Issue 47 December 2025

Cactus & succulent REVIEW

The online magazine for cactus and succulent enthusiasts

Contents

The front cover features the lovely flowers of *Lewisia* 'Pinkie' included in Brian McDonough's article *Lewisia*. See page 15

Editor's NOTES

Welcome to the December issue of the Cactus and Succulent Review

Sulcorebutia (*Weingartia*) *canigueralii*

As December approaches, and the days get shorter and darker, do not despair. I am confident that this issue of the *Cactus and Succulent Review* will brighten any December day with its colourful array of flowers.

Kathy Flanagan shows us some unusual flower colours in *Sulcorebutia*, while Laurie Poulson celebrates the first flowering of his *Cochemiea pondii*. Other items include Phil Crewe's introduction to *Tephrocactus verschaffeltii* with its stunning orange flowers and a host of beautiful and often delicate flowers in Brian McDonough's article on *Lewisia*.

Do you fancy a trying a new cactus-based drink as you read this issue. I have received an email from a company called Cacto introducing a range of sparkling canned drinks based on opuntia fruit purée. They come in four flavours, original, ruby pineapple, kiwi and strawberry and white peach and claim to be low in sugar and calories.

I have not tried any of these, in fact I can't see any stockists listed on the company's website, but if you'd like to check them out the drinks can be purchased directly from the makers. https://cactodrinks.com/

Sheila Cude

Cactus & Succulent REVIEW

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The *Cactus and Succulent Review* is a free quarterly magazine published in pdf format in March, June, September and December.

Contact Sheila Cude

Back issues

All back issues are available to download from the website.

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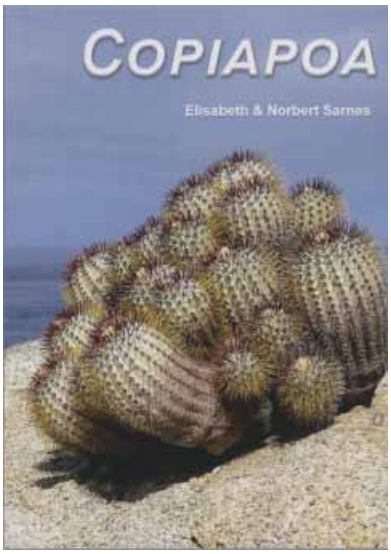


Copiapoa

by Elisabeth & Norbert Sarnes

Hardcover; 315mm x 155mm; 479 images and 60 maps.
English language (translated from German). Self- published.
English edition distributed by The Gordon Rowley Foundation.
Price £30.00 (plus £5.00 p&p within UK)

Reviewed by Graham Evans

To most cactophiles in the UK, Elisabeth and Norbert Sarnes are probably best known for their impressive work on the cacti of Argentina, in particular the genera *Austrocactus* and *Pterocactus*, where their diligent explorations have led to the discovery of several new species.

Their knowledge, enthusiasm and especially Elisabeth's outstanding command of English have also made them among the most popular speakers at UK conventions such as the Cactus Explorers Weekend and the Tephrocactus Study Group events, most often on Argentina-based subjects. So it came as something of a nice surprise to learn Elisabeth and Norbert were writing a book on the iconic Chilean genus *Copiapoa*.

The genus itself, of course, needs no introduction, some of its highly desirable species residing in the collections of most serious growers; and it is at this readership the book is principally aimed. It is neither an introduction to *Copiapoa* nor a cultivation guide. It assumes readers have a degree of prior knowledge that they are looking to expand and already have experience growing the plants, seed-raised examples of which are, as the authors observe, not difficult to cultivate. The book is also not a taxonomic revision of the genus concerned with detailed descriptions or imposing a new nomenclature. Instead, it is a well-illustrated survey of *Copiapoa* species in habitat, sharing the authors' experience, observations and knowledge gained through just under a dozen visits to Chile over 20 years or so.

After a few pages explaining its inspiration, background, purpose and offering tips to potential visitors to Chile, the book settles into a review of the species in nature. The arrangement is alphabetic rather than geographic and each taxon is afforded a few to several pages generously illustrated with high quality photographs showing the diversity of the plants.

The text is informative and easy to read, offering locality details, brief history and broad rather than detailed descriptions where relevant that highlight distinctions and facets of interest. These are particularly useful when comparisons are made to clarify the reasoning behind some of the newer, less familiar names. The nomenclature is modern and pragmatic, referencing the works of Ritter, Charles, Schulz, Schaub & Keim and Larridon, among others, giving fair credence to many newer taxa as well as established favourites. In all, 60 taxa are covered with only limited reference to confusing synonyms where this is necessary. Perhaps the most interesting is a potential solution to the Knize conundrum that is *Copiapoa* 'goldii', one of the more notorious invalid names formerly offered in this plant dealer's catalogues.

There are minor quibbles. Most pertinent for this reviewer is the assertion that if *Copiapoa atacamensis* and *C. boliviana* are considered the same species the former has priority because Harry Middleditch coined it two years prior to Ritter's combination of the latter; however, *C. boliviana* is based, as the authors acknowledge, on *Echinocactus bolivianus* erected by Pfeiffer in 1847 (when its habitat was part of Bolivia rather than Chile), which makes it the older name at species rank and would validate *C. boliviana* over *C. atacamensis*. The Index of Names at the back of the book is also largely unhelpful, being merely a list without page numbers and lacking referrals for unaccepted names.

The book is a handy size and production is very good, with glossy laminated board covers and high quality printing. The whole is thread bound, which means it will open completely flat and will be more durable than many glued books.

Copiapoa is an engaging work that can easily be read from cover to cover or dipped into from time to time to research or clarify. The book is eager to share a love of the plants and their habitat, full of keen observation, interesting information and packed with images, so much so that a larger format might have been preferable. It should appeal to all those wanting to increase their knowledge of one of the cactus family's most impressive genera and, for the cactus tourist looking to visit copiapoas in their natural environment, the book takes on even greater significance and may perhaps become an essential reference.

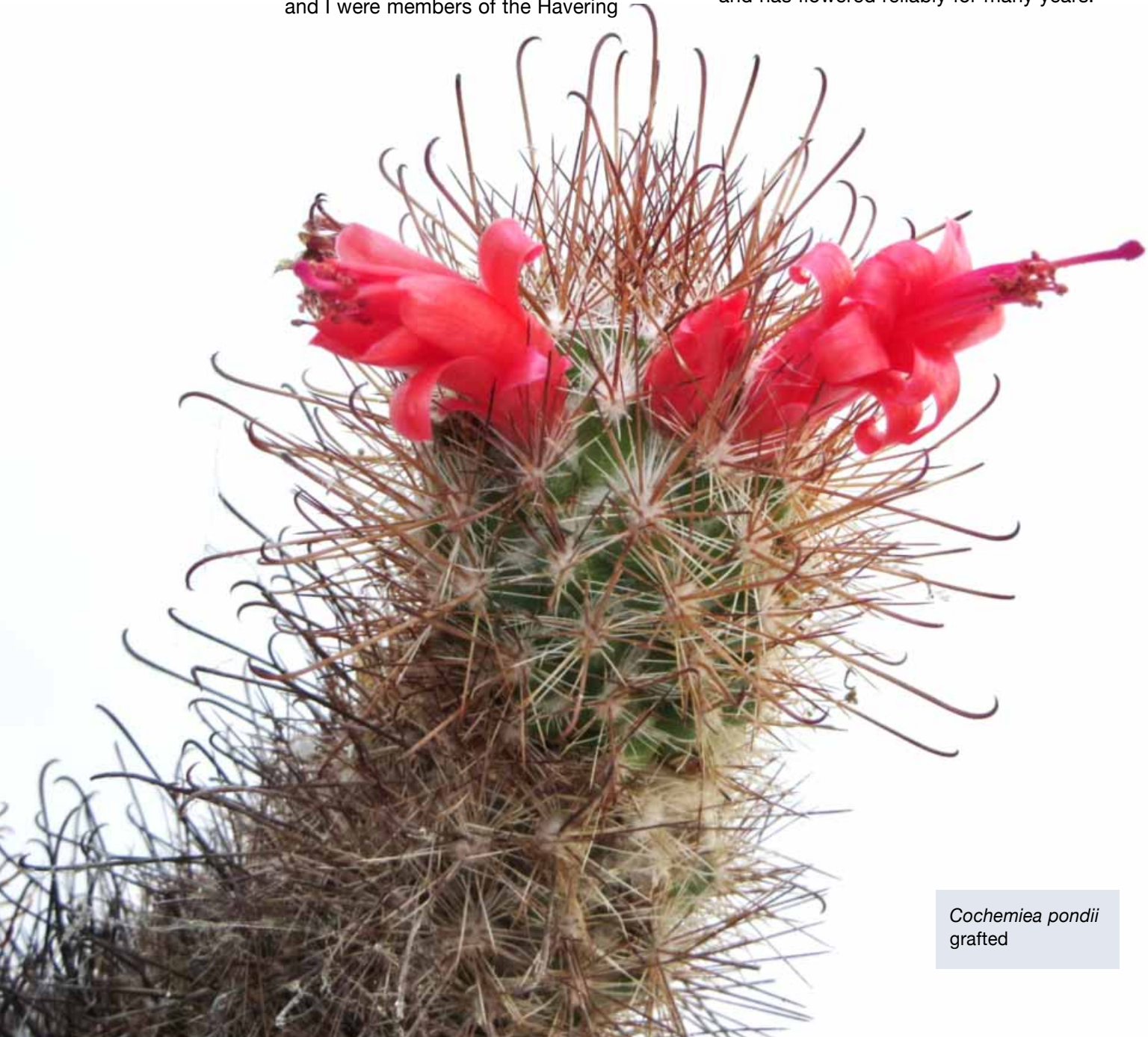
Copies are available directly from the The Gordon Rowley Foundation or from Keith's Cactus Books

First flowering of Cochemiea pondii after 50 years

by Laurie Poulson

I have grown the five long-standing members of the genus *Cochemiea* for many years. They all come from Baja California in Mexico.

