CHS NEWS

August 2017

NEXT MEETING

Monday, 4 September 2017 at 20:00 at The Athenaeum, Newlands.

R10 for members; R20 for visitors.

ALTERNATIVE PLANT SPECIES TO REPLACE THOSE WE KNOW.
WATER GUZZLERS OUT – DROUGHT-RESISTANT PLANTS IN!

Morné Faulhamer of Super Plants fame will advise us on what plants we should be using as we move into a future of very dry summers and not so wet winters.

For those who attended the meeting on the 7th, here is an apology from Ernst:

"I confused my talk with taking you through here (outing on the 31st). I said to the people here yesterday (7th) it was strange that no one arrived and thought perhaps something went wrong. I was right, but *I* made the terrible mistake. Please convey my feelings to the members. Please forgive me for letting you all down."

FORTHCOMING OUTING

Thurs, 31 August at 10:00 to visit the gardens of Babylonstoren and, hopefully, to see the river of Clivia. R10 entry fee. There are still a few places left. Let Glenda have your name by the 28th.

REPORT BACK

August Plant Table:
This month's selection came from the following suburbs:

Constantia garden – watered from borehole once a week for 5 minutes:
Bilbergia and *Aechmea gamosepala*, both Bromeliaceae. These epiphytes grow up in trees in South America – very much like orchids would do in the east. These grow very much in the forks of trees with their roots in the leaf litter. When they flower they're quite spectacular, but out of flower they're as interesting as an orchid or dead bulb. But, you have to love them.

Camellia – has been growing in a pot for approx. 5 years and survives on grey water and rain

Kirstenhof gardens – watered with wellpoint water
Gaura – still flowering after 2, 3 months?

Euryops virgineus (IND) – grows to 1.5m; clusters of yellow daisy-like flowers at branch tips in winter/early spring.

Euryops abrotanifolius? (IND) – grows 1m to 1.5m; grey-green leaves; yellow dais-like flowers; can cope with no water at all.

Psychotria capensis (IND) – from southern Cape. Shrubby evergreen, multi stemmed; yellow flower in clusters in Spring; berries go from dark green to yellow to red to black; takes shade or sun; grows to 3m.

Lakeside garden – municipal water (collected in buckets) and rain

Camellia "Prof Sargeant"

Diep River garden – nothing more than rain
Chamelaucium "Geraldton Wax" – a survivor. More common forms of Geraldton Wax, which come from Australia, seem to be much tougher than the very exotic looking plants that Arnelia are producing, which are very molly-coddled, very forced and it's a battle to get them established in many gardens in the suburbs.

University Estate garden – only rain
Aloe tenuior (IND) – very hardy but will thrive on a bit of extra care.

Sea Point garden – rain water collected in tank
Lachenalia Ronina (IND) – bulb purchased at Kirstenbosch. Dormant in summer; spring flowering; full sun; requires water in growing season. Like most hybrids are incredibly vigorous. The leaves are enormous and the flowers almost like a small Hyacinth. These were produced at Nieuwoudtville for a number of years.

Pinelands garden – only rain
Gladiolus priorii (IND) – grows from Saldanha to Hermanus. Corms came from Kirstenbosch in 2015. Usually flowers May/June but late this year due to lack of rain.

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https://www.facebook.com/pages/Cape-Horticultural-Society/779615695489381

Bergvliet garden – borehole water
Tiarella sp – from UK. Shade loving plant grown mainly for its foliage; flowers are a bonus; dappled or complete shade; needs feeding (this plant gets Talborne 2.3.2); good basket subject, but has struggled in the garden bed; needs water to thrive.

These plants were on display but had no information slips attached:

Ifafa lily (*Cyrtanthus* group) (IND) – Summer rainfall bulb; come in yellow, apricot, peach. Do need rainfall during the year.

Tulbaghia (IND) – fragrant; wide range of species in the genus.

