UNRAVELLING THE MYSTERIES OF

Verticordia

by Elizabeth George

For many years enthusiasts have been intrigued and fascinated by the beauty of *Verticordia*, commonly called feather flowers. Swiss botanist Augustin de Candolle described the genus in 1828 from specimens collected by Archibald Menzies (botanist on the Vancouver expedition aboard the Discovery) near Albany in 1791.

It is thought de Candolle named *Verticordia*, a genus of plants in the family Myrtaceae, for Venus, the Roman goddess of love and beauty whose sacred flower was the myrtle. Verticordia means "turner of hearts".

Pink and white forms of the same species *(Verticordia monodelpha)* growing in a private garden near Mandurah.
Photo - Elizabeth George▲

Orange morrison *(Verticordia nitens)*, one of the best-known species of *Verticordia*, can grow to over two metres.
Photo - Michael Morcombe ▶

Previous page - Roe's feather flower *(Verticordia roei)* Photo - Jiri Lochman

MAGNIFICENT vistas of massed feather flowers signal the end of spring on the sandplains of southern Western Australia, especially near Wongan Hills, Lake King to Dumbleyung and the northern sandplains in the Murchison area and around Mount Lesueur. This proposed reserve contains 16 species of feather flowers.

Early summer brings drifts of the striking orange-yellow flowers of the orange morrison (*Verticordia nitens*) in the banksia woodlands of the Swan Coastal Plain, especially north of Gingin in Moore River National Park. This flower once commonly graced Perth homes around Christmas, being sold door-to-door like the spring-flowering brown boronia.

Despite their visibility, feather flowers have been poorly studied. George Bentham described 37 species in *Flora Australiensis* between 1863-1878, and only 16 species have been described since. The names of several have been misapplied and others have simply been lumped with the species that appeared closest.

All feather flowers are woody shrubs, but there is fascinating variation within almost all of the other features; including habitat, growth habit, foliage, flower structure, flowering times and duration of flowering. There is also wide variation within some species, subspecies and varieties, and sometimes even between plants within the same population. Feather flowers are found only in Australia and occur mainly in southern Western Australia with three species in northern Australia. One of these, *V. decussata*, appears to be confined to the Northern Territory.

Feather flowers vary from only a few centimetres high to large shrubs. Two of the tropical species, *V. cunninghamii* and *V. verticillata*, can be small trees up to seven metres high. The shrubby species can be erect or spreading, compact or open, slender or bushy. Most species are single-stemmed and killed by fire, but some have a lignotuber (swollen underground stem) and will regenerate after fire or physical damage to the plant.

A new subspecies of *Verticordia staminosa* growing in a granite outcrop.
Photo - Elizabeth George ◀◀◀

Verticordia endlicheriana resembles a yellow cauliflower.
Photo - Basil Smith ◀◀

Verticordia plumosa was the very first Verticordia species ever collected.
Photo - Steve Hopper ▼

The flowers are solitary, though they appear to be in heads or spikes. They vary from tiny to more than three centimetres wide and can be almost any colour except blue. Some are multi-coloured. Others change colour as they age; a signal to the pollinators, (which could be native bees, beetles and other insects) that the flowers are not producing pollen or nectar.

The flowers' sepals are divided into hairy, fringed or feathered lobes, hence the common name "feather flowers". The common name morrison, first given to the golden, summer-flowering *V. nitens* and later used for other species, honours William Morrison, a professional collector from the late 1830s, not Alexander Morrison (the first Government botanist) as is often assumed.

Because of the lack of research, attempting to positively identify specimens of verticordia has been difficult. More than 250 people, mostly *Verticordia* enthusiasts, spent 10 years from 1979 to 1989 helping to change this situation. They collected specimens of *Verticordia* from all over the State and gathered information about the distribution patterns and habitats of many species, including some that are rare and endangered. Some new species were discovered and several that had not been seen for many years were relocated. However, two species remain elusive. *V. carinata* was collected by James Drummond in the 1840s and has not been seen since; and *V. harveyi* was last collected in the 1950s.

The result was the *Verticordia* Reference Collection, now housed in the Community Reference Herbarium in CALM's WA Herbarium. It includes descriptions, more than 600 pressed specimens and photographs of most known species, subspecies and varieties and is available to anyone wishing to identify or study verticordia specimens.