My *C. setispina*, which comes from the central mountains, was acquired from Dave Brewerton in 1974 when my late wife Jenny and I were members of the Havering Branch of the British Cactus and Succulent Society (BCSS). I added two plants of *C. pondii*, which is found on the Isla de Cedros in the South, in 1975, one from Abbey Brook Nursery and the other from Jumanery. This second plant, shown here, is grafted on some sort of cereoid species and has flowered reliably for many years.



Cochemiea pondii grafted

Cochemiea setispina

Then, the notoriously untidy *C. poselgeri* came from Bill Stevens later that year. My younger members of the genus are the straight-spined *C. halei*, from Magdalena Bay, bought from Uhlig in 2004 and my *C. maritima*, found on the Pacific coast, from Abbey Brook also in 2004. Despite its label, it might actually be a *C. setispina* as it lacks the darker central spines usually found on *C. maritima*.

Cochemiea halei

Cochemiea poselgeri

I did have a much older *C. halei*, probably from Holly Gate Cactus Nursery in the 1970s, but we moved from Ilford in East London to Haslingden in Lancashire (north-west England) in 1977. We sold our house in the summer but did not move into the new one until Christmas week.

Meanwhile I found that someone with whom I worked had an empty greenhouse and the plants were moved in. What I did not know was that there was a leak in the roof and my treasured *C. halei* was immediately underneath it. When it came to collecting the plants it was the only casualty. What a shame!

These days the genus *Cochemiea* does not just have those five members. Large numbers of interesting, former mammillarias, particularly from Baja California, have been moved into the genus by Breslin, Wojciechowski and Majure in their reworking of *Mammillaria*, *Coryphantha* and *Cochemiea*, published in the journal *Taxon* in 2021. So now there are over 50 recognised species in *Cochemiea*! These include such species as the former *M. angelensis, M. blossfeldiana*, *M. guelzowiana*, *M. saboae* and *M. theresae*. For me, they tend to be in the category of species that we often class as 'I used to have one of those!'

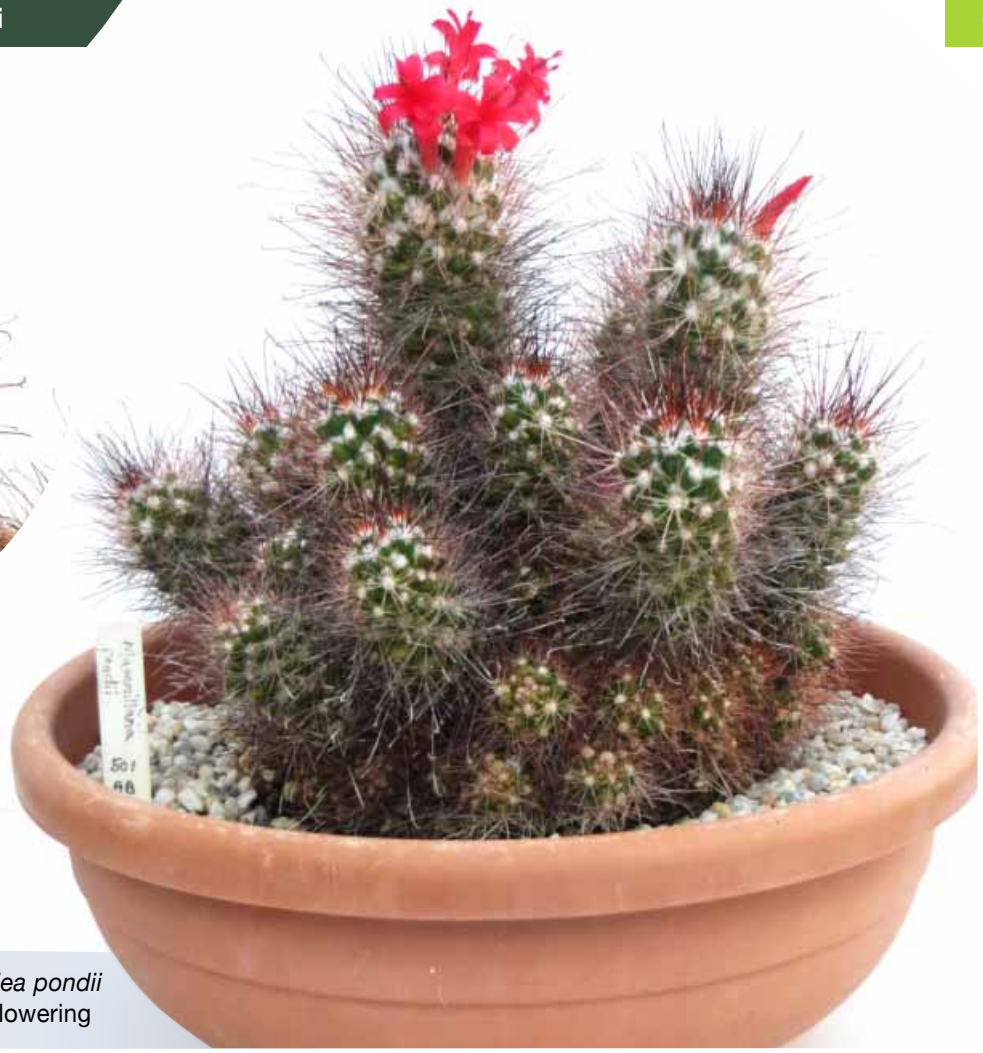
Cochemieas *sensu stricto* have a reputation for being rather shy-flowering, due possibly to needing higher light levels than we can normally provide. I now live on the east coast of England where it is often cloudier than further inland and there are neighbouring trees, so I do the best I can by growing them in hanging baskets high up in the greenhouse.

For the last 50 years this has not been enough, except for one plant, the grafted *C. pondii* mentioned above. Just to rub it in, it normally has three bursts of flowers each year, starting in June, and is in flower again as I write this (in early October).

None of the other five plants, all on their own roots, has ever looked like flowering until this year. Mind you, last year, I was discussing this with another grower who looked up at the plant I have as *C. maritima* and reckoned that there were the remains of a flower, which presumably would have been in bloom while I was away in Australia. I took the plant down the next day and discovered that the 'flower remains' were in fact a dead moth caught in the hooked spines!

The grafted *Cochemiea pondii* with seed pods

Cochemiea pondii first flowering



Cochemiea pondii second flowering

Cochemiea pondii third flowering

My 50-year wait was finally over this year. In June there were flowers appearing on my other plant of *C. pondii*, the one on its own roots! Amazingly, it produced another flush of flowers in late July and then again in early September. Three flushes, just like the grafted plant!

Unexpectedly the grafted plant has produced seed pods and it will be interesting to see if they are fertile. In habitat I understand that they are normally pollinated by hummingbirds and we are a bit short of them here in East Anglia. So, although I did have a bird in the greenhouse the other day (a pigeon), I am not totally optimistic, but we shall see!

So, it's a special 'first flowering' as far as I am concerned and it has been well worth the wait. As for *C. setispina* and *C. poselgeri*, my other 50-year olds, (let alone the 20-year old babies) only time will tell! ■

Photos: Laurie Poulson

Turbinicarpus alonsoi flowering in a 6.5cm pot

Alonso's Turbinicarpus and dried Mexican grass

by Graham Evans

Contuining an occasional series reviewing the genus *Turbinicarpus*

Back when people worked together and it was easier to ferry cacti and their seeds from Europe, the announcement of a new species in the cactus family was always an exciting moment. In my time as a grower, a number of these desirable novelties have been in the genus *Turbinicarpus* and it is two of those than comprise this article: *T. alonsoi* and *T. graminispinus*.

Turbinicarpus alonsoi

T. alonsoi was discovered in the state of Guanajuato in central Mexico in 1994 during an especially fruitful period of exploration in that cactus-rich country that yielded such gems as *Ariocarpus bravoanus*, *Aztekium hintonii*, *Strombocactus disciformis* subsp. *esperanzae*, several *Turbinicarpus* species and the rediscovery of the plant that became *Mammillaria luethyi*.

T. alonsoi was formally described by Charles Glass and Salvador Arias in 1996, the specific name honouring Alonso Garcia Luna who made the type collection. A particularly distinctive turbinicarpus, its appearance in habitat is such that it was initially thought perhaps to be a second species of *Obregonia* or even an addition to *Ariocarpus* but subsequent observations of flowers and fruit revealed its true affinity.

The species is one of the largest in the genus with single heads exceptionally reaching up to 9cm across in habitat. The stems are distinctly tuberculate and pale grey-green in colour. Each small woolly areole has three to five short, slightly curving, more or less flexible, very light to medium brown spines that are normally shed with age.

In cultivation, stems of 11cm or more can be achieved and older plants sometimes offset. The epidermis, more often than not, remains a pale apple-green colour, certainly in most UK conditions, and the spines are normally retained but can be detached with irritating ease if handled without care.

As if its standard appearance isn't enough the crowning glory of this exceptional turbinicarpus is its flowers, which are bright magenta with a paler or darker midstripe. Until the recent arrival of the related *T. nikolae* (2016) it was the only soft-spined *Turbinicarpus* species with flowers in this range, *T. viereckii* and *T*. (*Kadenicarpus*) *horripilus* having hard spines fairly typical of former *Gymnocactus* types.

A young *Turbinicarpus alonsoi* flowering for the first time at 3cm across and showing the attractive midstripe

Turbinicarpus alonsoi is not difficult to grow given the normal Mexican miniature treatment of an open, free-draining mix and lighter than average watering. The latter is especially so early in the growing season to avoid the possibility of unsightly splits appearing if the stem tries to expand too quickly and with older plants when growth has slowed considerably.

Most of the original plants offered for sale were grafted, not unusual with novelties, but this is not necessary. Although such plants progress slightly more quickly and also remain fairly typical, the species grows perfectly well on its own roots and will still flower at just a couple of centimetres in diameter. Older own-roots plants are best left in their pots rather than being repotted regularly as, in my experience, they can take longer than most cacti to settle.