Hybrid Aloe (IND) – these have been fantastic this year and the hybrid aloes that are being grown are going to be quite a good mainstay while we are so drought-stricken.

Hibiscus – white

Sparmannia (IND) – probably needs watering throughout the year

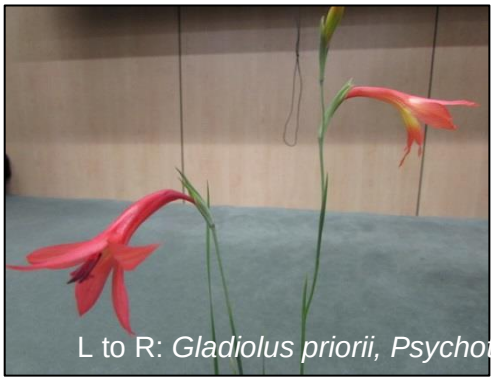
Hebenstretia (IND)

Leucadendron (IND)

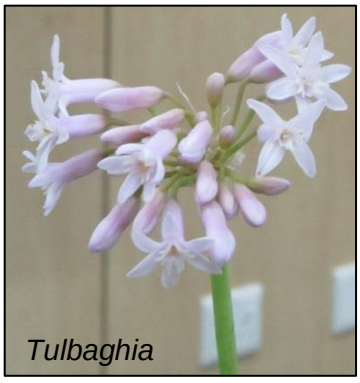
Jenny noted that it looks as if all the yellow flowers are flowering together. It is often true that the pollinator will do all the yellow flowers and, a month or two later, the colour scheme changes entirely from yellow, then to pink and to white.




L to R: *Euryops abrotanifoli*, *Lachenalia* Ronina, *Cyrtanthus*




L to R: *Gladiolus priorii, Psychot*a capensis, Tiarella sp


Tulbaghia


Leucadendron

JENNY'S CHOICE FOR AUGUST

Exotic

Cherry's unnamed Camellia

Lakeside garden – municipal water (collected in buckets) and rain

Indigenous

Sabina's *Scadoxus*

Constantia garden – "This is one of 10 flower heads!" says Sabina.

Annual Book Prize Winners – Part 2:

Sihle Ngxabi has achieved a hat trick by being awarded our Book Prize for the third year in succession. He attained the highest marks at the end of his 3rd Year in 2016 (with an 82% average and 6 distinctions).

Sihle tells us: "*My research topic for my BTech is based on overcoming the water challenge that we are faced with in South Africa, by regulating plant nutrients available in the soil. This is very interesting because we can reduce the demand for irrigation. I would also like develop and grow in that aspect of the industry.*

Currently I am a student tutor at CPUT offering Tutorial sessions and mentorship to struggling undergraduates. I enjoy helping others realize the importance of hard work."

Well done, Sihle! Keep up the good work. We hope to see you again next year.

Flower and Garden Show Trophies:

Our Chairman – and Trophy Custodian – has made an appeal to all last year's trophy winners:

Although there won't be a flower show this year, we need to get all the trophies back into storage. Please bring them to the next meeting, or give me a call to make an arrangement to deliver them at an outing or to me. My number is 021-531-0711. Thank you.

Errol Scarr

Seed Swopping

The Seed Box now contains, among others, *Antigonon leptopus* (Coral vine; red Basil; dwarf Marigolds; Namaqualand daisies; Love-in-the-Mist; 2 sorts of poppy ; gold tomatoes; and an unusual edible plant called a Tomatillo, a sort of Physalis. There are seeds for salad greens –just right for baby leaves, or, if there are too many in a packet for one person to grow, why not share with a friend?

It would be helpful if donors would write a word or two on the envelope as a guide to the lesser-known plants: can anyone let us know the colour and size/shape of *Aloe polyphylla*, and whether it likes direct sun?

Speak to Jane Robertson if you have any questions.

Library

Our library trolley is full to overflowing – and there are more books to come. It is also getting very heavy with the weight of our wonderful books.

