

In need of protection: *Dierama grandiflorum*

An urgent appeal is made this week to landowners in the mountains north of Somerset East, Pearston and Graaff Reinet to assist in tracking down any populations of a rare hairbells that may exist in their area. It's undoubtedly one of the most beautiful and spectacular of the many hairbell species we have in South Africa.

LAST WEEK WE INTRODUCED the hairbells, the lovely group of cormous plants belonging to the genus *Dierama*. This week's column is devoted to one species alone, *Dierama grandiflorum*, which because of its rarity and exceptional beauty, merits particular attention.

Dierama grandiflorum is the most distinct member of the genus, with conspicuous, large and widely opening pink flowers. It was discovered in the 1930s by a Mrs Harries in the Bosberg Mountain near Somerset East. It was established as a species, and aptly named *Dierama grandiflorum* in 1934 by Gwendoline Joyce Lewis, who made the South African *Iridaceae* her speciality. It's one of those rare flowers that most of us only dream about and few have seen in flower in its natural habitat. It's truly

deserves its name – *Dierama grandiflorum*, a grand flower. This variety undoubtedly has the largest flowers in the genus – flowers that flare into a wide trumpet with a distinctive twist on the tips of the petals.

According to the literature it occurs in only two disjunct populations – one on the Bosberg Mountain above Somerset East in the Eastern Cape and the other some 100km further west on the Oudeberg north of Graaff Reinet (*The Hairbells of Africa* by OM Hilliard and BL Burt, 1991).

Why has it only been recorded at these sites? There must be populations in habitats on the ranges between Somerset East and Graaff Reinet, but these have clearly not been seen or recorded yet.

They occur on the Bosberg in small localised populations on the grassy slopes at elevations of around 1 300m, often in rocky and stony areas. One population occurs on the farm Glen Avon belonging to Bill and

Alison Brown and it was a specimen from the Glen Avon population that Dr Auriol Batten illustrated in the *Dierama* book, *The Hairbells of Africa*, for which she painted 36 exquisite full-page watercolours.

Dr Batten recalls that when she was taken up the mountain by Bill on 3 November 1987 that there were only 20 plants in flower. She took photographs and made sketches on page 81. A lovely pencil drawing on the facing page very clearly illustrates the habitat in which the plant grows.

First hand sighting

The population I am most familiar with occurs on the farm *Waainek* belonging to Dr Pieter Botha in the grassland just above the spectacular forest-clad Glen Avon Valley near the famous Glen Avon waterfall. I have visited this population periodically over a number of years, but previously never at the height of its flowering in November.



LEFT: The spectacular grandeur of the flowers of the *Dierama grandiflorum* is worth preserving.

BELOW: The natural habitat of *Dierama grandiflorum* is equally breathtaking. Farmers are essential to help trace and protect hairbells.



- Landowners need to be aware of the vital role they would need to play to conserve this plant.
- The population of *Dierama grandiflorum* needs to be allowed to flower and seed without been grazed at that vulnerable time.



ABOVE: The hairbells here are struggling because of the way the land is grazed.

ABOVE RIGHT: It is not so much the intensity of grazing that is at issue, but rather the fact that the area where the plants occur is grazed at a time when they are most vulnerable.

'The population needs to expand to be able to survive and thrive.'

In 2006 I had the opportunity to visit the area in early November and was able to admire it in its full majesty, and take photographs. I visited the site again in spring last year and so have been able to make an assessment of the health of the population.

The problem that I have observed over the number years of monitoring the populations is that of sustainability inhibited by the grazing management practices in the area. The hairbell population seems to be limited now to a declining number of mature plants protected by the dense tufts of *miscanthidium* grass (*suurpol*). I have noticed fewer flowers and declining seed production over the years. In 2006 only eight plants were in flower and last year there were only two or three with very weak flowering stems. While there are some young plants and seedlings visible, these tend to be cropped together with the grass and are

replaced by enough younger plants. While there are some juvenile plants in the area, it's clear the population is in decline due to the periodic grazing by sheep and cattle and also depredation of the corms by porcupines. The habitat would need to be better conserved if natural propagation of younger plants is to occur. The population needs to expand to be able to survive and thrive and it's gratifying to know that having been made aware of the situation, the landowners are conscious of the vital role they play in conservation.

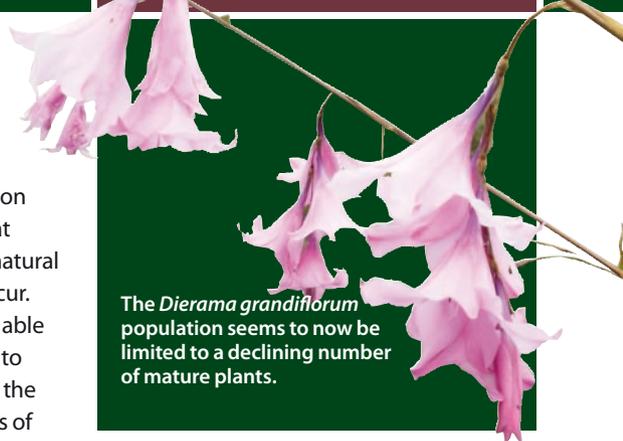
In need of effort

This scenario may be prevalent in many other sites in those mountains. We need to discover more populations of this beautiful hairbell. If it does occur elsewhere we should record the populations, assess their conservation status and, if necessary,

'The habitat will need to be better conserved to facilitate reproduction and growth of the younger plants.'

not able to develop adequately into strong adult plants. The grassland is certainly not overstocked and is only lightly grazed in the summer. However, it's not so much the intensity of grazing that is an issue, but rather the fact that the area where the plants occur is grazed at a time when the plants are most vulnerable – at flowering and seeding. Many of the older plants are not being

apply grazing regimes that will maintain and increase the populations. The ideal solution would be for the hairbells to be left undisturbed during their growing and reproductive cycle – effectively from the end of August to the end of March. If this is not possible every year, then periodic summer rests could be considered – resting every second or third year up to



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the end of March. This would enable flowering, seed production and young plant establishment to take place, at least at regular intervals. Late autumn and winter grazing would not harm the plants and in fact might be beneficial, reducing the intensity of fires that might occur in early spring, whether accidental or planned.

Because of their very limited distribution and declining numbers it's imperative that steps be taken to preserve the habitats and arrest the decline of these plants. While this may be a formidable responsibility for the landowners concerned, it would also be a great privilege for them to care for these rare and endangered plants.

If any landowners in the region are aware of other populations of *Dierama grandiflorum*, I would be very grateful if they would get in touch with me. – Cameron McMaster
• Contact Cameron McMaster on 082 774 2075 or e-mail cameron@haznet.co.za. |fw