Older plants of *Turbinicarpus alonsoi* grown in full sun sometimes develop glaucous markings

Turbinicarpus graminispinus showing the grass-like central spines curved across the stem and also the floral tube

Turbinicarpus graminispinus flowering for the first time at 12mm across

Turbinicarpus graminispinus

The second subject of this piece, *T. graminispinus,* was described in 2011 by Grzegorz Matuszewski, Vojtěch Myšák and Zdeněk Jiruše. It hails from Nuevo León state in north-eastern Mexico and represents an era of discoveries made and brought into cultivation, sometimes dubiously, by a new generation of Czech and Eastern European explorers.

The species was named for its long spines that protrude from the ground and look somewhat like dried grass (from the Latin '*graminis*', meaning 'of grass'). My original plant was a much-appreciated gift (the name at that time a nom. prov.) from a delightful Czech nurseryman known to be rather partial to dried grass!

T. graminispinus is a genuine miniature reaching only 2cm across in habitat and pulling itself down into the limestone substrate during the dry season. The bodies are finely tuberculate and dark green in colour with a reddish tint in full sun. New areoles have white wool and there are 5-7 mainly downward-pointing white radial spines of about 5mm or so in length. Older plants can have two upward-pointing radial spines that are longer and pale brown. It is the central spines, however, that dominate this taxa's aesthetic; only one to each areole, they are up to 3cm long, yellowish-brown and curve over the body giving the aforementioned effect.

The flowers are interesting too, being up to 4cm or 5cm across, rather larger than the plant body. They are fairly long for the genus, about 4cm, and normally white, although plants with flowers having a pinkish hue are occasionally seen. In my greenhouse, it is one of the most floriferous of the turbinicarpi and rarely seems to be out of bloom during the growing season.

Although far from difficult to grow, it does require careful cultivation to preserve its tiny, compact form. Grafted plants and plants that are overfed or treated to too much water become excessively tall and lose their distinctive appeal, looking a little like *T*. (*Kadenicarpus*) *pseudomacrochele* subsp. *krainzianus* perhaps. Full sun to develop the spines, an open mix, small pots and light watering with little or no fertilizer are recommended. ■

Photos: Graham Evans unless indicated otherwise

The only other soft-spined *Turbinicarpus* with magenta flowers is *Turbinicarpus nikolae* (Photo: Vicky Davies)

A columnar coming of age

by Paul Spracklin

As many regular readers will know, I like to grow my cacti outside. Plants that especially benefit from not having a roof above them are the tall columnar cacti as, if they are hardy enough to take my south-east Essex winters, they can just carry on growing taller and taller.

One such plant is *Trichocereus pasacana*, of which I have a number of gorgeous examples growing away happily in various spots around my garden.

At least, that is what I like to call them. The species continues to be the subject of some sort of taxonomic hokey-cokey having been, at various times, considered to be *Cereus*, *Helianthocereus*, *Trichocereus*, *Echinopsis* and, most recently, *Leucostele*.

Then there is the species name. Purists today would consider this to be *Leucostele atacamensis* subsp. *pasacana* hailing from north-west Argentina to south Bolivia. There is a further subspecies *Leucostele atacamensis* subsp. *atacamensis* the range of which extends into northern Chile. I would that say pretty much everyone knows what plants I am talking about when I say *Trichocereus pasacana*, however, so that is how I will refer to them.

A magnificent *Trichocereus pasacana* flowering in habitat (Photo: Ian Woolnough)

At least, I think that is what they are. I understand there are several columnar cacti that can look rather similar. Often, when rehoming old cacti, the label has long gone – lost, perished or ignored – along with any chance of provenance details; and this was the case with my largest *Trichocereus pasacana*. I wrestled it home in the summer of 2017 with no label but full of promise.

The story of how I acquired it is one of those rare but strangely serendipitous occurrences; one which followed on from when my garden briefly appeared on BBC Gardeners' World in 2016. Away from plants, the other interest in my life is music and I have played bass guitar in a number of bands over the years.

A guitarist in one of my bands was having dinner with a friend of his who, apropos of nothing, said he was watching Gardeners' World the previous year and saw "some lunatic somewhere in Essex" growing large cacti outside. The conversation went along the lines of "I have a large cactus that has outgrown my greenhouse, I wonder how I could get in touch with him". "That's easy," said my guitarist mate, "I am in a band with him".

It was a big plant in 2017, standing at around 2m, having been fed and watered regularly alongside cucumbers and peppers for the previous 23 years. Interestingly it is much larger than another almost identical specimen I have that, when acquired, was documented as 63 years old yet was still just 1.5m tall. Apparently plants respond to food and water! I must try it one day. Anyway, this giant was planted and lashed to some adjacent railings to keep it steady while it settled in.

And settle in it did! With its roots in the ground the growth rate has been an impressive 20cm a year and the brute now measures around 3.3m high. It is interesting to see how the growth has varied according to the season, with larger spines and a fatter body being grown in summer, shorter spines and a slight narrowing of the stem in colder weather, making it possible to see the annual growth quite clearly.

This year I noticed a change, however. Gone are the lengthy golden toothpick spines, the areoles instead sprouting large numbers of straw-coloured trichomes alongside the shorter spines. In silhouette, when backlit the plant has a hairy halo, not a spiny one.

My plant, taken a few years ago, showing the yellow spines

A more recent picture showing the increasing number of trichomes

From a distance the appearance of the stem has changed from yellow – the colour of the spines – to grey. I have not had the pleasure of seeing these cacti in habitat but this hairiness and colour gradient conforms with pictures I have seen of older plants in habitat – in fact exactly as Ian Woolnough's, wonderful picture, shown on page 12, beautifully illustrates.

This leads me to conjecture as to why this change takes place. The most sensible suggestions propose that it is a defence mechanism against being eaten. Young plants arm themselves spikily to deter anything but the most persistent munching but, once out of the danger zone, the plants can relax into a gentler way of life.

This assumes that making trichomes is more energy-efficient than spines in addition to perhaps being a more efficient UV shield. Certainly many examples of high altitude cacti are similarly hirsute. Back when these cacti were evolving, South America was home to many giant herbivores now long extinct. If spiny cacti were on their menu I would not have fancied running into one on a dark night!

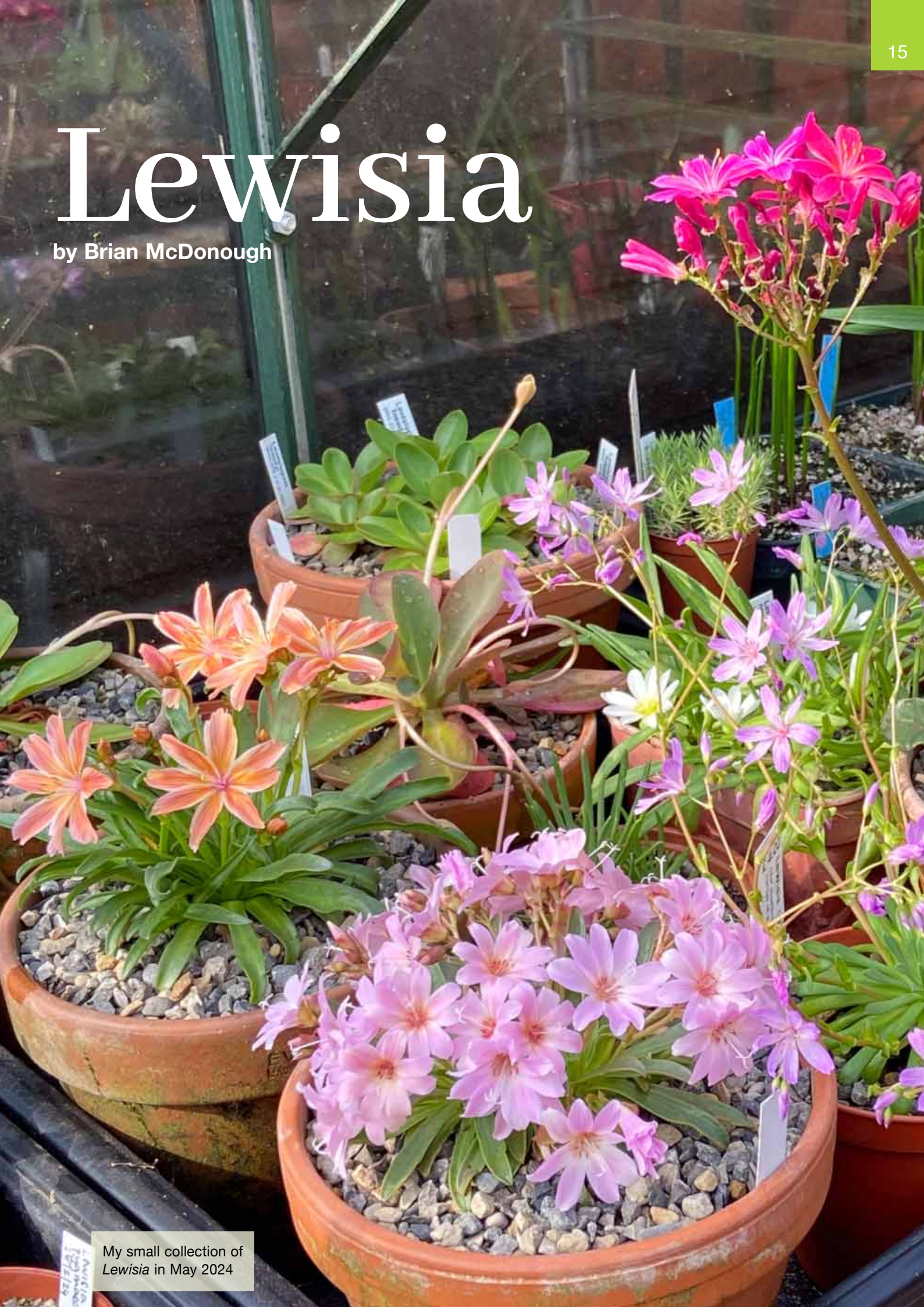
Whatever the reason it is most gratifying to see my *Trichocereus pasacana*, if that is indeed what it is, coming of age and, for me, underscores the joy of growing my plants outside. ■

Photos: Paul Spracklin unless indicated otherwise

My *Trichocereus pasacana* continuing to grow happily outside and showing the change in its appearance

Lewisia

by Brian McDonough



My small collection of *Lewisia* in May 2024

A springtime visit to any garden centre is usually met with a spectacular display of colourful blooms all vying for our attention and hard-earned cash.

