



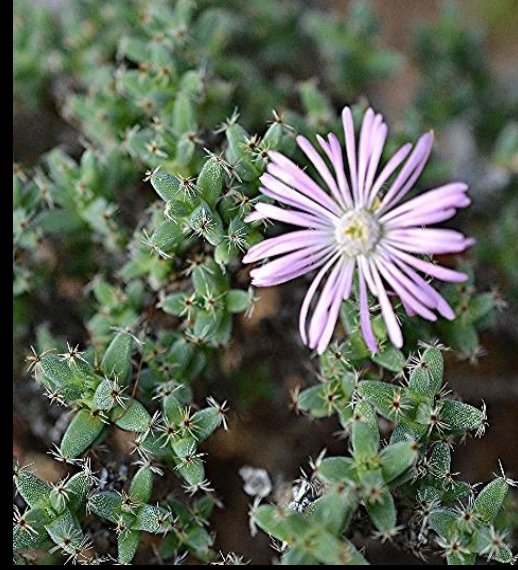
The Wonderful World of Mesembs



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Part 1 Mesembs in cultivation





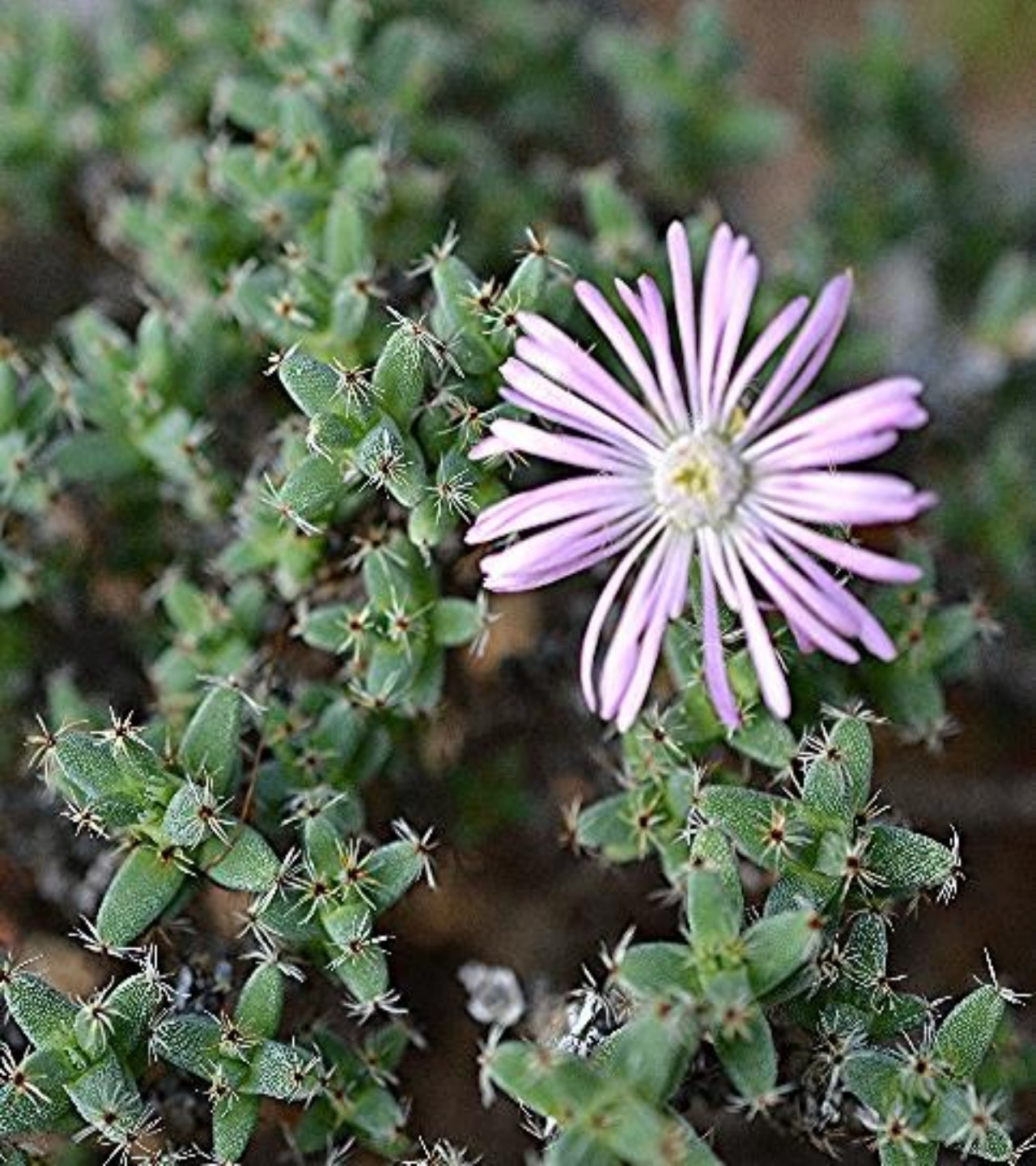
Titanopsis calcaria

An attractive genus of plants named from the Greek *titanos* meaning chalk and *opsis* meaning appearance. This refers to the calcium filled raised warts on the leaf surface. In the wild they come from two separate rainfall zones, one where late summer rain is experienced and the other where winter rain is the norm. However I find they will accept a prolonged growing period from April through to January but watering is very sparse from November to January on really sunny days perhaps once a month.



Phyllobolus tenuiflorus

Plants in this genus are erect or creeping shrubs and they are not often seen in collections. Many have a swollen rootstock. They can be treated as winter growing species with watering beginning in late August into September and continuing with much decreased water from November to April on suitably sunny days. The small to medium sized flowers are variable in colour from green to yellow, orange, red pinkish on to white. Though 32 names are accepted the number of species encountered in collections is around five.



Trichodiadema species (possibly littlewoodii)

This bushy species can be found over vast areas of South Africa and just into southern Namibia. It is named from two Greek words, *trix* meaning hair and *diadema* meaning crown. This refers to the crown of bristles which adorn the tips of the leaves in most species. They are easy plants to grow but they tend to sprawl all over the pot in most species. The growing period actually covers a lot of the year because it is unwise to withhold water completely in winter (particularly the non tuberous rooted species) or they will dry up completely. Watering from May to December is recommended with the occasional sprinkle in the other months.



Faucaria candida

This genus will also be referred to in the 'Mesembs in Habitat' section later. White flowers are rare in this genus with *Faucaria candida* and *Faucaria bosscheana* (in some varieties) being those to bear them. Watering from April through to December is recommended, obviously much less in the last two months. They tend to flower in the second half of the growing season and those that flower yellow have a great show of bright yellow flowers. They are readily recognisable with the bristly edged leaves in most species. They propagate readily from cuttings.



