

**DEPARTMENT OF
CONSERVATION AND
LAND MANAGEMENT**

**BAN ON COMMERCIAL
HARVESTING OF
VERTICORDIA ERIOCEPHALA
(CAULIFLOWER BUSH)**

Commercial harvesting of flowers of *Verticordia eriocephala*, also known as cauliflower bush or "brownii" will cease on Crown land from 1 November 1994 as a result of impacts of commercial picking that threaten wild populations.

The decision to ban commercial harvesting of *V. eriocephala* from Crown land was taken in response to research that has demonstrated the species cannot be picked sustainably. The proposal has been supported by the WA Flora Industry Advisory Committee and endorsed by the Minister for the Environment.

For further information, please contact Dr Ken Atkins (Senior Botanist) on (09) 334 0425.

METHODOLOGY

Conservation Status

To ascertain the conservation status of *V. eriocephala* surveys of the known range of the species between Perenjori and Esperance were made. Particular attention was given to soil types and vegetation types which the species was known to favour and to areas where the species could be expected to be protected (e.g. conservation estate). In addition, populations recorded from specimens lodged in the WA Herbarium and by Muir's surveys of wheatbelt nature reserves (1977-1982) were revisited and their current status determined.

RESULTS

Figure __ shows a schematic representation of the major routes traversed to assess the conservation status of *V. eriocephala*. Appendix __ gives details of populations of *V. eriocephala* found during current surveys. Appendix __ gives details of sites recorded by Muir (1977-1982) during his survey of wheatbelt nature reserves. Appendix __ gives details of specimens recorded in the WA Herbarium specimen database.

The current survey made it apparent that many of the sites recorded in WAHERB no longer exist. Much of the area of the wheatbelt has been cleared for agriculture, and the soils on which *V. eriocephala* occurs, because of their loam content, have been intensively farmed. In many places, remnant *V. eriocephala* plants along roadsides made it possible to estimate the extent of the previous habitat and its loss.

In addition, many populations on nature reserves had been illegally harvested, eroding the value of these areas for conservation. This problem was particularly prevalent in the northern and central-western parts of the Wheatbelt.

For example, in CALM's Moora District, which extends from Dongara to Three Springs and south to Calingiri (see Figure __), *V. eriocephala* was recorded on the following areas of Crown land:

Depot Hill Nature Reserve

- Wotto Nature Reserve
- vacant Crown land near Timuka Spring (Three Springs)
- Meenar Nature Reserve
- Pinjarrega Nature Reserve
- Watheroo National Park
- Bryant Park (Shire Reserve, Moora)

Of these sites, only the vacant Crown land was legally available for harvesting (prior to the 1994 ban on the commercial harvesting of the species on Crown land). However, all the other reserves had been illegally harvested, some to the extent of significantly changing the structure of the vegetation (Depot Hill Nature Reserve) by killing most of the previously

dominant *V. eriocephala*. Illegal harvesting was also common on roadside vegetation.

DEPARTMENT OF CONSERVATION AND LAND MANAGEMENT

Wildlife Branch

To: Nigel Higgs
Corporate Relations

Your Ref:

Our Ref:

Enquiries: Sarah McEvoy

Phone: 334 0431

**Subject: Press Releases for *Verticordia eriocephala* and
Ti-tree species, *Kunzea ericifolia* and *Melaleuca viminea***

Please find enclosed copies of papers for the subject species which were prepared for the WA Flora Industry Advisory Committee and summary sheets prepared for Corporate Executive.

The recommendations to ban the harvesting of flowering material of *Verticordia eriocephala* and beansticks of *Melaleuca viminea* and *Kunzea ericifolia* were made at a WAFIAC meeting (comprising representatives of industry) on 9 June 1994 and these recommendations were accepted by Corporate Executive on 11 July 1994. A submission is currently being prepared for the Minister.

I believe that a positive slant could be put on the bans and have included some notes below which may assist in this regard.

Industry, through the WA Flora Industry Advisory Committee, has recognised the need to ensure long term conservation of these species by recommending the banning of harvesting of the species from Crown land. Other management measures were also proposed.

For the ti-tree species CALM's Vegetation and Tree Planting Advisory Service is investigating the use of alternative species for plantations which may provide a landcare benefit as well as alleviating pressure on wild populations of ti-tree. In addition, CALM will be liaising with the Fisheries Department and market garden industry to ensure the protection of *Melaleuca viminea* and *Kunzea ericifolia* from illegal harvesting.

CALM is assisting private property owners who have stands of *Verticordia eriocephala* through the provision of advice on sustainable management of the populations. The Department of Agriculture is researching cultivation of the species, particularly its establishment and nutritional requirements, and in the development of alternative products for the industry. CALM also hopes that the smoke testing technique pioneered by Dr Kingsley Dixon of Kings Park and Botanic Garden may be used to rehabilitate areas of high conservation value where *Verticordia eriocephala* previously grew in profusion.

I hope the above may be of assistance to you.

Sarah McEvoy
BOTANIST (FLORA INDUSTRY)

20 July 1994

**NOTICE TO ALL COMMERCIAL PURPOSES
FLORA LICENCE HOLDERS**

New Commercial Purposes Licence Conditions

Please find enclosed a new set of licence conditions for your Commercial Purposes Licence. These replace the existing licence conditions.