Among these there may well be *Lewisia* hybrids and cultivars, which have long been popular as garden centre plants. They can usually be found in the alpine plant section with other low-growing or mat-forming plants.

At one time *Lewisia cotyledon*, in its many forms, was the most commonly seen representative of the genus. Its leaves are drought-resistant, thick, fleshy and fairly rigid. In habitat its flowers are naturally variable, both in colour and markings, so it is hardly surprising that it has been a popular subject with plant breeders for decades. Flower colours range from whites and yellows, through oranges and on to saturated pinks and magenta, with striped petals or solid colour; always vibrant, sometimes shockingly so.

Above and left: *Lewisia cotyledon* hybrids at a Scottish Rock Garden Club show

A *Lewisia* hybrid at a Scottish Rock Garden Club show

Lewisia cotyledon cultivar ‘John’s Special’

Lewisia cotyledon cultivar 'John's Special' showing the thick, waxy-coated, drought-resistant leaves typical of these cultivars

Lewisia longipetala hybrids tend to have softer, neater leaves

More recently, an increasing number of other hybrids and cultivars have become available commercially, although some have been around for quite some time. Just as floriferous and colourful, but a little less brash than *L. cotyledon*, the main protagonist appears to be *Lewisia longipetala*.

Its hybridisation with *L. cotyledon* has imparted a far greater range of flower colours, with subtle shadings and petal markings being more prominent. Foliage, while remaining fleshy, is softer and more regular, making neater rosettes. Many of the hybrids have their main flowering period in the spring followed by a second flush of flowers in early summer.

True *Lewisia* species are rarely seen in the typical garden centre. They are more likely to be found in specialist alpine plant nurseries. As a result they are not propagated in the same quantities as the popular hybrids and usually sell out very quickly, making them difficult to source.

Lewisia 'Pinkie' – a *L. longipetala* × *L. cotyledon* hybrid. See also the front cover

Lewisia cotyledon × *longipetala* hybrids

Lewisia ‘Little Plum’ – new flowers open as orange and fade to pink over time

Lewisia ‘Little Raspberry’

Lewisia ‘Little Peach’

Lewisia ‘Brynhyfryd hybrid’ – white

I grew a few of the small species for a time, around 30 years ago, but my interest was reignited in recent years when I joined the Scottish Rock Garden Club and began attending some of their shows. These events have wonderful displays of plants and usually a good number of nurseries in attendance, so it wasn't long before I had the nucleus of a new *Lewisia* collection. The club's annual seed exchange normally contains some lewisias and is a cost-effective way of expanding a collection.

There are currently 18 recognised species of *Lewisia* which are native to western North America, from north-western Canada, through the USA down to the north-west of Mexico. Growing at high altitudes in 'Alpine-type' meadows or desert-like rocky terrain and sometimes perched on north-facing cliffs away from the intense glare of the sun, such varied habitat has resulted in various adaptations for survival.

All species have fleshy roots, some forming tap roots, affording protection from periods of drought. Some are evergreen and have a 'waxy' leaf surface to minimise water loss.

Other species, living in harsher environments, are deciduous and are 'programmed' to lose their leaves during the hot dry summers, retreating underground until the rains arrive and the temperatures drop in autumn. They need to be kept almost completely dry during the summer.

The fleshy tap root of *Lewisia nevadensis* 'Rosea' about to be repotted in autumn

Lewisia nevadensis 'Rosea' – an uncommon plant rarely seen for sale

A group of the normal form of *Lewisia nevadensis* which is summer deciduous

The genus *Lewisia* was described by Frederick Pursh in 1813 in honour of Captain Meriwether Lewis who collected a number of previously unknown plants during the Lewis and Clark Expedition, commissioned by President Thomas Jefferson, into the Louisiana Purchase and the Pacific Northwest of 1804–1806. One of those plants, collected as a botanical specimen on 1st July 1806, became the type species of the genus, *Lewisia rediviva*.

Being one of the deciduous lewisias it has a well-developed tap root and has been collected as a food source by the indigenous people of the region. It has a bitter taste, hence the common name of 'Bitterroot'.

L. rediviva has one of the widest distributions in the genus but it is far from common in collections in the UK. I began looking for a supplier almost four years ago but the search for *L. rediviva* in the UK has been fruitless, with listed plants always being sold out.

Having no contact with lewisia growers I resorted to sourcing seed from abroad, which I germinated at the start of this year. It was a little worrying to see such small seedlings disappear just a few months after germination, as we moved into summer. Thankfully they reappeared with extra vigour as autumn arrived.

Lewisia rediviva, the type species of the genus, on the show bench in May after the leaves have dried up

Lewisia columbiana – a small evergreen species

Lewisia columbiana – flower

There has been some taxonomic reshuffling over the years (as there always is). *Lewisia* used to be included in Portulacaceae, where it rubbed shoulders with 'Old World' succulent genera *Anacampseros* and *Ceraria,* until that family was completely revised.

Lewisia then settled in Montiaceae along with *Phemeranthus*, *Calandrinia* and the monotypic genus *Lewisiopsis*, created for what was known as *Lewisia tweedyi*, a beautiful species still referred to as *Lewisia* by many. I remember seeing a gorgeous plant back in the day when I grew a few species in the pre-internet era. It immediately went on my 'wants' list but seemed unobtainable back then. In recent times it appears reasonably common but short lived if treated as a garden plant and grown outside. Best grown in an alpine house, it can put on a spectacular show in spring with its large flowers in either pale gold, pure white or flushed pink.

A *Lewisiopsis tweedyi* show plant with pale golden flowers

Lewisiopsis tweedyi

A *Lewisiopsis tweedyi* seedling with a flushed pink flower

A young *Lewisiopsis tweedyi* with pale golden flowers

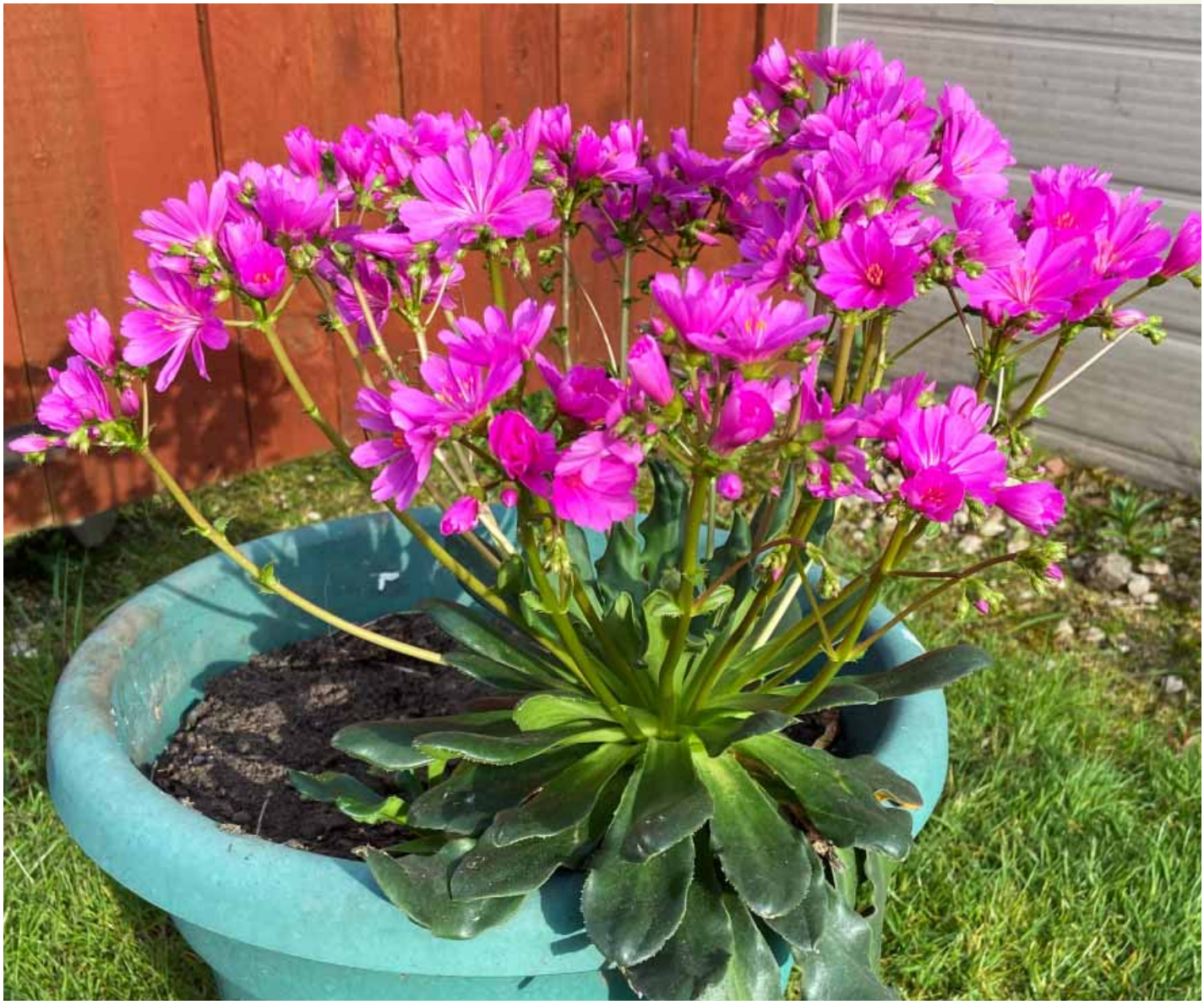
A white flowered form of *Lewisiopsis tweedyi* on the showbench

Outdoor culture of *Lewisia* in the UK can be tricky. They are very cold-tolerant and happy below freezing but they absolutely detest being overly wet. Winter rainfall settling on the crowns of evergreen plants is a sure way to reduce their life expectancy and poorly draining soil can easily lead to rotting of the fleshy roots.

