

Growing South African bulbous plants in The Netherlands

Peter Knippels

Until 15 years ago I grew succulents on the window sills of my house, mainly *Haworthia*, *Euphorbia* and *Monadenium* species. A friend of mine back then had a nursery where he grew and sold succulents and cacti, but also bulbous plants from southern Africa. From him I bought my first *Bowiea volubilis*, *Veltheimia bracteata* and *Haemanthus* and *Lachenalia* species. Within a year I was confronted with a lack of space on the window sills, so I moved most plants to the attic. There the problems started, or should I say, there were the first challenges created. First of all I had to make choices - I had to specialise. So I sold most of my succulents and made room for the bulbs.

Winter growing bulbous plants

The problem with the winter growing bulbous plants in the attic was that there was not enough direct sunlight as there was only one small window. So I bought a special growing (sodium) lamp of 400 Watt. According to the instructions you had to install the lamp about 1 meter above the plants, so I did. I knew that the lamp would produce a lot of warmth, so I decided to keep the window open year round and to turn the lamp on for only 6 hours a day during the growing period, viz. October-March. Some years I turned the lamp off at the beginning of March when the leaves of the first plants started to die off. When the lamp was on, the temperature was 20-25°C, on warm days even higher. The night temperature was 15-17°C. For most plants this was too warm. They produced large, weak leaves, no flowers and they died off early. The bulbs were mostly too weak to survive. This happened to most of the *Bulbine*, *Bulbinella*, *Lachenalia* and *Polyxena* species. My *Haemanthus* species and for instance *Strumaria truncata* and *Bowiea garipeensis* didn't mind the high growing temperatures: they grew and flowered prosperously.

I then had the chance to use the greenhouse at my work, so all my plants moved from the attic to this non-heated greenhouse. The plants grew better, but it was still too warm. On sunny days in the winter the temperature could get as high as 15°C and sometimes 20°C. At night the temperature didn't drop below 10-15°C, and this high night temperature was the problem. So it was time to start some experiments and to sacrifice some plants for a good cause!

The first experiment was growing six *Lachenalia* plants outside for the first 2-3 months of the growing period. I planted the bulbs in black plastic pots in October and placed them outside, with only some protection against the rainfall. The plants stayed outside until the night temperatures dropped below 0°C. This was in the first week of December and the plants were then moved into the greenhouse. Most species formed beautiful short, firm leaves. Some species showed purple spots on the leaves, caused by the low temperatures. All species flowered and produced short leaves. For one species, *L. reflexa*, it was too cold outside. The tips of the leaves had died off and the plants first started to grow when the pots were placed in the greenhouse. In general, the results were positive.

The next and final step in the experiments on growing winter growing bulbous plants was to grow them outside for the whole winter. In October 2005 I placed pots with some South African plants

in a wooden frame. I plunged the pots into the soil. The soil in the frame is clayey loam and due to the high water level, it is very humid during the whole year, sometimes becoming soaking wet. One of these wet periods is the winter. I started with four winter growing plants, besides some European and American bulbous plants: *Albuca spiralis*, *A. circinata*, *Haemanthus barkerea* and *H. sanguineus*. To be quite honest, I had my doubts that the plants would survive! In the first few months of 2006 the soil was very wet, with the water level only 5-10 cm below the surface of the soil. Over this period the leaves of the plants stayed green and firm. In December 2005 the temperatures dropped below zero, so I covered the plants with some straw. At the end of the winter, or rather at the beginning of spring (the first week of March 2006), we had a week with snow and very low temperatures (-10 to -15°C). In April I took the glass off and took the pots out of the soil and inspected the plants. There could only be one conclusion: they had done very well and the bulbs had grown and were still firm. Even the roots of both *Haemanthus* species were white and showed no damage due to the long humid period.

