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RP 18

Research Paper No. 18

1975

FORESTS DEPARTMENT
OF WESTERN AUSTRALIA
54 BARRACK ST., PERTH

DUPLICATE

**THE WILDFLOWER
INDUSTRY IN
WESTERN AUSTRALIA**

by

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SUMMARY

Investigation of the illegal picking and sale of wildflowers was initiated in 1971 and 1972 to assess the validity of press and other public fears for a diminishing wildflower resource in Western Australia.

The study produced an improved understanding of the industry associated with native plants, and showed that little damage was caused on State Forest or other Crown lands by commercial or tourist wildflower picking.

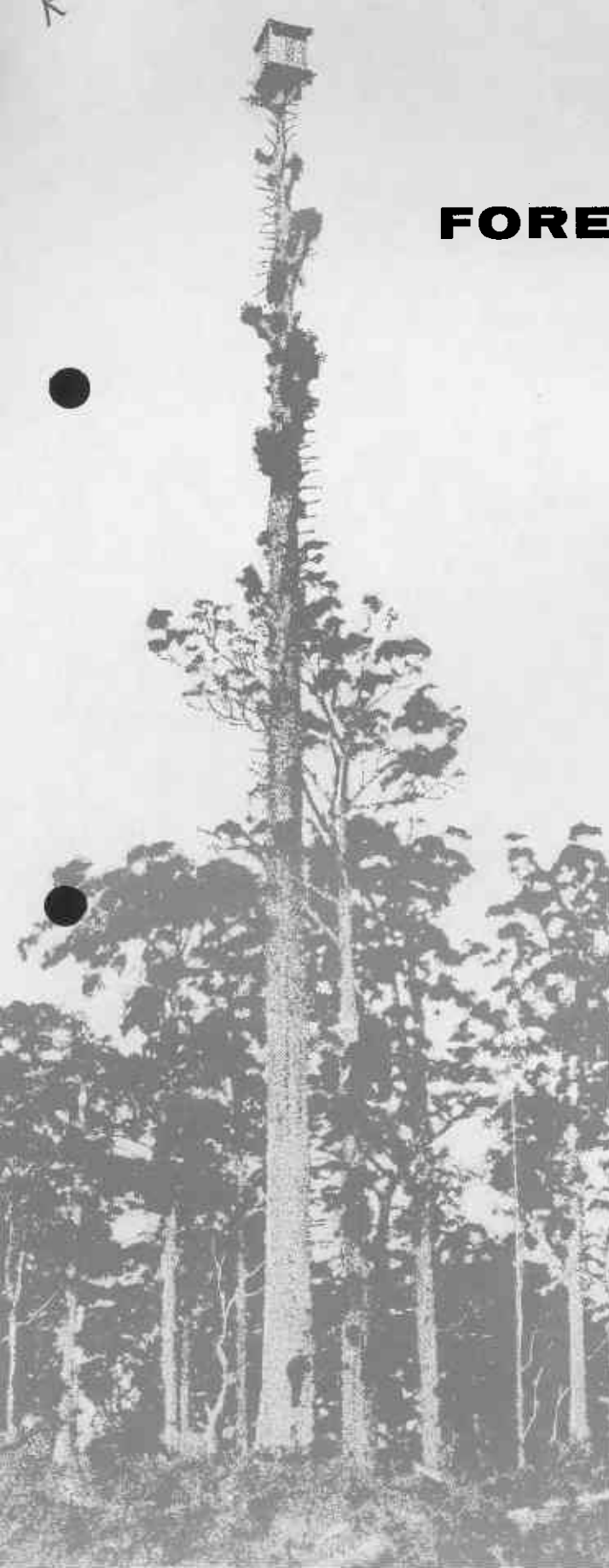
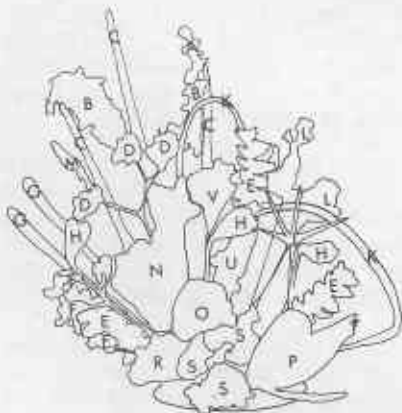




