

The countryside's star flowers

The family *Hypoxidaceae* are the little stars of the veld and are so numerous they sometimes go unnoticed. Here is a brief description of some of them and their relatives by Cameron McMaster.



'They are often the earliest plants to bloom in the spring.'



1. South African *Rhodohypoxis* growing in a garden in Devon in the UK, where it's a popular garden plant.

2. *Hypoxis costata* flowering shortly after a burn in the Cathcart district.

3 and 4. The two-colour forms of *Spiloxene capensis* – the species that served as a model for the logo of the Indigenous Bulb Growers' Association of SA.

5. The insignificant *Empodium elongatum*, one of two summer rainfall species in this genus is dwarfed by the grass between which it grows in the Barkly East district.

6. *Rhodohypoxis baurii* flowers at the top of Naude's Neck Pass near Rhodes in the Eastern Cape.

7. *Hypoxis membranacea* prefers shady, sheltered spots among rocks.



COLLECTIVELY KNOWN AS STAR Flowers because of the star shape of the blooms, the family *Hypoxidaceae* comprises a number of genera – *Hypoxis* and *Rhodohypoxis*, which are most numerous in the summer rainfall areas and *Spiloxene*, *Empodium* and *Pauridia* which are largely confined to the winter rainfall areas.

While widespread and numerous throughout South Africa members of the genus *Hypoxis* are mostly small, fairly insignificant and easily overlooked. Despite the fact that the bright, mostly yellow star-shaped flowers make a brave show throughout the spring and summer, they are so numerous they're often ignored.

They are deciduous and occur mostly in grassland and are sometimes referred to as star grass. They are often the first plants to bloom in spring. The rootstock is a slow-growing tuberous rhizome from which sprouts a cluster of strongly veined, often hairy leaves. The flowers are born

on stems of various length, depending on the species. After pollination, seed capsules develop, which mature while still green, opening neatly from a lidded top and scattering the small shiny black seeds. The African Potato (*Hypoxis hemerocallidea*) is the most prominent and well-known member of the genus and is used extensively as a traditional medicine.

The species in general

There are approximately 65 species of *Hypoxis* in Southern Africa, with many more worldwide. Generally a poorly studied genus, the taxonomy of *Hypoxis* has up to now been confusing. However, a comprehensive revision of the genus by the Durban-based botanist Yashica Singh, published in *Bothalia* (2006) Volume 36 Part 1, has largely clarified the confusion.

The species vary in size and leaf shape and include diminutive plants found in grassland (*Hypoxis filiformis*), a small silver-leaved species growing in rock cracks at



- Important clues to the history of our plants could be found in species we are already familiar with.
- The stars are extremely hardy and drought resistant.
- *Rhodohypoxis* are endemic to South Africa.

high altitudes (*Hypoxis argentea*), and a small white-flowered species growing in shady places (*Hypoxis membranacea*), as well as a fairly tall upright plant growing in open grassland (*Hypoxis rigidula*).

While a common component in grassland, and although not poisonous, they are fairly unpalatable and are not readily eaten by livestock. They are extremely hardy and drought resistant, but don't tend to be invasive, even in overstocked veld.

Other stars

Rhodohypoxis are tiny plants with very decorative cerise, pink or white flowers, the gems of the high mountain regions where they occur in bare patches and on gravel beds in the Drakensberg and Lesotho. It's a genus endemic to South Africa and consists of six species which flower in mid-summer. Coming from the high alpine regions, these species can survive the cold winters of the northern hemisphere and have become extremely popular with English and European gardeners. Pots of *Rhodohypoxis* feature regularly at British Alpine Garden Society shows. There are also many beautiful cultivars that have been developed in Europe – this genus has the most commercial value.

The genus *Empodium* consists of about seven species in Southern Africa, five of which occur in the winter rainfall region. They are very small deciduous plants that flower in autumn before the leaves appear and they have earned the common name autumn star. The solitary, bright yellow, star-shaped flowers emerge from the ground with a well-developed solid flower tube, while the ovary remains and matures at ground level. I was surprised one December to stumble upon two summer rainfall species, *Empodium elongatum* on the farm Balloch in the Barkly East

district – it's a very insignificant little plant almost indistinguishable at a distance from the similar small *Hypoxis* flowers in the grassland.