Lewisia cotyledon is probably the toughest and best equipped to survive the British climate but other species will benefit from some protection from winter rain. Better still would be to move them into an unheated greenhouse or cold frame. My ambition is to eventually grow most of my collection in a purpose built part of my rockery that can be temporarily covered by a glass roof in winter.

At present I grow all my lewisias in pots, mostly terracotta, and I overwinter plants in a small greenhouse. I move the plants outside in late spring, after the worst of the weather has passed. During the height of summer I place them in partial shade and water lightly during dry periods. Deciduous species, such as *Lewisia nevadensis*, are placed out in spring but are returned to the greenhouse when the leaves have dropped, so that the pots can be dried out until autumn, when they will receive regular, light watering.

I use a well-draining John Innes-type soil mix with extra drainage added. *Lewisia rediviva* prefers drier conditions, so extra grit is added to the mix. *Lewisia cotyledon* and *Lewisiopsis tweedyi* benefit from the addition of a little more composted material. They seem to enjoy the extra moisture that this gives and I notice that the best *Lewisiopsis* entries in shows are quite often grown in plastic pots. The best time to repot is in the autumn when root activity is at is peak. Even evergreen species repotted in spring or summer can often sulk.



My neighbour's *Lewisia cotyledon* cultivar – a riot of colour and looking after itself!

Lewisia pygmaea seedlings in April – recently germinated after two winter periods

Sowing *Lewisia* seeds is pretty easy and needs no special equipment but patience is required. As the plants come from locations experiencing cold winters the seeds need a period of cold stratification. I sow seed any time from October through to February in plastic pots using the standard *Lewisia* soil mix with a little extra fine grit added. The seed is scattered on the surface and gently firmed down before being covered with a thin layer of grit. Pots are soaked in rain water and placed in a bright position in my cold greenhouse out of direct sunlight. The pot is then watered when required to prevent drying out.

In the spring, as daytime temperatures begin to rise, seedlings will begin to appear. If germination does not occur in the spring, yet the pot was not allowed to dry out at any time, there is no need to despair. Continue to water the pot until summer then allow to dry out until autumn, when the pot can be re-soaked and kept moist through a second winter for another attempt.

Of the species I have sown, most have germinated in the first spring but a couple of pots of *Lewisia pygmaea* seed showed no sign of life until they had been through two winter cycles. They then germinated *en masse* and grew strongly. Another successful outcome.

If you have not tried growing *Lewisia*, why not give it a go? It's pretty easy if you follow the few simple rules mentioned. Whether you choose the flamboyantly coloured hybrids or it is the subtle beauty of the species that wins you over, they are very rewarding subjects. ■

Photos: Brian McDonough

Lewisia pygmaea seedlings in August growing more rapidly as autumn approaches

Tephrocactus verschaffeltii

by Phil Crewe

Well-grown cacti have green stems! Many perfectly healthy plants are chopped up to renew them from cuttings or simply discarded as a result of this tenet once the lower parts of their stems become brown with age. In contrast, succulents that grow leaves and have stems covered in brown bark, such as othonnas or tylecodons, are more often considered acceptable.

Tephrocactus verschaffeltii is an opuntioid cactus with seasonal leaves and, as a mature plant in cultivation, quite rough, brown lower stems.

While it would be easy to restart plants from cuttings, doing so risks missing out on some of the most wonderful flowers of any small opuntia.

Originally described as *Opuntia verschaffeltii* in 1898, until recently it has been most commonly known as *Austrocylindropuntia verschaffeltii* (the transfer being made in 1939). Several morphological features suggested it was closely related to the austrocylindropuntias, such as *A. vestita*, with which it shared cylindrical stems, indeterminate growth (especially in cultivation), substantial leaves on the new growth and red flowers. It was not until 2011 that it was moved to *Tephrocactus* as a consequence of DNA results indicating it was best placed there.

Whereas many tephrocacti grow at low altitudes, *T. verschaffeltii* is most frequently encountered between 2800m and 3900m where it forms small shrublets only 20–30cm high and across. First discovered in Bolivia, it is known to grow predominantly in Bolivia and Argentina but was recorded in Peru for the first time early this century.

I have only one plant of *T. verschaffeltii* in my collection which bears the field number PM 308, a Ken Preston-Mafham collection from Quebrada de Escoipe, Salta, Argentina.

Fig. 1

Tephrocactus verschaffeltii PM 308

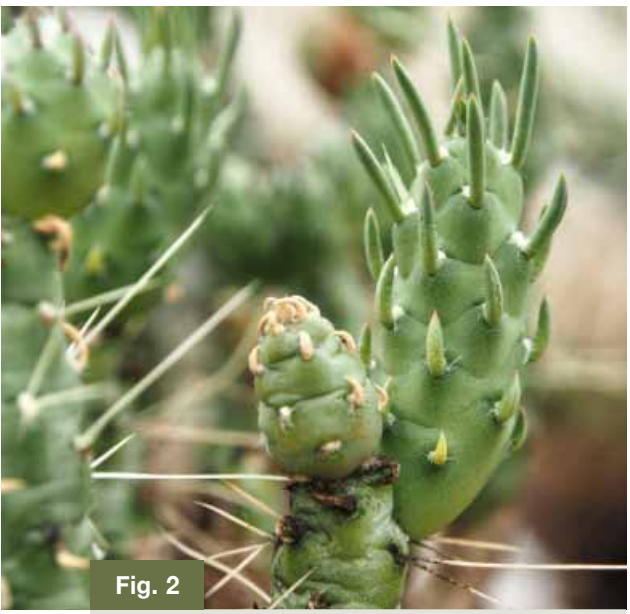


Fig. 2

The two growth types. By early July, the leaves on the small cladode (left) have already shrivelled and this stem will be shed in winter

Fig. 3

By early August, the larger cladode (right) has produced spines

As a young plant it grew strongly but as it has aged, the overall height has plateaued at about 20cm (Fig. 1).

The stems are much branched, in chains made up of multiple cladodes. It has an unusual characteristic in that new growth is of one of two types. Some cladodes are elongated, several centimetres long and bear leaves that persist through the growing season, whereas others are so short as to be almost spherical and produce only small leaves that are quickly lost (Figs. 2 and 3).

Fig. 4

On old plants much of the plant's stems become brown

During the following winter, these latter segments are themselves mostly shed, so that, overall, the plant increases in size only by the growth of the longer cladodes. In very young plants, most growth is of this type but in my now very mature plant, spherical, deciduous growth predominates. Spines are either absent, especially on the smaller cladodes, or thin and flexible. Areoles are small; the few glochids are well hidden.

In my rather damp greenhouse sooty mould can be a problem, causing the areoles to turn black (Fig. 2). The aged branches of my plant are quite brown but the overall appearance is like that of a small bonsai tree (Fig. 4).

The flowers of *T. verschaffeltii* are its main attraction. They are produced in a flush in late May or early June and are red with an orange sheen – an unusual colour for one of the Opuntioideae (Fig. 5), although intense red flowers are sometimes seen. The 15mm-thick stems are quite flexible, so the flowers can weigh the branches down.

Propagation is very easy on account of the numerous small cladodes that are shed; in fact, their rooting in neighbouring pots can be a nuisance.

If you can accept this cactus's wizened appearance (or can grow it better than I can), I highly recommend adding it to your collection. ■

Photos: Phil Crewe

Flowers tend to open together

Fig. 5

Sulcorebutia flowers
Some unusual colours

by Kathy Flanagan

Introduction

Back in 2022 I obtained a collection of around 300 sulcorebutias from a fellow collector who was unable to care for them any more.

I had undergone surgery for back problems previously, after which it had taken a good couple of months before I could stand and walk. My own collection had been neglected somewhat with plants suffering from red spider mite and sunburn and there were many casualties.

The new plants got me back on my feet again. It took about six weeks to unpot and hose off every plant. I kept at least one of every species and more of some.

The plants I was going to keep were all repotted in more suitable pots and with my own compost mixture. It looked as though they had been grown in pure peat. They had no pests or diseases but they had been watered with tap water shown by the limescale on the base of the bodies. They filled the empty areas of my staging.

Fig. 1

A form of *Sulcorebutia krugerae* var. *hoffmannii* (*Weingartia steinbachii* subsp. *steinbachii*) (Photo: Keith Flanagan)

I was given a list of plant names and collection numbers, the dates on which the plants had been bought and from where. The nurseries mentioned covered almost the length of the country and some plants came from the continent.

Unfortunately this was not much help as there were only four labels in the whole collection so I still needed to identify which plant was which. I wanted to see their flowers in the hope they would help me to name them. All I could do was wait. A few flowered that year but most took longer.

The plants

As they started to flower it appeared that some of them at least must have been self-sown seedlings. I had already found with my own plants that a lot of the hybrids seem to have a metallic sheen to their flowers, which I find attractive.

The first plant that caught my eye was a plant which I originally thought was a bit like a short-spined *Sulcorebutia hertusii*; that is until it flowered (Fig. 2). The flower has red outer petals with the inner petals a kind of yellow going into orange. It is beautiful, so different and the only one with flowers like that.