FIGURE 1
An arrangement of dry wildflowers



- | | | | |
|----|--|---|----------------------|
| A. | <i>Dryandra polycephala</i> | - | many-headed dryandra |
| B. | <i>Conospermum incurvum</i> | - | plume smokebush |
| C. | <i>Xanthorrhoea gracilis</i> | - | graceful grass tree |
| D. | <i>Macropidium fuliginosa</i> | - | black kangaroo paw |
| E. | <i>Banksia grandis</i> | - | bull banksia |
| F. | <i>Anigozanthos pulcherrimus</i> | - | golden kangaroo paw |
| G. | <i>Adenanthos obovatus</i> | - | basket flower |
| H. | <i>Kingia australis</i> | - | black gin |
| J. | <i>Leucopogon verticillatus</i> | - | tassel flower |
| K. | <i>Macrozamia riedlei</i> | - | zamia palm |
| L. | <i>Stirlingia latifolia</i> | - | blueboy |
| M. | <i>Lachnostachys verbascifolia</i> | - | lamb's tails |
| N. | <i>Dryandra nivea</i> | - | couch honeypot |
| O. | <i>Banksia coccinea</i> | - | scarlet banksia |
| P. | <i>Banksia prionotes</i> | - | orange banksia |
| R. | <i>Verticordia brownii</i> | - | common cauliflower |
| S. | <i>Helichrysum, Helipterum</i>
and <i>Waitzia</i> species | - | everlastings |
| U. | <i>Lachnostachys eriobotrya</i> | - | lambs' tails |
| V. | <i>Verticordia nitens</i> | - | yellow morrison |

INTRODUCTION

Much has been spoken and written about the loss of Western Australian wildflowers over the years, and the following review of some of the commercial activity based on our unique flora arose from an investigation undertaken in 1971-72.

The blame for the alleged loss of wildflowers has been levelled variously at bushfires, farm clearing, commercial picking and the activity of government organisations such as the State Electricity Commission and the Postmaster General's Department. Rarely has there been any evidence or documentation of the comments made, and, in the majority of cases, respondents have relied upon their 'vivid' memories of past wildflower displays.

The Forests Department of Western Australia has been responsible for administration of the Native Flora Protection Act from the time of its proclamation in 1935. In 1974, new legislation, to be administered by the Department of Fisheries and Wildlife, was drafted; but this has yet to be enacted. During the administration by the Forests Department, special grants have been made each year for the purchase and display of wildflower notices, and in recent years this amount was increased to \$1000 per year. The signs produced were distributed gratis for use by local authorities, who were given complete freedom to choose the most suitable location for them. As a point of interest, the signs were deliberately constructed of the same shape and size as the fire prevention notices provided by the Bush Fires Board.

The suggested use of the same supporting posts and location — for bushfire signs in summer, and wildflower notices in winter and spring — was rarely adopted by the local authorities. Nevertheless, over 700 signs had been distributed to June 1974, and the 100 or so that were used as intended, and that were positioned somewhere near a patch of wildflowers, did help to increase public awareness of the flora.

In order to test the validity of at least some of the fears held by environmental groups, the Department investigated the collection and sale of flora in the south-west of Western Australia in 1971 and 1972, with particular emphasis on State Forests and Flora Reserves.

LEGISLATION

The Native Flora Protection Act, 1935-38, contains a number of definitions, of which the following are of particular interest.

' "Native plant" means any tree, shrub, fern, creeper, vine, palm or plant indigenous to Western Australia and not growing under cultivation.'

' "Protected wildflower" or "Protected native plant" means any wildflower or native plant which has been notified pursuant to this Act by the Governor to be a wildflower or native plant protected under this Act.'

' "Wildflower" means the flower of any native plant.'

Likewise, the Forests Act, 1918-74, defines a number of terms, which include the following.

' "Forest produce" means and includes trees, timber, firewood, piles, pole wood, wattles, branchwood, slabs, chips, sawdust, plants, grass, reeds, rushes, bedding, creepers, fibres, leaves, moss, flowers, seeds, ferns, blackboys, grass trees, roots, bulbs, galls, bark, gum, kino, resin, sap and charcoal; and in any State forest or timber reserve also includes stones, and earth . . . , shells, indigenous animals and birds . . . , honey and bees-wax.'

Section 7(2): 'The department [Forests] shall have the exclusive control and management of —

. . . (b) all State forests and timber reserves, and the forest produce of other Crown lands.'