This autumn (October 2006) I placed almost all my winter growing bulbs in the wooden frame. I am doubtful about the survival of two: *Massonia depressa* and *Whiteheadia bifolia*. For the time being the pots with these plants are outside in my back yard where I can see them daily. When it gets too cold I will take them inside, or

I have always learned to grow South African bulbous plants as dry as possible: it is written in every book and everyone will tell you this. It has become a kind of a law. I obeyed this law, so I always added sand to my soil mixtures and I watered the plants very little. I wonder if this is true? After the symposium we visited Neil McGregor at his farm Glenlyon in Nieuwoudtville. We saw *Brunsvigia bosmaniae* and *Boophone haemanthoides* plants growing in a dolerite (very clayey) soil, which stays wet for a long period after rainfall. I think it has to do with the structure of the soil that the plants can grow here, not with how dry we keep the soil. Besides that, I notice people tend to be very cautious with their plants, afraid they will die off. Sometimes people are too cautious! There isn't one right or successful way to grow winter growing bulbous plants and one must experiment.

Summer growing bulbous plants

When the winter growing plants were moved from the attic to the greenhouse, the other bulbous plants were moved there as well. I have now grown the plants here for 5-6 years. The plants are all grown in plastic black pots. In summer it can get very warm in the greenhouse – up to 30-35°C. It is not the temperature that gives the problems, it is the sunshine. The sun shines on the black pots and it warms up the soil in the pots. This results in roots which dry out and afterwards die off, and in some cases the bulbs are also damaged by the high temperatures. Unfortunately I only noticed these effects when it was too late for some plants. So in spring 2006 I planted part of my summer growing plant collection in the wooden frame for the first time. As with the winter growing plants, I placed the pots into the soil. At first the plants were covered by frames with glass, and in June I took the frames away, as the night temperatures were not dropping below 15°C anymore. The plants did very well: they flowered and the bulbs grew.

Plants I grow outside include all *Albuca* (eg. *shawii*, *humilis*), *Agapanthus* and *Eucomis* species, *Cyrtanthus sanguineus*, *Ledebouria marginata* and *Dipcadi marlothii*.

Problems

One of the problems you will come across are snails. Because I grow most of my winter- and summer growing bulbs outdoors, I have to watch out for snails. One day you have a beautiful plant in full flower, and the next day you have nothing left! To control the snails I use pesticides but it is not possible to exterminate them, and I don't even try this. If they eat the leaves of a plant, well, next year the plant will probably grow out again and will hopefully flower. So don't bother too much as you can't kill them all!

However, the biggest problem is mealy bugs. The moment you see them, you are almost too late to get rid of them. I think it's not about how to get rid of them, but how did I get them in my plants? The main source of infection, if you can call it that, is new plants. I have learned from experience to grow any new plant in quarantine for at least 6 months. This means not in the same room or greenhouse. If after that period you don't find symptoms on the leaves then, the plant is 'clean'. The biggest mistake in dealing with mealy bugs is that it's not only about the bugs and the visual damage they cause, but more on hygiene concerning all the plants in the neighbourhood. You have to inspect all the containers and clean everything. If you have a bad infection of mealy bugs in one of your plants, you may have to take more rigorous measures and perhaps throw the plant away. There is sometimes no other solution. Be realistic. You cannot get rid of the little buggers and the plant is a serious threat for the other plants! ♣

Growing South African bulbs in the United Kingdom

David Victor

Whilst there are many similarities between growing South African bulbs in South Africa and in the UK, there are also many differences. From these differences arise a number of challenges that face growers in the UK and, over the years, various strategies have been developed to overcome them. I will describe some of these, illustrating them by reference to my own experience and methods. But first, a few words of explanation. In this paper, I use the term "bulbs" in the broad sense of a geophyte, to include plants with the variety of storage mechanisms, tubers, corms and the like, not in the narrow sense of "true bulbs".

Probably due to our Anglo-centric view of the world, we in the UK sometime think that Cape Town is as far south from the equator as London is north of the equator. However, that is by no means true. Cape Town is at roughly 34° south, whereas London is 54° north: thus, London is roughly 1,500 miles further from the equator. The equivalent place for Cape Town in the northern hemisphere is in the Sahara in North Africa. Similarly, London is on the same latitude as Calgary in western Canada. So, the UK is a long way north and, being so far north has major implications for growers in the UK. I would like to highlight three of these.

Firstly, our prevailing weather systems flow in throughout the year from the south west, across the Atlantic. This pattern gives rain all the year round, rather than seasonally. What is more, it is frequently accompanied by high levels of humidity and low light levels, due to heavy cloud cover. Secondly, being so far north, we could expect to have very cold winters. Luckily, a warm current from the Gulf of Mexico, runs northwards along the eastern US seaboard as the Gulf Stream and