

The candy-striped *Cyrtanthus*



TOP: *Cyrtanthus smithiae* flowering near Fort Brown in the Fish River Valley.

ABOVE: *Cyrtanthus clavatus* in the Addo Elephant Park. The specimens in this population have striking dark candy-stripes.

The phenomenon of darker stripes, so-called candy-stripes, spreading along the lobes of tubular flowers is a feature that also occurs in Amaryllidaceae. It's a distinct feature of the crinum lilies found in the Eastern Cape.

THE *CYRTANTHUS* IS THE LARGEST group in the family Amaryllidaceae, numbering nearly 60 species. As would be expected in such a large genus, there is considerable variation in size, shape and colour, as well as in the diverse and sometimes specialised habitats in which the different species occur.

Discovering populations and monitoring these fascinating bulbous plants has been a preoccupation of mine for many years. In the previous two chapters of this series I discussed the species that are stimulated by fire to flower (the fire lilies) and some other rare and spectacular members of the group. This week we deal with a specialised group that all have striped flowers.

Candy stripes

The phenomenon of darker stripes spreading along the lobes of the tubular flowers is a feature that also occurs in other Amaryllidaceae. I like to call these "candy-stripes". It's a distinct feature of crinum lilies and is also seen in *Brunsvigias* and *Ammocharis*. It's less common in the *Cyrtanthus* group, most of which have red to orange and occasionally yellow, tubular

flowers. It's not certain what advantage spirally, twisted leaves offer, but it's a feature of numerous plant families growing in arid regions.

The candy-striped *Cyrtanthus* are largely restricted to drier environments. The only other *Cyrtanthus* species to have spirally twisted leaves is *Cyrtanthus spiralis*, named for this feature, in the Port Elizabeth and Coega thicket, but this species has the more typical umbel of red, tubular flowers. Large numbers of this rare species have been destroyed by road construction in the vicinity of the Coega harbour development.

A first encounter

My first introduction to this distinctive group of bulbous plants was just outside Sterkstroom on the road to Molteno, where I found a number of very small, white, trumpet-shaped, candy-striped flowers with tightly rolled corkscrew-like leaves, widely scattered in the short grassland alongside the road. This is flat sandy country which, I discovered later, is a typical habitat for *Cyrtanthus helictus*. I didn't know the name of the species then, but collected a specimen to lodge in the national herbarium in Pretoria who identified it. I then found a further population in a similar habitat just south of Cathcart, and eventually got to know it well. It usually flowers in October and always has only one flower on each stem – a diagnostic feature of the species.

This first encounter with a candy-striped *Cyrtanthus* stimulated my interest to find the other species, which are all documented in *Reid and Dyer's Review*, produced by the American Plant Life Society in 1984. The next species I encountered was the legendary *Cyrtanthus smithiae*, which was originally recorded near Fort Brown in the Great Fish River Valley, a hot and arid environment in valley thicket vegetation. Despite these harsh conditions this is one

flowers without any distinctive markings. However, a number of closely related *Cyrtanthus* species, all from the Eastern Cape, with white to pale pink flowers, do have this feature. Other features they have in common are widely-flaring trumpet-shaped flowers, a tendency to have spiral or corkscrew-shaped leaves in various degrees, which emerge at flowering or just after.



- A number of the *Cyrtanthus* species have candy-stripes, but they are more common in *Brunsvigias* and *Ammocharis*.
- The protected Addo Elephant Park population of *Cyrtanthus clavatus* has striking flowers with dark-red stripes.

'Large numbers of rare species have been destroyed by the Coega harbour development.'

of the most beautiful and spectacular *Cyrtanthus* species. It's fairly large with long and relatively broad, spirally-twisted leaves. It has a number of large, trumpet-shaped flowers on stems up to 30cm tall and flowering from late October to December, depending on rain. Flowers are in various shades of pale pink and all have the typical darker red or brown candy-stripes.

Widespread population

Further exploration has revealed that *Cyrtanthus smithiae* is a variable species which is widespread. Plants in populations around Cookhouse and Somerset East are very much smaller, some with a slight yellow tinge and greenish candy-stripes. In most habitats, the bush in which they occur has been heavily grazed by goats and is mostly in a very degraded state. Plants survive on the Cookhouse commonage under thick, thorny shrubs where the goats can't reach them. Thousands of these beautiful bulbs have been destroyed between Cookhouse and Uitkeer where much of the land has been established to citrus orchards. It's the responsibility of the owners of land still to be developed in this area to investigate and to set aside small reserves to conserve the few remaining populations that might still occur. Populations previously recorded in the King William's Town area have disappeared under the pressure of overgrazing. Recently a small population was discovered in the Quanti area of the Stutterheim district.

Cyrtanthus loddigesianus is another of the candy-striped *Cyrtanthus* which is severely threatened by housing and residential development. It occurs exclusively in coastal dune vegetation from Port Elizabeth to East London. It flowers in late November and December, and has white to cream flowers with green stripes – a very attractive plant. The leaves have only a very slight twist. In earlier years there was a strong population in the open ground between the Humewood graveyard and the Port Elizabeth airport, but these plants have had to make way for buildings, public gardens and sports fields. Another previously prolific population now leads a precarious existence in the precincts of the Dolphin Hotel at the Nahoon River mouth in East London. Here

they are subjected to regular mowing in the few patches of open ground where they still occur. Other populations are found around coastal resorts like Kidd's Beach and Kayser's Beach where they still survive on pavements and are also mown regularly. It's the responsibility of the municipalities concerned to preserve areas where there are concentrations of these lovely plants.

A fourth member of the candy-striped group is *Cyrtanthus clavatus*, a small plant distributed from Grahamstown to Addo and to just west of Port Elizabeth near Greenfields. This species is confined to inland areas, where it occurs in grassland with scattered bush – and in common with other members of the group it prefers light, sandy soil. It's very similar to *Cyrtanthus helictus* and the two could easily be confused, but it has almost straight leaves, usually two or more flowers per stem and it flowers in January, nearly two months later than the *Cyrtanthus helictus*. The Addo population has striking flowers with dark-red stripes. This population, being within the Addo Elephant Park, is well-conserved and thriving. Other populations, such as those on Botha's Hill east of Grahamstown, are in degraded areas subject to heavy grazing pressure and are declining rapidly. There are possibly large and safe populations on some of the game farms between Grahamstown and Port Elizabeth. I have seen them along the N2 highway on both sides of the Bushman's River, and they are sure to also occur in the Shamwari Game Reserve.

All of our unique and beautiful wildflowers are under extreme pressure as a result of the ever-increasing demands of the expanding human population. Little thought is given to the effects of development on the precious and vulnerable natural flora and the impact of the loss of natural ecosystems on the health of our environment. I hope that by making farmers and landowners more alert to the biodiversity on their land there will be a greater awareness of the imperative to preserve as much as we possibly can, while there is still time. – Cameron McMaster (cameron@haznet.co.za) |fw



TOP: *Cyrtanthus loddigesianus* has white flowers with green stripes. It occurs in coastal dune grassland. This specimen was photographed in the Nahoon area, East London.

ABOVE: *Cyrtanthus helictus* flowering in the typical grassland habitat near Cathcart. This small species always has only one flower on each stem.

BELOW: *Cyrtanthus smithiae* with developing seed capsules and showing the spirally twisted leaves which are a feature of some of the candy-striped *Cyrtanthus*. This species occurs in valley thicket vegetation.