Does anyone have a bookcase/cupboard going begging for us to split all the books over two cupboards? The space allocation we have at the Athenaeum is 730mmW x 1000mmL. Some of the books we have are rather big and in order to accommodate them, shelves need to be at least 300mm deep with the space between the shelves at least 360mmH.

If you have something suitable you wouldn't mind parting with, please let Glenda know.

WEEKEND AWAY: 22 – 25 September 2017

A talk on the flora of the area by Prof Sue Milton-Dean, a bring 'n share supper, visits to the Prince Albert Garden Club members' gardens, a walk through Wolwekraal reserve and a hike with the local hiking group have been organized, with plenty else to do. There are still a few places left, so please speak to Glenda.

ANNUAL PLANT SALE

9 September 2017 from 09:30 – 14:30 at 11 Sonnet Quay, Marina da Gama

I do hope you've all been beavering away on plants for the sale – this makes quite a lot of money for the amount of work that goes into it, AND it makes us happy too by helping to keep our subscriptions down! There's still time to pot up those self-sown shrubs, trees and perennials, so do please scour your gardens for plants to pot up. Remember, nothing in your garden is too simple or too ordinary to be sold at the sale.

We also need seeds, bulbs, corms, rhizomes – and people are happy to buy them as they are; we don't have to pot them.

Plants may start arriving from Monday, September 4 – do please phone first to make sure we're here. If you're away for the day of the sale, please give me a ring to make arrangements re delivering your plants earlier.

Plants should please arrive with plants labels on them...

… on strips cut from yoghurt containers or labels stuck on the pots (remove old labels). This makes our lives so much easier!

We need helpers on the Thursday and the Friday mornings, when we sort plants and then price them. It's a very pleasant exercise and there's lots of tea and delicious things to eat – I'm not ashamed to bribe you with food to get you here!

We also need helpers on the Saturday for dealing with the selling, while Glenda and Andrew handle the money.

And, if you're not able to help on any of the days, come and buy, and bring your friends and neighbours. There will not just be potted plants for sale, but easy-to-grow cuttings, roots and tubers – *Dietes bicolor* (wild iris), *Aloes*, climbing *Aloes*, succulents, *Portulacaria* (Spekboom) – all ready to plan. These will be available very inexpensively, making stocking up an economical way to fill those empty spaces with tough, waterwise plants.

If you're needing pots or soil, we have masses for you. Happy potting up!

Melanie
082 550 2618 / 021 788 2840

JOURNAL OF A HAPHAZARD GARDENER –AUGUST/SEPTEMBER 2017

The section of garden that is going to be transformed into a gravel garden has been lying fallow for the last three months and it has sprouted a prodigious number of weeds. While pulling them out I counted 15 different varieties of the noxious beasts. The onion types have been particularly prolific and produced hundreds of babies. I have had to be particularly careful in pulling them out as the slightest pressure on the stem means that the bulb with all its many offsets is left in the ground.

As promised this month I am going to finish writing about the succulents on the list provided by Starke Ayres Garden Centre. In the *Lampranthus* family there are over 200 species. They come in a nice range of colours: purple, red, pink, orange, yellow and white. *L. multiradiatus* (Garden Mesem) in our garden has not come into flower as yet but when it does the daisy-like flowers cascade down the wall bordering on to the front pavement. It occurs naturally on the Peninsula. They are water wise and drought tolerant. It is easily and quickly propagated from cuttings in the summer. I had not realised how many varieties there are of Mother-in-law's tongue (*Sansevieria):* the picture (below left) shows two from our garden. *Sansevieria* grows well in shade and can be propagated from leaf cuttings.

The other local plants mentioned on the list are *Othonna, Ruscia* and *Tylecodon* which I don't have in my garden. I looked them up on PlantZAfrica. (The site has a new address www.pza.sanbi.org) *O. triplinervia* has 'striking yellow flowers' and 'gets better looking with age'. What more could one want? *R. spinosa* is a 'striking plant' with 'lovely purple flowers'. *T.paniculatus* (Botterboom) is a Karoo-type shrub with an aptly descriptive popular name. All these plants are 'easily propagated from cuttings'.



