

*Staavia dodii*, (diamond eyes) is 'critically rare', and only known from a few sites in the Cape of Good Hope Nature Reserve. It is, however, alive and growing at Kirstenbosch.

Illustration: Ellaphie Ward-Hillhorst.

The genus *Staavia* Dahl was named in honour of Martin Staaf, a correspondent of Linnaeus. *Staavias* belong to the fynbos endemic family *Bruniaceae*. They are small shrubs with closely-set, simple leaves. The pink to mauve flowers are in tightly-packed flat heads (capitula) surrounded by pale involucrel (whorled around the capitulum) bracts, giving them a daisy-like appearance. The flowers open over a number of months, accounting for the long life of the flower head.

All species are obligatory re-seeders with the exception of *Staavia capitella* and *S. radiata* (altdbossie), which both re-sprout after fire. The latter is the most widely-spread and best known species, being used extensively by the cut-flower trade.

#### Distribution and status

The species differ from each other in the size and shape of the leaves, involucrel bracts and the



# STAAVIAS IN CULTIVATION

by Fiona Powrie, Kirstenbosch

In the past the cultivation of *Staavia* was unsuccessful and the unraveling of the problem started with the work by Mary Wolff on the germination of *Staavia dodii*. These initial studies have been continued by Fiona Powrie and are progressing well.

capitulum. Individual flowers of the different species are very similar. There are currently nine recognized species of which only *S. radiata* might be considered widespread, and *S. capitella* not rare, though localized. (It is worth noting that these are the two re-sprouting species). *S. phyllicoides*, known from one record collected in 1930, is given an 'indeterminate' status by Hall & Veldhuis (1985) but a two-day search around the rather precise 1930 collecting locality revealed ploughed lands and no staavias. Although there is a remote chance that it may still exist in an isolate remnant patch of fynbos in the area, it is probably extinct. *S. dregeana*, a small, compact species from the Cape Peninsula with insignificant flower heads, also has a status of 'indeterminate'. In the last four years only one very healthy plant and one very scruffy plant have been located, but this may be because it is not an easy plant to see. *S. zeyheri*, listed as 'endangered' and known from one single locality, was eventually found on a third trip to locate it. Despite extensive searching only a single plant was found. Since that visit the locality was burnt and we can but wait in hope.

The two 'critically rare' species, *S. dodii* and *S. glutinosa*, known from localized sites in the Cape of Good Hope Nature Reserve and on Table Mountain respectively, are both showy shrubs threatened by too-frequent fires sweeping their habitats. There are old records of *S. glutinosa* from Van Stadens Gorge near Port Elizabeth, Tradouwberg and Grootvadersboschberg which suggest that historically its distribution may have been wider.

#### Cultivation at Kirstenbosch

Currently *Staavia radiata*, *S. dodii*, *S. glutinosa*, *S. capitella* and *S. dregeana* are in cultivation at Kirstenbosch. In the past, staavia cultivation was unsuccessful and the unraveling of the problem started with the work by Mary Wolff on the germination of *S. dodii* (*Veld & Flora* 76 (2) June 1990). The work continues...



***Staavia dodii* (diamond eyes)** was a good starting point for this project. This species is not only 'critically rare', but has great horticultural potential. It is a 1.5 m, much branched shrub with a basal trunk and an attractive open habit. From April to September it is covered with terminal flower heads (10 - 14 mm in diameter) that are surrounded by several whorls of long white bracts. The large dehiscent (splitting open) seeds are easily collected towards the end of the flowering season. Germination of the seed is helped by using an acid scarification treatment followed by a subsequent gibberellin (plant growth substance) treatment, although

***Staavia glutinosa* (flycatcher bush or vlieëbos)**, also critically rare, is known from five populations on Table Mountain. Photo: Fiona Powrie.

good germination was also obtained from 3 year-old seed that was sown untreated. Seedling mortality is high even in cultivation and the growth rate is slow, but we have managed to raise quite a few seedlings.

During the third year in cultivation the narrow, hirsute, juvenile leaves are replaced by the broad, glabrous, mature leaves and the more advanced seedlings will begin to flower at this stage. Branching usually occurs after the first flowering when 2 - 4 new

shoots develop around the terminal head, giving rise to its characteristic open habit. In cultivation the seedlings can be pruned during their second and third year. This delays flowering but a far more compact shrub is obtained as a result of the vigorous shooting that occurs in response to the pruning.

***Staavia glutinosa* (flycatcher bush, vlieëbos)** is a 1.5 m high, well-branched shrub with a single basal stem and upright growth habit. The terminal flower heads are slightly smaller than those of *S. dodii*, being 8-10 mm in diameter, and are very glutinous. Several rows of white needle-like bracts surround the flower head. These attractive shrubs are known from five small but healthy populations on Table Mountain. The attractive flower heads, long flower-life, good growth form and positive response to pruning make this a highly desirable horticultural plant.

The smaller seeds of *S. glutinosa* and *S. radiata* are easily collected. Fairly good germination was obtained for *S. glutinosa* using a gibberellic acid treatment without scarification.

***Staavia radiata* (altydbossie)** is a small rounded shrub with an

underground stem. Individual plants have a long life and re-sprout after fire or after being heavily cut back. The flower heads are relatively small, 3-7 mm across, but are normally crowded on the terminal ends of the branches. At least two rows of white or occasionally pale yellow involucre bracts surround each head. *S. radiata* is widespread from Malmesbury to Knysna and is found growing together with several other species of *Staavia*. The bushy habit, long flowering period (all year, from whence comes the common name), long life as a cut-flower, the positive response of the bush to pruning and the long life of individual plants gives this plant great horticultural potential for gardens and for the cut-flower trade.


#### Vegetative propagation

The vegetative propagation of staavias is closely allied to the growth pattern of the species. *Staavia dodii*, *S. glutinosa* and *S. radiata* have their growth flush in summer, after flowering and this vegetative growth tails off just prior to flowering. Most of the staavias are winter flowering and could be expected to exhibit this summer growth flush. There are, however, two exceptions,

*S. brownii* and *S. verticillata*, which both flower in summer.

Previously, tip cuttings of *S. glutinosa* and *S. radiata* gave poor results. Good rooting results can, however, be obtained by making use of the seasonal growth flush. For *S. dodii*, *S. glutinosa* and *S. radiata* the correct time to take cuttings is at the end of the flowering season just as the vegetative growth starts. All three species have terminal inflorescences and the vegetative shoots break just below the flower head. Cuttings should be taken of the previous season's wood when the new growth is between 5-20 mm long. The disadvantage of this procedure is that preparing the cuttings is slow, as the flower heads have to be removed from the cuttings.

The other type of cutting which is successful is re-sprout growth, either vigorous shoots which occur in response to pruning, in the case of *S. dodii* and *S. glutinosa*, or re-sprout growth from the underground stem of *S. radiata*, found after fire or cutting. In the latter case a heel type cutting is successful. This is an opportunistic approach and depends on the material being available.

The success of staavia propagation and the apparent ease of cultivation is of twofold benefit. Firstly in the event of a natural disaster causing the loss of the wild populations, cultivated plants could be re-introduced to these sites. Secondly, a group of new and exciting plants will have been introduced to horticulture, benefiting both gardens and the cut flower industry. Though it will be a number of years before these species are sufficiently established at Kirstenbosch for distribution, the plants are growing well in the garden and the future bodes well for *Staavia*. 

#### Acknowledgments

I would like to thank Ellaphie Ward-Hilhorst for executing the water colour painting and Rachel Saunders for comments.

#### References

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