New Wildflowers from the Wongan Hills Wildlife District

by Dr S. Hopper, Research Officer, W.A. Wildlife Research Centre

Fifteen new wildflowers occurring in the Wongan Hills Wildlife District were described in the latest edition of *Nuytsia*, the bulletin of the Western Australian Herbarium (Volume 4, Number 1). This wildlife district occupies an area approximately 250km square in the north-central wheatbelt (see map on the back cover of this issue).

The range of colour and form among these newly described wildflowers is illustrated in the accompanying photographs. They include large and quite beautiful mallees (e.g. *Eucalyptus synandra* and *E.caesia* subspecies *magna*) through to small inconspicuous herbs (e.g. *Conostylis wonganensis*). The naming of these plants, several of which are rare and endangered, is the culmination of years of work by local residents, by members of the Western Australian Naturalists' Club, and by the botanists from Perth, Canberra and Adelaide who have provided the published descriptions. (Text continued page 14)

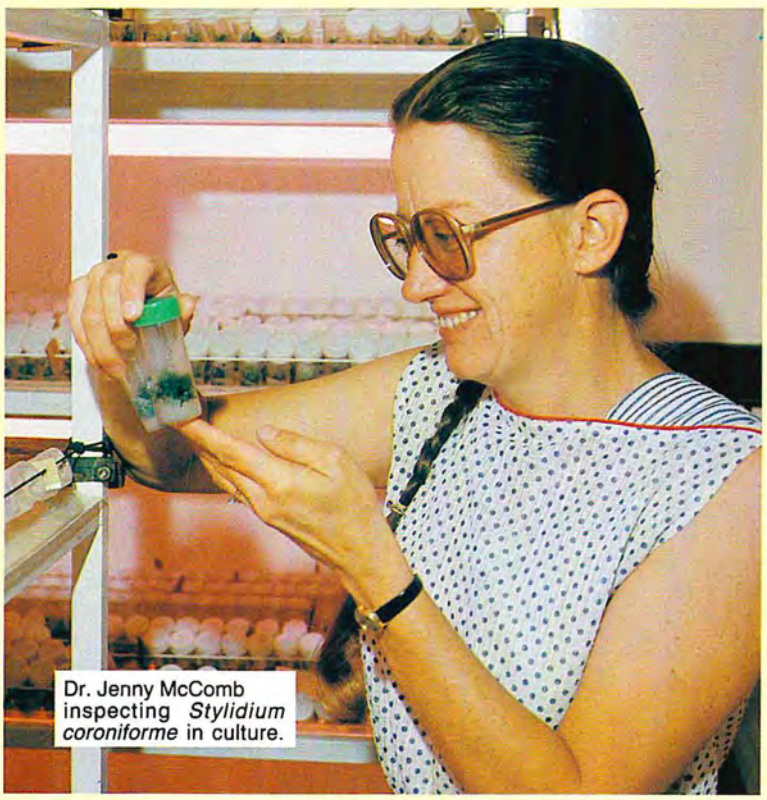
▼ *Acacia botrydion*
The latin name of this new Wongan Hills wattle means "bunched like grapes" and aptly describes its clustered inflorescences. (Photo S.D. Hopper)

▼ *Eucalyptus synandra*
A straggly mallee up to 6 metres tall known from scattered locations between Morawa and Koorda, and in the southern Great Victoria Desert. Flowers are yellow when the bud cap falls off but change bright pink with age. This species has considerable potential for horticulture. (Photo P. Roberts)

▲ *Daviesia spiralis*
An intricate rounded shrub up to 1.5 metres tall known only from the gravelly uplands of the Wongan Hills. It has remarkably spirally twisted leaves, and has no close relatives in *Daviesia*. It flowers from September to January. (Photo P. Roberts)

▼ *Conostylis wonganensis*
This clumped perennial herb has narrow rounded leaves up to 17cm tall. It is normally inconspicuous but has attractive star-like flowers that appear mainly in August. This is a very rare relative of the kangaroo paws, known from only two locations near Wongan Hills. (Photo P. Roberts.)

Back from the Brink



Dr. Jenny McComb inspecting *Stylidium coroniforme* in culture.

Advanced laboratory techniques and the chance find of a new population in the wild has given a new lease of life to one of Western Australia's rarest wildflowers, the Wongan Triggerplant *(Stylidium coroniforme).*

Until a few months ago, it was thought that the plant was close to extinction as only two individual specimens were known to exist in the wild. These two specimens were the subject of an intensive hand cross-pollination attempt by one of the Department's District Wildlife Officers, Phil Roberts, as described in *SWANS* Vol 12 No. 2 1982.