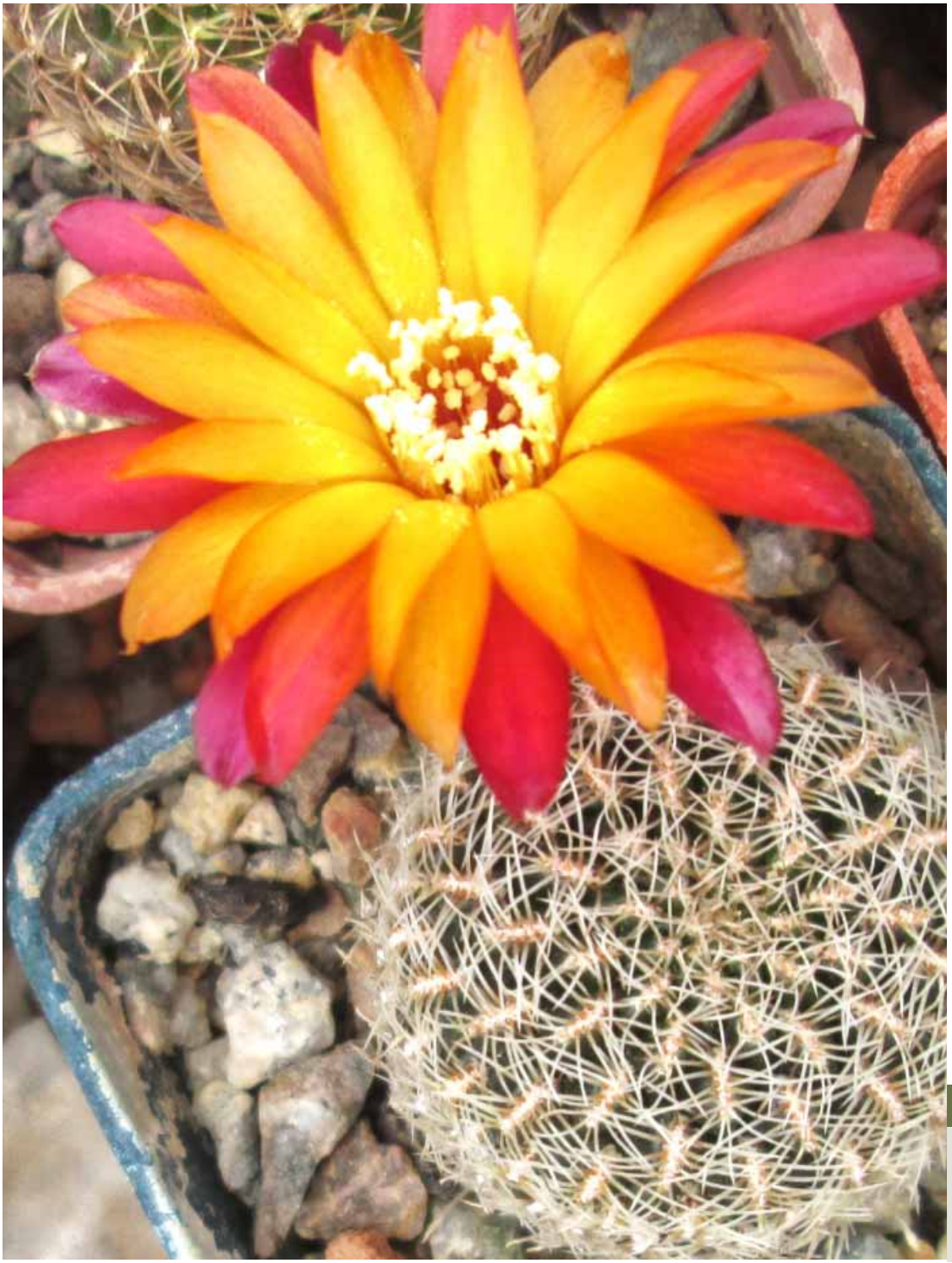


Fig. 2

A beautiful flower with red outer petals and yellow-orange inner petals

Fig. 3

Sulcorebutia torotorensis with a vivid metallic flower

One of my favourites has a body similar to *S. torotorensis* with maybe a look of *S. vizcarrae* to it (Fig. 3).

It has a dark green body, dark brown, quite heavy spines though short in my opinion but the flower colour is a really metallic magenta into purple and the flower lasts a few days. I think it is really beautiful.

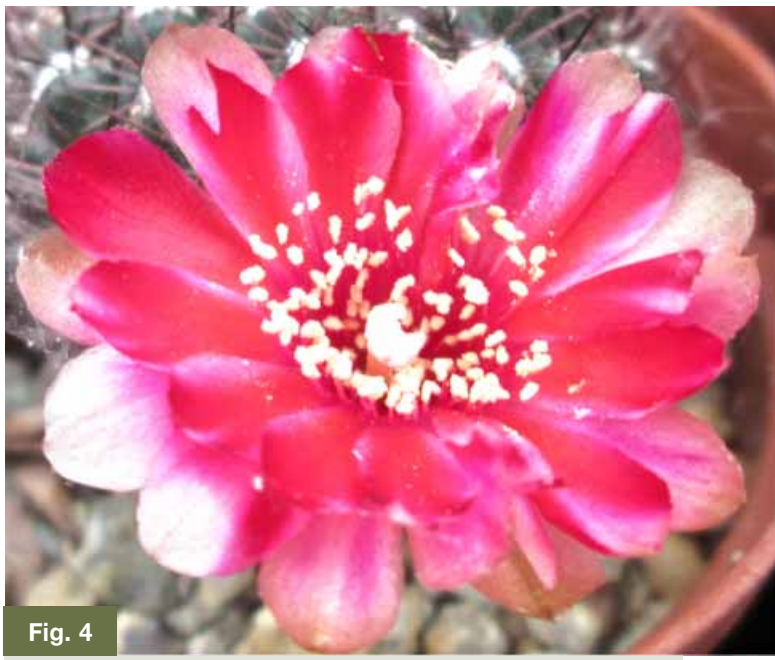


Fig. 4

Sulcorebutia krugerae var *hoffmannii* (*Weingartia steinbachii* subsp. *steinbachii*) flowering with white outer petals and red inners.

The next plant I had thought was a small clump of *S. krugerae* var. *hoffmannii* (*W. steinbachii* subsp. *steinbachii*) (Fig.4) until it flowered. Last year the outer petals were white and the inner ones were red which gradually seemed to fade into one another. The flower was almost as big as the main head. The body is almost black with black spination.

This year it flowered with the normal red and yellow flowers of *S. krugerae* var. *hoffmannii* and the body has become greener probably resulting from extra nutrients. Another very different flower and beautiful to me anyway. The old saying of beauty is in the eye of the beholder comes to mind, but perhaps I'm easily pleased.

Fig. 5

Possibly *Sulcorebutia* (*Weingartia*) *mentosa* with metallic magenta petals

Fig. 6

Beautiful metallic pink flowers, possibly *Sulcorebutia pulchra*

This year I have been surprised by what is a quite small *S. flavissima* (*W. mentosa*) type of plant (Fig, 7). It sits next to a normal one on my staging but I was thrilled to find out it had alternate petals, one pale pink the next white and so on. I hope it stays that way going forward.

The final plant I want to share with you is, I believe, a very different form of *S. mizquensis* (*W. mizquensis*) (Fig. 9). This has always been a favourite of mine for the lovely delicate fairly pale pink flower that turns to white in the centre.

My original *S. mizquensis* WR194 is quite small-headed with tight, silver-grey coloured spination concealing the body underneath. The new plant has slightly bigger heads (possibly because of its age) and a pale green body with an open lacy spination. The flowers are exactly the same as those of my original plant and they flower at the same time.

The collection also included a number of *S. rauschii* (*W. canigueralii*) forms with a variety of flower colours, which will appear in a later issue of the *Cactus and Succulent Review*.

Photos: Kathy Flanagan unless indicated otherwise

Fig. 7

Sulcorebutia flavissima (*Weingartia mentosa*)

Fig. 8

A form of *Sulcorebutia mizquensis* (*Weingartia mizquensis*)

A note on nomenclature

As a general rule the article uses names described in the genus *Sulcorebutia* which will be familar to readers.

Where an alternative is given in brackets after a name this is derived from POWO.

Selected Mexican sedums

by Colin C. Walker

Introduction

Sedum is a very large genus of Crassulaceae with well over 400 species. These are distributed principally in the northern hemisphere in North America and Eurasia with just a few outliers in South America and Africa. There are no sedums native to Australia or New Zealand.

For the collector, the greatest concentration of desirable non-hardy, frost-sensitive species is found in Mexico, home to around 100 species. These exhibit wide diversity, ranging from small creeping plants known as stonecrops, which are typical of the genus, to large atypical very woody shrubs, 3m or more tall. The majority of these species are frost-sensitive and so in areas subject to low temperatures they must be provided with winter protection. A cool, frost-free greenhouse is all they require if they are kept dry during the winter. Many are ideal for outdoor planting in the spring and summer, especially those that make attractive subjects for hanging pots.

Here, just a small selection is showcased to illustrate the range of diversity across Mexican sedums. For those wanting more information on sedums in general or Mexican species in particular, the book by Horvath (2014), the most recent of several books on the genus, is highly recommended. The older book by Stephenson (1994) also deals with most of the species discussed here.

Sedum adolphi

This is a woody plant with stems that, in time, can grow up to 40cm long thus making it an ideal plant for a hanging pot (Fig. 1). Indeed, I hang a few specimen pots from tree branches in the garden when the danger from frost is past. It branches freely from the base and is a relatively fast grower. When grown well only the bases of the stems are bare of the pale green leaves.

Fig. 1

Sedum adolphi

Fig. 2

Sedum allantoides

Fig. 3

Sedum allantoides 'Goldii'

I have grown this plant for over 30 years and in my experience it is a very shy flowerer but when it does oblige the flowers are creamy-white and are produced at the stem tips. This species is often encountered under the name *Sedum nussbaumerianum,* which is now considered to be a synonym. The name *adolphi* commemorates Prof. H.G. Adolf Engler (1844–1930), a famous German botanist from Berlin.

Sedum allantoides

This species has sausage-shaped leaves, which account for its name (Fig. 2), this being a very distinct feature that cannot be confused with any other Mexican sedum.