These licence conditions have changed considerably from previous conditions. You will need to read these and familiarise yourself with the requirements of your licence under the Wildlife Conservation Act and Regulations. Please destroy your previous licence conditions and replace them with the licence conditions dated 8 September 1994. The new licence conditions will come into effect immediately upon receipt of this letter.

Syd Shea
EXECUTIVE DIRECTOR

14 September 1994

Commercial harvesting of flowers of the cauliflower bush on Crown land will be banned as part of a conservation strategy for the native plant.

Environment Minister Kevin Minson today said the ban was imposed on the recommendation of the Department of Conservation and Land Management and was supported by the Western Australian Flora Industry Advisory Committee.

Cauliflower bush - *Verticordia eriocephala* - has a wide range in the Wheatbelt, from Coorow to Esperance. The species usually grows in heathlands but its habitat is now limited as a result of land clearing for agriculture, and sand and gravel mining.

The common name derives from the tight arrangement of flowers in a dense flower head that resembles a cauliflower. It is this feature that makes it an attractive flower for display, and has led to its exploitation by wildflower pickers.

Research has shown that harvesting flowering stems kills many of the picked plants and results in much fewer seeds being stored in the soil. The species is killed by fire and depends on this seed store to regenerate after fires.

Mr Minson said commercial harvesting from Crown land posed a direct threat of extinction of the species in the wild.

The Departments of Conservation and Land Management and Agriculture were advising private property owners with stands of cauliflower bush on the sustainable management of the species.

The Agriculture Department was researching cultivating techniques, particularly plant establishment and nutrition to assist land owners who might wish to grow the species for flower production.

CALM also was looking at ways of rehabilitating areas of high conservation value where cauliflower bush was once prolific.

"The decision to ban commercial harvesting will have minimal effect on the wildflower industry as the majority of harvesting is now on private land," Mr Minson said.

"The Government has a responsibility to ensure that the wildflower industry develops on a sustainable basis and on-going research by CALM and the Agriculture Department will help pickers and producers to achieve this."

The Western Australian Flora Industry Advisory Committee comprises representatives of the industry, conservation interests and Government agencies and provides advice to the Minister on commercial flora harvesting in Western Australia.

Media contact: Diana Callander 222 9595 or 321 2222

CULTIVATION OF *VERTICORDIA ERIOCEPHALA*

Establishment Trial

A trial planting has been established on Australian Wax Farms at Great Northern Highway in Muchea. This site is close to the natural range of the species, although it does not occur at the site. The soils are lighter than those in which *V. eriocephala* naturally occurs, with a larger proportion of sand. The groundwater level is also higher at the trial site than in natural populations. The climate is similar, although the winters are milder and the summers more influenced by the proximity of the coast. The plot has been established within wind breaks of mature Geraldton Wax plants and thus is well protected.

Plants were supplied by Brian Jack, who has grown them from cuttings taken from healthy stock plants. The trial will determine the best method to use for minimum plant losses at establishment for *V. eriocephala*. The trial has been planned as a factorial experiment with three (?) replicates, each of 50? plants. All replicates have a mulch of jarrah bark and are trickle irrigated. Comparisons will be made between:

- Rates of fertiliser application
- Different trace elements
- Different proportions of nitrogen, phosphorus and potassium
- Rates of irrigation

Nutrition

A factorial pot trial will be established in September 1994 to investigate the nutritional requirements of *V. eriocephala*. ___ plants per treatment and ___ levels of nitrogen, phosphorus and potassium with and without trace elements.

Regular measurements will include:

- plant height
- leaf tissue analysis
- plant health, using a rating scale of 0-5 (0 - dead, 5 - excellent)
- any particular symptoms (e.g. chlorosis)

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Verticordia eriocephala

A number of studies have been carried out on *Verticordia eriocephala*, known as cauliflower bush or "brownii", as a result of concerns about the impact of commercial harvesting on wild populations.

Research has shown that harvesting of *V. eriocephala* causes the death of a large proportion of plants harvested, as a consequence of their poor reshooting capacity. Harvesting of flowering stems from populations also reduces future seed production leading to a depletion of the seed store in the soil. *V. eriocephala* is dependent on soil-stored seed to regenerate, particularly after a fire. During surveys, very little regeneration was found, even in areas previously burnt.

If the current decline in health of natural populations continues, the species will be threatened with extinction in the wild in the long term. The operation of bush picking has contributed greatly to this situation.

The proposal to ban commercial harvesting of *V. eriocephala* from Crown land was discussed by the WA Flora Industry Advisory Committee, comprised of representatives of industry, government and conservation interests at its 9 June 1994 meeting. This Committee supported the proposal to ban Crown land harvesting of flowering stems. The Minister for Environment has endorsed the ban.

The taking of seed for regeneration purposes from Crown land is only permitted subject to the holding of a special endorsement from the Executive Director of CALM. All persons wishing to take seed of this species are required to contact the Administrative Officer (Flora) on (09) 334 0422.

The ban on the taking of *Verticordia eriocephala* from Crown land is effective from 1 November 1994. Conditions attached to all Commercial Purposes Licences are therefore now amended to include *Verticordia eriocephala* in the list of species that may not be taken from Crown land, as of 1 November 1994. This letter constitutes formal advice that your licence conditions have been amended to this effect.

Your cooperation in this matter would be appreciated so that our flora can be safeguarded for future generations.

For further information, please contact Dr Ken Atkins (Senior Botanist) on (09) 334 0425.

Syd Shea
EXECUTIVE DIRECTOR

14 September 1994