Verticordia pennigera is sometimes covered in moths, which presumably gather the nectar.
Photo - Basil Smith▲▲

Verticordia nobilis has for many years been wrongly called *V. grandiflora*. This species occurs only on the sandplains north of Perth.
Photo - Elizabeth George▲

Botanists and CALM officers were among the many people who helped to compile the *Verticordia* Reference Collection.
Photo - Elizabeth George◄

Painted feather flower *(Verticordia picta)*. There is a very large-flowered form that occurs only at Mt Lesueur.
Photo - Jiri Lochman▼

The styles of the rapier feather flower *(Verticordia mitchelliana)* are very short in the bud but they elongate overnight.
Photo - Jiri Lochman▲

A book on *Verticordia* is also being written about the 98 species and 40 subspecies and varieties of *Verticordia* that are currently known. It will feature life-size watercolour paintings by Perth artist Margaret Pieroni. The paintings will be a valuable aid to identification.

Many *Verticordia* species and variants have potential for use in horticulture and floriculture, for their spectacular flowers, attractive foliage and habit. They are attractive to birds, insects and probably small marsupials. Some species have been grown for many years. A small number were even cultivated in England and probably in other parts of Europe during the second half of the last century and early this century, but proved to be difficult to establish and maintain.

Apart from Kings Park, where more than 25 species were grown during the 1960s and early 1970s, and the National Botanic Gardens in Canberra, most cultivation has been carried out by amateur enthusiasts and a small number of specialist nurseries. Feather flowers were considered too difficult to cultivate by most gardeners.

However, in the last few years commercial cultivation has escalated dramatically because of increased interest and demand for Australian flora by international flower markets.

Since 1979 a small group of dedicated enthusiasts in WA has been trying to cultivate all species of *Verticordia* and achieved remarkable results. They have proved that most species can be grown given suitable conditions, some more easily than others. Many have potential for gardens and landscaping. It is possible to have at least one *Verticordia* species - and usually more - in flower every month of the year.

Many species flower much longer in cultivation and with judicious pruning can be enticed into a second flowering. Most species respond well to regular pruning to maintain shape and encourage new growth and more prolific flowering, but whether this practice shortens plant life or productive life is not fully understood. Many cultivated species will set viable seed and self-sow.

All feather flowers appear to require good drainage, plenty of sunshine and air circulation, and some require protection from cold winds for successful cultivation. However, many more selection trials are needed to determine the best forms and more research is necessary to ascertain the specific requirements of species that are difficult to establish.

Verticordia oculata has the largest flowers of any species in the genus - they are over two centimetres across.
Illustration from a greeting card by Margaret Pieroni▲

Since 1983 the Society for Growing Australian Plants (SGAP) *Verticordia* Study Group has been accumulating information from its members, who are distributed throughout Australia in a wide range of conditions. Research and breeding programs are being carried out by Government bodies and commercial growers.

The horticultural potential of *Verticordia* is substantial and, if it can be realised, future commercial picking from wild populations should cease to be necessary. ◘

LANDSCOPE

VOLUME 5 NO 2 SUMMER EDITION 1989/1990

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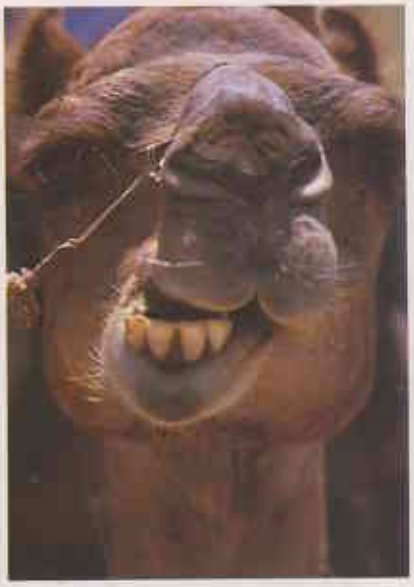

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Inlets and rivers, towering karri and tingle forests, rugged coastline and remote wilderness areas - Walpole-Nornalup National Park has it all. See p. 15.

C O V E R

Australian sea-lion (Neophoca cinerea). *Photo - Nick Gales*

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Colour Separations by The Colour Set
Printed in Western Australia by Kaleidoscope

Published by Dr S Shea, Executive Director,
Department of Conservation and Land Management,
50 Hayman Road, Como, Western Australia 6152.