It will be seen, therefore, that, for Crown lands, State Forests and timber reserves, all that is included as native plants, protected wildflowers, or wildflowers is a form of forest produce. This is of particular importance when considering the wide range of plant pieces that comprise the so-called 'wildflower industry'.

THE WILDFLOWER INDUSTRY

The study commenced in mid 1971 and incorporated:

1. A study of available records and files.
2. Interviews with commercial wildflower operatives.
3. Inspection of wildflower areas during the spring season.
4. Limited investigation of retail sales for processed wildflower material.

There are two principal categories of permit to pick wildflowers that are issued: Scientific and Commercial. Permits to pick wildflowers for scientific or other purposes are issued in the name of the Minister of Forests under the terms of the Native Flora Protection Act. They have been issued to a relatively limited range of people, and the majority are for botanical collections or for 'bus botanists' on the spring wildflower tours. Although the conditions of issue vary, they generally restrict picking to one or two specimens of each species, and are usually issued for a maximum period of six months.

Commercial pickers have a licence issued for forest produce under the terms of the Forests Act, 1918-74. This latter procedure has the advantage of confining pickers to State Forest, timber reserves and Crown lands, and of requiring the operator or licensee to submit detailed returns for all plant material collected.

Discussions with commercial wildflower pickers and processors led to further interviews with those operating on private land, and also provided information about the wide variety of plant material for which there is a commercial outlet.

Fresh-Cut Flowers

A few species are used as fresh flowers, either as monospecific bunches such as red kangaroo paw (*Anigozanthos manglesii* D. Don.) and brown boronia (*Boronia megastigma* Nees.), or as mixtures with or without the addition of cultivated flowers. Examples of this latter group are smoke bush (*Conospermum triplinervium* R.Br. and *Conospermum incurvum* Lindl.), banjine (*Pimelea spectabilis* (Fisch. & Mey.) Lindl.), and yellow morrison (*Verticordia nitens* (Lindl.) Schau.).

Nearly all the reports about large-scale picking of fresh wildflowers are received during the spring season and fall into three broad categories:

1. Street sales in the Perth Metropolitan Area.
2. Wildflower bus tourists arriving back in Perth laden with fresh flowers, mainly kangaroo paws.
3. Airline passengers departing from Guildford Terminal with sheaves of fresh wildflowers.

These activities have been investigated as a routine part of the administration of the Flora Protection Act, and when specific complaints have been made to the Department.

In most seasons, street sales are limited to one or two operators whose source of flowers is private land, and whose kangaroo paws are picked within 15 kilometres of the city. Many of the wildflower tours have their last stop on the return journey in the sand plain areas between Perth and Geraldton. At some of these stops, a meal or cup of tea is served by district organisations, who also sell freshly-cut wildflowers from their own farms. The airline passengers do often carry a sheaf of wildflowers, which almost invariably is purchased from city or suburban florists.

Dry Wildflowers

A much wider range of species, many of which have little demand as fresh flowers, is used in this category. They are species that have good lasting qualities when carefully handled in the dry state, or which respond to special treatment such as soaking in glycerin, spray-painting or manual re-shaping. All are used in one of the dry floral art forms, which include framed flower pictures, large fixed floral decor, and the more delicate Japanese 'Ikebana'.

Woody fruits, stems and foliage also play an important role in dry flower arrangements, examples being the seed vessel of *Banksia baxteri* R.Br., the seeds of the zamia palm (*Macrozamia riedlei* (Gaud.) C.A. Gardn.) and the open vessels of several species of *Hakea* and native pear (*Xylomelum angustifolium* Kippist.). The harvesting of these pieces need not be destructive but will depend on the picker involved.

Some foliage has uses for both floral art work and for the creation of simple garden shade, yet it would appear that the former is regarded as wildflower picking, the latter as a logical use of otherwise useless material. The species used here include the fronds of bracken fern (*Pteridium esculentum* (Forst. f.)), zamia palm and blackboy (*Xanthorrhoea preissii* Endl.).

Other leaves of value for floral art come from bull banksia (*Banksia grandis* Willd.), curly hakea (*Hakea conchifolia* Hook.) and the grass tree (*Kingia australis* R.Br.). The grass tree is of special interest because its use involves careful removal of the complete leaf and leaf base, the white, spade-like base forming the petals of an artificial flower. The process is highly destructive, because the whole plant must be decapitated to provide the material in a usable form.