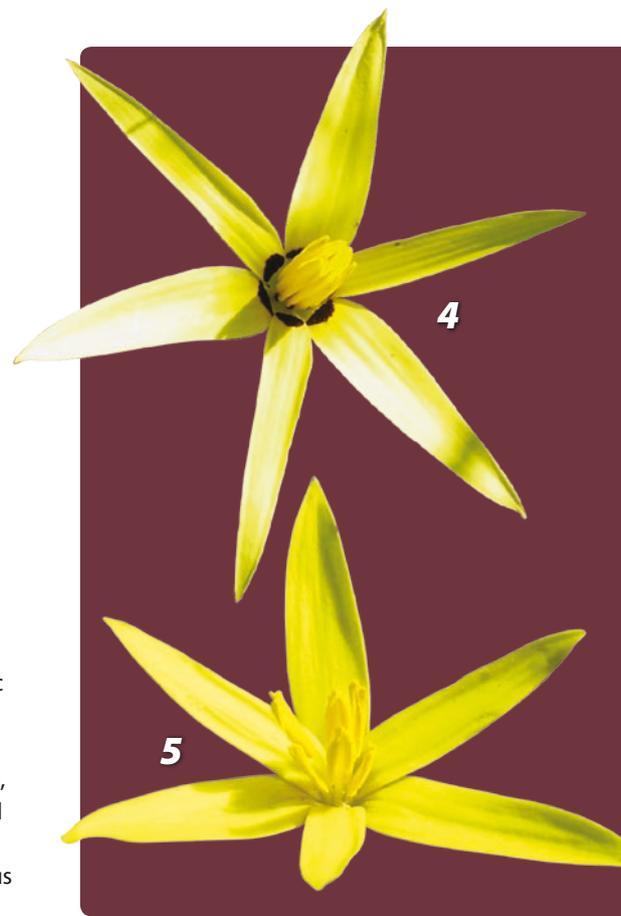
The genus *Spiloxene* (Cape Star) consists of 25 species, 18 of which occur in the Cape Fynbos. The leaves are broad to narrow, usually channelled and hairless. Flowers occur singly or in clusters and are born on slender stalks, flowering in winter and early spring. The fruit is a dry capsule opening from a lidded top. The flowers are generally yellow but *Spiloxene ovata* and *Spiloxene capensis* can also have white flowers. The white forms of the latter species sometimes have striking flowers with spectacular metallic green and blue centres and they have been chosen as the emblem of the IBSA. *Spiloxene aquatica* has white flowers and, as the name implies, it occurs in seasonal marshes and pools in the Western Cape.

There are only two species in the genus *Pauridia* (Little Stars). *Pauridia minuta* is barely 2cm in height when in flower. These tiny plants are among the smallest bulbous plants in South Africa, but what they lack in

'The flowers only open on warm sunny days and close at night.'

size, they make up for in charm and number, with dense floral displays when they flower in mats in autumn and early winter in the Western Cape. The flowers only open on warm sunny days and close at night.

In an article published in the Indigenous Bulb Growers' Association of South Africa (IBSA) *Bulletin* (March 2008), Dr Dee Snijman discusses the significance of the relationship between *Pauridia* and Orchids. Recent molecular analysis has shown that



Hypoxidaceae is closely related to the large, diverse Orchid family and that *Pauridia*, in particular, resembles the immediate ancestors of *Orchidaceae*. She concludes her article: "Although the quest to find the Orchid's immediate ancestor still eludes botanists, their studies on *Pauridia* serve as a strong reminder to South Africans of their huge responsibility to conserve even the smallest representative of our flora for these species may yet reveal important clues about the evolutionary history of plants elsewhere in the world."

Here is just another reason for us to be vigilant and take steps to conserve them for posterity.

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