUM

Above are the flower heads characteristic of *Oreocallis* and opposite is a specimen tree in full flower. The main superficial difference between the two species is in the leaf shape. Both species show a tendency to iron chlorosis in the early stages and for this reason an article "Physiology of Iron Chlorosis" is included on page 27.

(Continued on page 36)