Its stems are erect, modestly branched from the base and bear pale, almost white, glaucous leaves that are blunt and terete (circular in cross-section). Its stems elongate to form the inflorescences bearing white flowers.

This is one of the most frost-sensitive of the Mexican sedums, so slightly higher winter temperatures are recommended to avoid damage to the plant. A cultivar of *S. allantoides* has flatter leaves and overall the plant is more sprawling and less erect. This was first described as *Graptopetalum goldii*, named in honour of Dudley Gold of the Mexican Cactus & Succulent Society. A more recent study, however, has shown that this plant is not a *Graptopetalum* but merely a form of *S. allantoides*. It is thus better considered to be a cultivar, so it now has the name *S. allantoides* 'Goldii' (Fig. 3).

Sedum furfuraceum

This is a typical stonecrop with a low-growing, creeping habit making it an ideal subject for display in a bonsai pot (Fig. 4). I'm proud of this particular container because I made it at a bonsai pot-making class, so it is truly one of a kind! Another

Sedum furfuraceum in a 10cm diameter bonsai pot

Fig. 4

feature making this mode of display suitable is that the plant is relatively slow-growing but in time it develops a low bushy appearance.

The stems of *S. furfuraceum* are relatively thick and irregularly, tortuously branched. Its leaves though are unique: they are the shape of small eggs, dark green in colour suffused with red or purple especially if grown in strong light, while the surface is covered with a thick waxy layer that splits into small scales that remain attached. The name *furfuraceum* means 'covered in bran-like scales' and hence is rather appropriate.

Its white flowers are produced at the branch tips. A close relative appears to be *Sedum hernandezii,* which is like *S. furfuraceum* but is all round a larger and faster-growing plant, still with the scaly surface but the leaves are just bright green with the waxy coating of larger scales. Flowers also differ in being yellow.

Sedum lucidum

This is a woody species that has basally well-branched sprawling stems up to 45cm long that are either erect or, as in my largest specimen (Fig. 5), sprawling to pendulous. The leaves are very fleshy, oval in cross section, slightly flattened on the upper surface and more rounded on the lower surface, slightly pointed at the tips, lustrous-green tinged with red (*lucidus* means 'shining') (Fig. 6). My plant (ISI 1497) is a handsome form collected by Alfred Lau in 1971 on north facing granite outcrops south of Acultzingo, Veracruz, Mexico. I named this clone 'Obese' for its fattish leaves (Walker, 2021).

The inflorescences of this plant are always produced at the stem tips. They form dense hemispherical heads up to 6cm across with more than 30 flowers, which are typical of *Sedum*: flattened, star-like with five (but sometimes six) white petals.

Fig. 5

Sedum lucidum 'Obese'

Fig. 6

Close-up of *Sedum lucidum* 'Obese'

Sedum morganianum 'Burrito'

This is a smaller, more compact version of the better-known *Sedum morganianum* and could be confused with this species but not others. It was originally described in 1977 as a distinct species, *Sedum burrito*, based on material found in a nursery in Guadalajara, Jalisco and with its natural habitat unknown. The species name is derived from *burro* and means 'donkey's tail' but it has the common name of 'Baby Burro's Tail'. It has more recently been reassessed and given the status of the cultivar 'Burrito'.

Its pendent stems (Fig. 7) are up to 50cm long, branching from the base, making it perfect for a hanging pot or basket. Unlike *S. morganianum* it does not easily shed its leaves, which are spirally arranged and when well grown usually hide the stem completely. In the UK this plant grows well outdoors in hanging baskets during the spring and summer and does not suffer from heavy rains if given a free draining compost. As a consequence of its many attractive features, *S. morganianum* 'Burrito' has become a very popular plant in North America and Europe.

Fig. 7

Sedum morganianum 'Burrito'

Sedum oxypetalum

This is one of just five species that are known as 'Mexican tree sedums', although more accurately they are better described as large shrubs, the largest of which (*Sedum dendroideum*) can grow up to 5m tall.

Sedum oxypetalum is smaller growing, forming stems up to 1m tall, 10cm diameter at the base and well-branched above. Even without any training or pruning plants naturally look like miniature trees, making them ideal subjects for display as bonsai specimens (Fig. 8). The stems produce light brown peeling bark, which enhances the appearance (Fig. 9). Plants are naturally deciduous and hence are leafless during the winter resting period.

The finely papillose (bearing small papillae), pointed green leaves up to 5cm long are produced in large numbers at the stem tips in the spring, which grow to become new branches. These branches later elongate to develop into the insignificantly-sized inflorescences – considering the size of the plant – bearing whitish-pink flowers in small numbers (Fig. 10). The petals are sharply pointed as indicated by the name *oxypetalum*. After the flowers fade, the ends of the branches die and fall away unless fruit is produced. Eventually in the autumn the plant becomes completely leafless.

The closest relative of this species is *Sedum frutescens*, which has a similar growth form but its branches are not deciduous after flowering and the flowers are white not pink; its leaves are also narrower. Both these species have an otherwise unique growth form for the genus making them desirable in any collection of succulents.

Flowers of *Sedum oxypetalum*

Fig. 10

Fig. 8

Sedum oxypetalum, 50cm tall, in a 20cm long bonsai pot

Fig. 9

Close-up of the base of the stem of *Sedum oxypetalum* showing the peeling bark

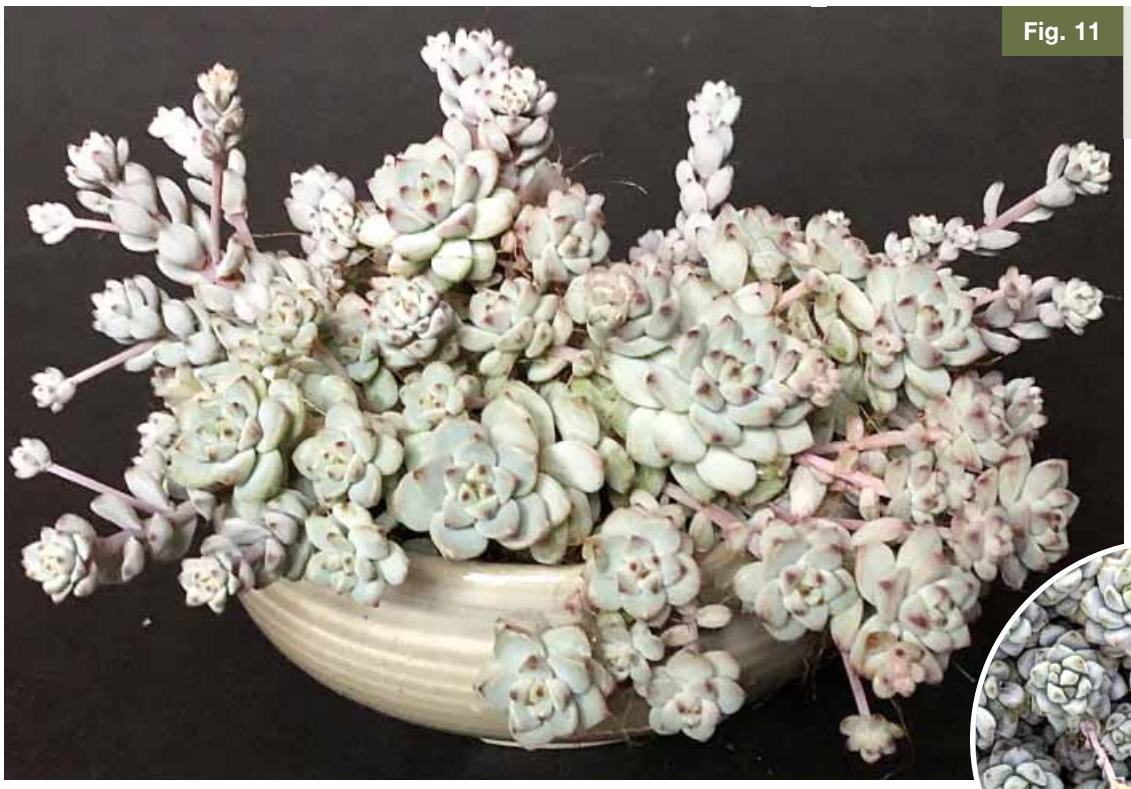


Fig. 11 *Sedum perezdelarosae* in a 10cm diameter bonsai pot

Fig. 12 Flowers of *Sedum perezdelarosae*

Sedum perezdelarosae

This species was newly described as recently as 2012 so it is as yet relatively uncommon in cultivation. It is a carpet-forming plant that readily produces offsets so it is perfect for display in a bonsai pot (Fig. 11). It forms tight rosettes up to 3cm in diameter, although most are much smaller than this, each consisting of glaucous-blue leaves with darker pointed tips. It produces offsets that elongate to form flowering shoots, which have yellow flowers (Fig. 12).

This plant does not really look like a true sedum but has an appearance more like that of an *Echeveria*. The species was named for Jorge A. Perez de la Rosa, a Mexican forestry engineer and secretary of the botanical institute of the University of Guadalajara.

Sedum ×rubrotinctum

This is a colourful plant that's very easy to grow and hence popular in cultivation. It is a hybrid, possibly between *Sedum pachyphyllum,* which has silvery-white leaves and *S. stahlii,* which has small, jelly-bean shaped brick-red leaves. As a result *S. ×rubrotinctum* has leaves that are mostly red – hence the name meaning 'red coloured' – with some green, especially in the winter if kept fairly dry (Fig. 13). Consequently it has the common name of 'Jelly Bean Plant'.

The leaves are spirally arranged and congested at the branch tips. The flowers are yellow although these are not frequently produced. It received an Award of Garden Merit (AGM) from the RHS in 2012. There is also an attractive cultivar 'Aurora', named for its glaucous grey leaves with pink hues when grown in full sun.

Fig. 13 *Sedum ×rubrotinctum*

Sedum suaveolens

This very attractive species is the most atypical of the sedums discussed here. It was first described as a *Sedum* endemic to the Mexican state of Durango (Kimnach, 1978). In 1981 it became *Graptopetalum suaveolens* but it does not fit comfortably in either of these genera and currently it is generally treated as a *Sedum*.