Glottiphyllum oligocarpum

The name refers to the tongue shaped leaves borne by the plants in this genus. It is taken from the Greek *glottis* meaning the mouth of the wind pipe, (probably referring to the uvula at the back of the soft palate) and *phyllon* meaning leaf. They are not demanding to grow but to grow them well you have to take great care of them. Some shade is advisable in the hotter months and watering should be lessened in June to August when they have a rest due to the heat. March to May and September to November are times to increase the water provision.



Cheiridopsis brownii

This species is a late winter flowering plant. Cheiridopsis grow mainly from August to March but they quite like an early drink in late June/early July. In the main they are reasonably easy to grow using an open compost to prevent causing root rot. The name comes from the Greek *cheiris* meaning sheath. I have to admit many don't sheathe over in Britain. According to species flowering can be from mid autumn to early spring but they are not easy to flower well in our dull autumns and winters.



Argyroderma delaetii.

This is a summer/autumn/winter growing genus with flowering for the delaetii group being October/November and perhaps into December. Flowers can be from all the colours found in Argyroderma, namely, red/purple, yellow and white. Begin the watering regime in July and continue through to February (avoiding too much in the latter months) after which the plants are allowed to dry out and rest. They should be watered in a miserly fashion at all times as moisture intake is rapid causing the skin to split marking the plant quite nastily with long unsightly scars. The soil mix needs to be open to prevent water retention.



Lithops
bromfieldii



Lithops
salicola
'maculate'



Lithops
aucampiae

Lithops

In the vernacular they are known as living stones or flowering stones as they merge with the surroundings in which they grow. They flower readily from a young age. Most Lithops are easy to grow if you follow the simple rule of watering from June to October. Ample water early in the season but easing off once reaching September. Use a well draining compost so that the roots are never waterlogged. Yellow flowered species will begin flowering in July and white flowered species follow in August and September.