Altogether, some thirty or more species have a commercial use, and the most important include:

- red kangaroo paw
- golden dryandra (*Dryandra polycephala* Benth.)
- Albany dryandra (*Dryandra formosa* R.Br.)
- bull banksia
- scarlet banksia (*Banksia coccinea* R.Br.)
- curly hakea
- grass tree
- white ti-tree (*Leptospermum* spp.)
- smoke bush
- yellow morrison
- broad leaf stirlingia (*Stirlingia latifolia* (R.Br.) Stend.).

From this list, only broad leaf stirlingia, red kangaroo paw, bull banksia, white ti-tree, yellow morrison and smoke bush occur extensively within lands controlled by the Forests Department. Some of the others may occur sporadically in State Forest, but the picking of those species is entirely on private land.

Seeds and Whole Plants

The wildflower seed industry, although a considerable earner of export income, is not within the scope of this paper, and warrants a study of its own. However, the trade on whole plants is of interest, both as a commercial enterprise in its own right and because it probably operates beyond the powers of the Act, in that such action does not 'lead to the ultimate destruction of the plant'.

Blackboys established in fuel drums are sold in Perth at prices between \$8 and \$10 each. A market for complete plants of the Albany pitcher plant (*Cephalotus follicularis* Labill.) has been reported, although no real evidence of this was found during the study.

Structure of the Industry

The structure of the industry based on our wildflowers is complex because it involves a relatively large number of part-time workers, a few fully-commercial handlers, and miscellaneous retail outlets. There is no trade association, and most of the work is seasonal. Individuals may merely pick one species for one client, while others will pick, dry, process, make the floral arrangement and carry out retail sales. The people interviewed during the study were generally co-operative and had strong views about conserving the resources on which their business is so dependent. There was some reluctance to reveal details of private sources of supply, for fear of competitive bidding in future seasons. The evidence suggests that not only is most picking carried out on private land, but in many cases the plants respond to careful harvesting. The golden dryandra is an excellent example of this, and responds to pruning in much the same way as do many garden plants.

Many of the private picking areas are close to State Forest or other Crown lands. Some species in demand occur on Crown land, while others have potential for introduction to Crown land. Any plans for long-term management of the flora should consider the deliberate introduction of valuable species on to suitable sites in Crown land or other areas where tenure of the land is secure from a wildflower viewpoint. With other commercial species, management could be achieved by manipulation of a fire regime to produce insect-free leaves (bull banksia) or by selective thinning of dense patches (grass tree). In other places, clearing and burning for pine plantations tends to promote development of broad leaf stilingia and red kangaroo paw, neither of which will persist under pine canopy but which could be heavily picked for the first few years after planting of the pine forest.

Economic Considerations

An evaluation of the returns from commercial wildflower activity in Western Australia can be made in approximate terms only. The usual arguments advanced in favour of mining in State Forests consider only the royalty values for timber destroyed, even though there is a very great difference between royalty and retail value of dry, dressed timber. Similarly, there is a big difference between royalties paid for wildflowers and their final retail price. It has been mentioned that people in the wildflower trade may operate at one or more stages in the productive process, but all methods involve multiple handling with added costs at each stage.

Data from seven of the relatively large operators in 1972 showed a turnover in excess of \$170 000 per annum, excluding fresh-cut boronia, the boronia perfume agencies and some large, framed-flower-picture dealers. It is considered that a retail value of \$250 000 a year would be a reasonable estimate of business activity. Furthermore, with the development of new techniques in presentation, and testing of species not previously tried, there is potential for rapid growth.

The above statement, while it may alarm some of the conservationists, should be viewed in the correct perspective. It has been shown that most flowers are picked on private land, that many species can be managed for greater production, and that people in the industry are, understandably, very keen to conserve the source of their income. It is also pertinent to remember that in excess of four million hectares of Crown lands were released for agricultural clearing in the decade 1958-68, and there can be no doubt whatsoever that agricultural clearing materially decreases the State's wildflower resources.

These factors, coupled with the knowledge that more brown boronia is picked in Victoria than in Western Australia and that the world's best source of our wildflower seed is New Zealand, suggest that failure to promote and use our unique flora could lead to them becoming more important in other parts of the world than they are in Western Australia.