However, since that time, a new population of Wongan Triggerplants consisting of about 1 000 plants, has been discovered on Crown land several kilometres from the known specimens. The new population was discovered by Wildlife Officer Roberts during a routine inspection of the area.

As the new population is on Crown land, whereas the individual specimens were both located on private land, an attempt is now underway to gazette the area as a Nature Reserve. In addition to the rare Triggerplants, the surrounding land is a rich habitat for many interesting and important species of flora and fauna. The vegetation includes tamma/bottlebrush shrubland, wattle thickets and woodlands of York gum, salmon gum

▲ *Stylidium coroniforme* The Wongan Triggerplant, reprieved from extinction. (Photo P. Roberts)

and gimlet. The richness of the vegetation is indicated by the fact that 10 species of eucalypt, 10 of orchid and nine of feather-flower *(Verticordia)* have been recorded in the area. Another rare species, the Wongan Cactus *(Daviesia euphorbioides)* and an undescribed species of *Conostylis* have also been found growing within the proposed reserve.

Although the discovery of the new population of Wongan Triggerplants has multiplied manyfold the plant's chances of continuing to exist in the wild, it is far from being out of danger. Accordingly, the latest results from last year's hand pollination attempts by Wildlife Officer Roberts are of considerable interest and importance. The most success has so far been achieved by Dr Jenny McComb of the Environmental and Life Sciences Department, Murdoch University.

Of the 45 seeds given to Dr McComb from last year's pollination programme, three have since germinated. However, more importantly, Dr McComb has had outstanding success in tissue culturing these seedlings and, at this stage, it seems likely that hundreds of new plants may be cloned from them. Some of these may then be able to be transplanted back into the wild at a suitable Nature Reserve thus increasing the species chances of long-term survival.

▼ A nutrient gel is used as a culture medium for laboratory cloning under controlled conditions.

▲ *Microcorys eremophiloides*
The tubular flowers of this shrub are 4cm long and appear well adapted for bird pollination. *M eremophiliodes* grows erect and openly branched to 2 metres high on massive laterites in the Wongan Hills. Only a few hundred plants are known. (Photo P. Roberts)

▲ *Acacia botrydion*
This colourful wattle flowers from July to September. It grows as a craggy diffuse shrub to 1.3 metres tall on the laterite soils of the Wongan Hills. (Photo B.R. Maslin)

▼ *Eucalyptus caesia* Benth subspecies *Magna*
This beautiful mallee from granite rocks north-east of Merredin is a favourie among native plant gardeners. There are far more plants in cultivation than the few hundred known in the wild. The large flowers (up to 6cm across) appear in winter and attract several species of honeyeaters to their nectar. (Photo S.D. Hopper)

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Local residents, particularly Basil and Mary Smith of Manmanning, discovered some of the new species and alerted professional botanists to their existence. A number of the new species are known only from the gravelly Wongan Hills (N.W. of the town of the same name), and were discovered by members of the Western Australian Naturalists' Club during surveys of the hills led by Kevin Kenneally, a botanist with the Western Australian Herbarium. These surveys were part of a programme of work that was published as a handbook in 1977 (K.F. Kenneally, coordinator, "The Natural History of the Wongan Hills", Handbook No.11, W.A. Naturalists' Club, Perth).

Publication of the handbook drew the attention of the Department of Fisheries and Wildlife to the occurrence of a number of rare or poorly known wildflowers in the Wongan Hills. Consequently, Dr Barbara Rye was appointed in 1980 as a botanical consultant to search for these rare plants and report on their conservation status.

As a result of the combined efforts of all these fieldworkers, it became apparent that several of the unnamed wildflowers in the district were very rare indeed and that they deserved the special protection afforded by being "rare flora" under provisions of the Wildlife Conservation Act. However, for administrative reasons, it is necessary that wildflowers be formally named by botanists prior to their gazettal as "rare flora". Their recently published descriptions in *Nuytsia* serve this purpose.

The naming of these new wildflowers also highlights the importance for conservation of areas of uncleared bushland in the wheatbelt. Because the wheatbelt flora contains a remarkably large number of rare and localised plants, the task of locating and naming them is likely to occupy botanists well into the next century. As demonstrated clearly by work in Wongan Hills, setting aside areas of bushland on farms and reserves will give future botanists the opportunity to complete this task. Perhaps future studies elsewhere in the wheatbelt will bring to light wildflowers as beautiful and as suitable for horticultural utilization as those featured in this article.