Lithops
salicola
'Sato' or
'Bacchus'



Lithops
julii ssp fulleri
v. rouxii



Lithops
hallii
'Green Soapstone'





Cylindrophyllum tugwelliae

Cylindrophyllum is derived from the Greek *kylindros* meaning cylinder and *phyllon* meaning leaf on account of the typical growth form. As a genus they are happy growing and being watered from March to October. Use an easily draining compost as they do not like to sit in soggy soil. Flowering is from mid to late spring . Flower colours for the genus as a whole range from white through yellow to pinkish. Flowers are borne singly and are large.



Conophytum herreanthus

Along with Lithops, Conophytum is the most widely grown genus of the mesemb family. The pictured specimen is completely different to the vast majority of the genus in appearance as it has triangular leaves. Like all in the family it grows happily from mid July through to the following March. Flowers for this species, pink with a white centre through to pure white in colour, usually appear in September and October. Different species will flower at different times so that a large collection will provide floral colour over a prolonged period though a good many flower early in the growing season. Overall, Conophytums are not hard to grow, though there are some species that buck this trend. In cultivation they may lose the centre of the plant with age when it should be broken up and repropagated. They take easily from cuttings.



Frithia pulchra

The genus is named for an avid plant collector, Frank Frith. In habitat all that is visible of the plant are the leaf tips in the same fashion as Fenestraria, which it resembles but is not related to as it grows in North West and Gauteng provinces (north east of South Africa) which is well away from the far western home of Fenestraria. The two recognised species flower in summer and into autumn and should be watered from June (earlier in hot weather) to December. With age the rootstock will thicken. Flowers are usually purple or white though orange yellow forms do occur.

Part 2 Mesembs in habitat

Phyllobolus oculatus





Cheiridopsis peculiaris

This photo and the next were taken in September 2015 near the town of Steinkopk in the Northern Cape, at an altitude of 920m.



Cheiridopsis peculiaris

The genus *Cheiridopsis* is named after the thin, papery sheath that covers the plant in the resting season. They grow in the winter rainfall zone on the western edge of South Africa and southern Namibia.



Conophytum pellucidum

This genus of about 100 species has a wide distribution across the Cape Provinces and southern Namibia, mainly in areas where rainfall occurs during the winter months. They are small, compact and usually clumping plants, sometimes with small windows on the upper surface of the leaves. They are often found growing on quartz rock.



Conophytum pellucidum

Having a wide distribution covering a strip about 150km long, centred on the town of Springbok, it is found in flat grit pans, quartz and rock crevices. The flowers are generally white, sometimes pink in colour. The windows on the upper surface are usually considered helpful to let light into the plants to aid photosynthesis but recent research suggests they may have a more important role in emitting excess heat to prevent the plants from over-heating.



Faucaria tigrina

Faucaria is named after the Latin word for jaw and refers to the teeth on the leaf margins. It grows mainly in the Eastern Cape but does cross into the Western Cape. The flowers are usually yellow but *F. candida* has white flowers. In habitat they grow near the boundary of the winter and summer rainfall zones so often receive sparse rainfall during spring and autumn.



Faucaria bosscheana

Near Graaff-Reinet, Eastern
Cape

We often think of red
colouration in mesembs as
being due to excess sun and
its associated heat stress.
However, in habitat, many
mesembs have red and green
coloured plants growing side
by side.



The genus Lampranthus

This genus can generally be found within about 100 kilometres of the coast across the three Cape Provinces and into the southern tip of Namibia. It contains over 200 species that can be difficult to identify. Flowers are normally large. They are white through to red and purple.



The genus *Lampranthus*

This *Lampranthus* was found growing in a flat, sandy river bed about a kilometre from the coast near to Alexander Bay in the Northern Cape.

In recent years they can often be found in garden centres with the alpine plants but appear not to be fully hardy in the British climate.



**Stomatium
beaufortense**

Near Laingsburg, Western
Cape

The name is derived from the Latin for mouth. The flowers are yellow or sometimes white. They are spread across the arid interior of South Africa and are often found on high ground. Flowering time is spring to early summer. The flowers open later afternoon and often remain open after dark. The flowers may emit a pleasant, musky odour.



The genus *Stomatium*

S. alboroseum from near Frazerburg. Common on flat, sandy ground with small quantities of limestone or sand overlying limestone rock.