A non-local family of succulents that grows very successfully in our garden is *Sedum. S.morganianum* (Lamb's tail) is a rewarding plant for the hanging basket. It is also easily propagated: every scrap of the plant is prepared to form roots. They also

thrive in the sun, come in many colours and are good in hanging baskets or pots. This rosy-leafed variety is *Sedum lineare variegatum* (above centre). Another water wise plant for a hanging basket is *Senecio radicans* (above right). The yellow flowers make a fine show as they fall over the side of a basket or pot.

As mentioned last month winter flowering bulbs are another plus in a water wise garden. As they lie dormant in the summer, dry old Cape Town suits them fine. The *Lachenalia* hybrids have been adding colour to the garden (below left). Another visitor is *Leucojum vernum* (misnamed "snowdrop"). Their characteristic small white flowers dotted with green markings have made a welcome return. Another plus is that they have been left undisturbed for many years. Another easy customer is *Veltheimia bracteata* (Glossy forest lily) which loves the deep shady spots. It tolerates dry soil and loves an occasional layer of compost. The one in the picture (centre) self seeded. Another "lily" that tolerates shade is the faithful *Zantedeschia aethiopicum* (Arum lily). So far it has survived the dry conditions by going dormant in the summer and even though it is in the shade it flowers well but late in the spring and summer. The big disappointment in the garden at the moment is the *Chasmanthe floribunda* which has produced a great number of large leaves but no flowers. Why I wonder?



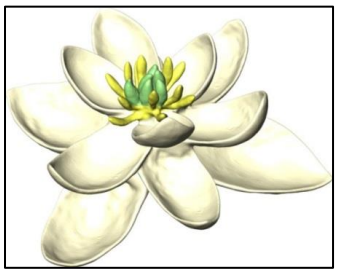
I shall finish this month with some plants that survived the drought so far and have welcomed the winter rains. *Polygala myrtifolia* (September bush) is covered in flowers (above left): the bees have been busy. This hardy bush loves the wind and it self-seeds. This yellow bush (*Euryops)* is another self-seeder (below left). The flowers look like tiny hands. Restios are only found in the Southern Hemisphere and the majority are found in the fynbos. This *Elegia tectorum* was misplanted*:* the tree that shaded it for many years has recently been cut down and it loves its new sunny position (far right).


It is not necessary to go to the West Coast to see mass displays of spring flowers: Signal Hill and Rondebosch Common are much nearer home: and, dare I say it, there is a minute display in our own garden.

I used the following references:

- Wilkinson, Jenny *Gardens in the sand*
- www.pza.sanbi.org This site has been given a makeover and I found it easy to negotiate after I had got used to the changes.

THE FIRST EVER FLOWER



The first ever flower, 140m years ago, looked like a magnolia.
The early flower had more numerous whorls suggesting flowers have become simpler over time.

The ancestor of magnolia. And oak trees, grass, tomatoes, daffodils, and much more. (Hervé Sauquet & Jürg Schönenberger)

Mario Vallejo-Marin, Associate Professor in Evolutionary Biology, University of Stirling

Although most species of plants on Earth have flowers, the evolutionary origin of flowers themselves are shrouded in mystery. Flowers are the sexual organs of more than 360,000 species of plants alive today, all derived from a single common ancestor in the distant past. This ancestral plant, alive sometime between 250m and 140m years ago, produced the first flowers at a time when the planet was warmer, and richer in oxygen and greenhouse gases than today. A time when dinosaurs roamed primeval landscapes.

But despite the fact dinosaurs went extinct 65m years ago we have a better idea of what an Iguanodon looked like than of how the ancestral flower was built.

The oldest flowering fossil, a 130m-year-old aquatic plant found in modern day Spain. (Gomez et al / PNAS)

This is partly because these first flowers left no traces. Flowers are fragile structures that only in the luckiest of circumstances can be transformed into fossils. And, as no fossil has been found dating back 140m or more years, scientists have only had a limited sense of what the ultimate ancestor would have looked like. Until now.

A major new study by an international team of botanists has achieved the best reconstruction to date of this ancestral flower. The research, published in Nature Communications, relies not so much on fossils as on studying the characteristics of 800 of its living descendant species.

By comparing the similarities and differences among related flowering plants, it is possible to infer the characteristics of their recent ancestors. For example, because all orchid species have flowers in which one half is the mirror image of the other (bilateral symmetry), we can suppose that their ancestor must have had bilateral flowers. By comparing those recent ancestors to each other it is then possible to go a step further back in time, and so on, until eventually we reach the base of the flowering plants' family tree.

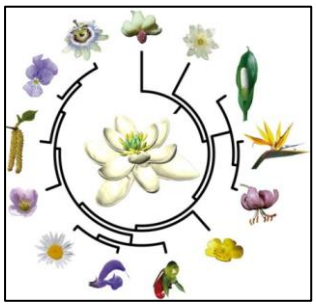
Orchids are symmetrical (Joanna Dineva)

So what did it look like?

In some respects, the original flower resembles a modern magnolia: it has multiple, undifferentiated "petals" (technically tepals), arranged in concentric rings. At its centre there are multiple rows of sexual organs including pollen-producing stamens and ovule-bearing ovaries. It is hard to resist the temptation to imagine ancient pollinators crawling in this flower, collecting pollen grains while unknowingly helping the plant to produce seeds.

A controversial sex life

The new study helps to settle the controversy about whether early flowers had separate sexes, or whether both male and female reproductive organs were combined in the same flower. Previous evidence pointed to different answers. On the one hand, one of the earliest diverging lineages of flowering plants, represented nowadays only by a rare shrub from the Pacific island of New Caledonia called *Amborella*, has flowers that are either male or female. On the other, most modern species combine both sexes in the same flower.



All living flowers ultimately derive from a single ancestor that lived about 140m years ago. (Hervé Sauquet & Jürg Schönenberger)

The authors of the study settle the question and show that the ancestral flower was a hermaphrodite. This means that early flowering plants could reproduce both as a male and a female. Combined sexes can be advantageous when colonising new environments as a single individual can be its own mate, and indeed many plant species colonising remote oceanic islands tend to be hermaphrodite. Maybe the combination of sexes helped early flowering plants to outcompete their rivals.

The devil's in the detail

Despite the apparent similarity with some modern flowers, their ultimate ancestor has a few surprises up its sleeve. For example, botanists have long thought that early flowers had floral parts arranged in a spiral around the centre of the flower as can be seen in modern species such as the star anise.

The new reconstruction, though, strongly suggests that early flowers had their organs arranged not in a spiral, but in series of concentric circles or "whorls", as in most modern plants. The early flower had more numerous whorls, however, suggesting flowers have become simpler over time. Paradoxically, this simpler architecture may have given modern plants a more stable base upon which to evolve and achieve more complex tasks such as sophisticated interaction with certain insects as in orchids, or the production of "flower heads" made of dozens or hundreds of simpler flowers as in the sunflower family.

Although now we have a good idea of what one of the earliest flowers may have looked like, we still know little about how that flower came to be. The detailed steps leading to its evolution are unknown. Perhaps we will have to wait for the discovery of new fossil flowers spanning the gap around 250m-140m years ago, before we can understand the very origin of what is the most diverse sexual structure on the planet.

Original article can be found at https://theconversation.com/revealed-the-first-ever-flower-140m-years-ago-looked-like-a-magnolia-81861

Source: https://gosouth.co.za/first-ever-flower-140m-years-ago-looked-like-magnolia/

Photos: Andrew and Glenda Thorpe, Peter Henshall