S. erminium from near Graaff-Reinet. A dubious name for a plant collected by Haworth. Known for its shallow, spreading teeth.



Part 3 Mesembs on the show bench





When mesembs are mentioned everyone thinks that means Lithops and Conophytum

When I first went to the North-West Mesemb Show I thought the same.

By seeing them on show, you realise there are lots of other types of mesembs.

Mesembs have been growing in popularity over the past ten years or so and it has been nice to see so many more people taking photos of them at the show.





They grow on the same principle of a pair of leaves emerging from between the previous pair.

Mesembs come in all shapes and sizes and a show tries to cater for that. By having them all arranged in similar groupings you can see how they are similar to each other and also different from each other.





The North West Mesemb Show has 41 classes which covers 90 different genera which is the greater majority of the genera known and available to the growers.

Most classes are for a single plant.

Eleven classes ask for multiple plants per entry.

Judging of the show usually takes around 90 minutes.



These two pictures show how many mesembs work. The windows on top of the leaves lets in light so that the plants can undergo photosynthesis.

It is a reminder to make sure you do not always look down on your plants – occasionally it pays to see things from their perspective.

The new leaf pair emerging is shown forming between the previous years leaves.





Some classes have multiple plants.

Here are nine different Conophytums.

Some classes have plants of different genera.

This is partly to show the judge that the exhibitor can successfully grow a range of mesembs and not just one genus and also to give the miniature plants a chance in the show.

Having plants in a grid or single line like this can make them tricky to photograph.

It is sometimes is hard to get all the plants in focus.



Some plants fill large bowls and others only need a tiny pot.

In cultivation many Fenestraria can be much bigger than in habitat. In their natural terrain the tips of the leaves are level with the surface of the sand.

The Conophytum on the right is in desperate need of a bigger pot.





This is neither a Lithops nor a Conophytum, as its appearance might suggest – it is a Muria (now recognised as Gibbaeum) and are difficult to grow to this size.



Pleiospilos are some of my favourite mesembs to look at – they look almost like they have been around from pre-historic times.

This is the same plant photographed from the same angle in different years.



The bottom left picture is of the same species but a much younger plant.

Pleiospilos similans



Let's be honest, some mesembs can look a little leggy and straggly which makes one wonder about their appeal.

Some form huge mounds of tangled leaves and others seem to want to grow in every pot apart from its own.





Above, *Conophytum herreanthus* has large triangular leaves instead of rounded ones. Unusually for the genus the leaves of this species are not pressed tightly together.

Some *Conophytums* have atypical growth habit.

Conophytum burgeri, below, is one of these because it has a very small central fissure and does not clearly display two leaves.





Many mesemb form handsome clumps, either warty or smooth.

(top left) Aloinopsis

(top right) Titanopsis



(bottom left) Conophytum



(bottom right) Cheiridopsis



All of the mesembs placed on the show bench have been lovingly grown to the best of their ability by the entrants. They are a testament to the beauty produced by nature that we cannot improve upon.

Many mesembs form handsome clumps, with leaves either warty or smooth.



(top left) Conophytum

(top right) Schwantesia

(bottom left) Faucaria

(bottom right) Lithops



Seeing the detail

The more you look at them the more details you see.

Every so often it is worth switching the camera to the macro setting and really looking closely at the plant leaf detail.



Sometimes they are smooth with patterns, others have teeth or warts and a few have many fine hairs.



(above left) Lithops have various different patterns of windows to allow for photosynthesis. Why is the pattern different for each species?

(above right) Fenestraria is named for its windows. The common names for it are vensterplant and baby toes.



The majority of mesembs have names that the locals know them by.



Mesemb flowers come in a wide variety of colours from white through to yellow and on into orange, pink, red and purple.

Commonly called mid-day flowers because many open around noon each day and remain open until sunset.

Only a small minority open in the morning or evening.

A few Conophytums and Stomatiums have flowers that open after dusk.



The North ...
Hosted by BBSA
Class 40. A mesemb garden (an artistic
display of 4 or more species in a suitable
container)



It was suggested that we introduced a class where people could use their ingenuity and creativity to make an interesting display.





If you have enjoyed this presentation please let us know as we will endeavour to produce more.

For more information visit:
www.bcsm.manchester.org.uk/home/ozm

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