It forms loose rosettes 10–15cm in diameter (Fig. 14) but in time it can grow quite quickly by offsetting from the base to form a large clump up to 50cm across. Its rosettes of flattened, glaucous leaves up to 6cm long more closely resemble those of an *Echeveria*.

The flowers, however, are rather different being arranged in inflorescences of up to only about 5cm long with a dense array of white flowers that are turbinate (top-shaped) or urceolate (urn-shaped). When first described the flowers were reported to have a distinct sweet-spicy fragrance from which the Latin name '*suaveolens*' is derived, meaning 'pleasantly fragrant'. In my personal experience, however, I would describe the scent as faint since for me it was barely detectable.

Another remarkable feature of this species is that it is renowned for having the highest recorded chromosome number of any flowering plant of approximately n = 320 (Kimnach, 1978; Stephenson, 1994). A consequence of this is that few hybrids have been produced in cultivation using this species as one of the parents.

Sedum suaveolens might possibly be the result of an ancient hybridisation event, which perhaps involved the doubling of its chromosomes.

Fig. 14

Sedum suaveolens in a 12cm diameter pot

Whatever its origin, it is a unique species of Mexican Crassulaceae. It does not fit satisfactorily in *Echeveria*, *Graptopetalum* or *Sedum,* as these genera are currently conceived, and it does not have any close relatives in these genera. It should be noted that a few other species of *Sedum* do have odoriferous flowers whereas no echeverias have this feature.

We must therefore await further molecular analysis of a much wider range of species before a more appropriate classification of this unique species is finally resolved.

Photos: Colin C. Walker

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Adventures in Mexico

Part 2

by Paul Spracklin

Day 9

Part 1 of 'Adventures in Mexico' ended with our drive to Jalpan (see *Cactus and Succulent Review*, Issue 46 September 2025). There were four of us Toby, Neil, Phil and myself and this, the ninth day of our trip, promised to be interesting.

Our aim was to visit the type location for *Yucca queretaroensis*, that most special of yuccas. We headed a few kilometres south to Pinal de Amoles and from there to a small town named Bucareli.

But which was the correct road out of town and to the yuccas? Toby asked some nearby locals who, amazingly, knew the plant under its local name '*estoquillo*' and pointed us in the right direction.

"Take the road to Querétaro, along the river," is what we thought they said. 'Road' and 'river' are not words usually used together when driving back home in Benfleet, so I did not really understand what was going to happen. It soon became apparent, however.

We wound our way in, through and around the Río Extóraz (but don't tell the jeep hire people) surrounded on all sides by towering rock faces. What a totally awesome experience!

Above: Towering rock faces along the Río Extóraz

Each time we passed by a canyon, we scoured the sides for a glimpse of the yuccas. Then we saw them. A few hundred metres away on an almost sheer-sided canyon – too far away to photograph and too dangerous to investigate. But we saw them!

Buoyed up by this we carried on but were to have no further sightings. We needed to come to a decision: turn back or continue. I think most of us wanted to go back, though my kidneys were not looking forward to another pummelling on that dirt road. Neil was firmly in favour of carrying on and finally persuaded us to keep going. After all, this was the road to Querétaro. So we did, stopping here and there to soak in the scenery.

Eventually, after maybe 30km of splashing our way along the Río Extóraz basin, we found dry land and a paved road and turned towards Zimapán, our next stop.

The road to Querétaro

Day 10

We went to Zimapán because another friend and I had, on an earlier trip, discovered a previously unknown colony of *Yucca queretaroensis* just a little way outside town (I should add it was nothing clever, we simply got lost, which is another story). These plants were accessible from the road, which itself was cut into a vertiginously sloping hillside for access to a mine at the valley bottom.

We found the right road easily enough, though it appeared the mine traffic was much increased as everything was covered in dust. Suddenly Toby noticed a funny noise coming from his corner of the jeep – we had a puncture. OK, not a problem, we had a spare; and a jack, somewhere.

We found the jack but it was not big enough to lift the car. Phil made a rock heap and jacked up the jeep from that. Once the tyre was changed we had to decide – risk carrying on with no spare or go back to town and get a new tyre. I couldn't remember how far along the road the yuccas were, so that didn't help. We decided to throw caution aside and carry on and about 200m further on we found the yuccas.

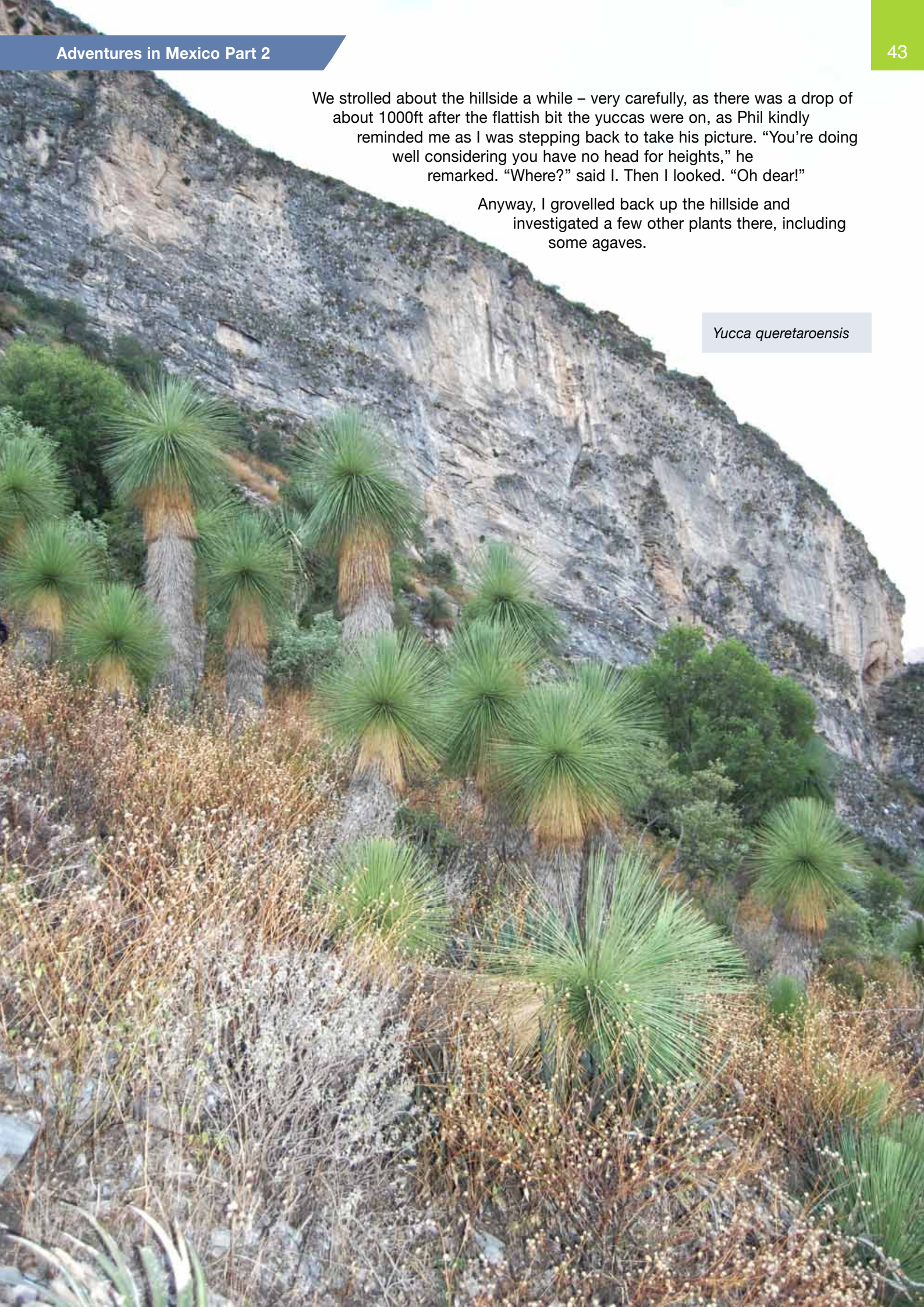
These really are supremely beautiful plants, the finest I have ever seen; a study in light and shadow in the way that light falls on those stiff rapier-thin leaves, making the crown almost shimmer in the sun.

It was interesting to see that they are definitely suckering. They seem to reach a certain size (or fall over) then start to make suckers. I guess that partly explains why they are found in these little clusters of up to maybe 50 individuals. Once you got your eyes tuned into them, the surrounding hillsides were full of little groups dotted here and there.

Yucca queretaroensis

We strolled about the hillside a while – very carefully, as there was a drop of about 1000ft after the flattish bit the yuccas were on, as Phil kindly reminded me as I was stepping back to take his picture. “You’re doing well considering you have no head for heights,” he remarked. “Where?” said I. Then I looked. “Oh dear!”

Anyway, I grovelled back up the hillside and investigated a few other plants there, including some agaves.



Yucca queretaroensis

An attractive *Agave lechuguilla/lophantha* type of plant

Agave xylonacantha, *Agave mitis* and *Agave striata*

Finally we walked along an old road cut into the mountainside, following it to where the track ended. The hillsides ahead of us were covered in many, many groups of *Yucca queretaroensis*. We also spotted many more on the way back and between us estimated we had seen close to a couple of thousand individuals within a shortish distance from that one road. Maybe these are not such rare plants after all. Certainly their need to grow on such (generally) inaccessible, sharply sloping banks should ensure they are left in peace.

The other local yucca, most likely *Yucca potosina,* at the edge of its range

We dragged ourselves away and headed for Pachuca via the town of Ixmiquilpan (Iks-mi-KILL-pan), a market town and possibly our best chance of getting the tyre sorted. This was quite easy; a repair, rather than a renewal, costing the equivalent of £7.50. Then back on the road towards Pachuca, where we stopped for a bite to eat. The fact that Neil is a Cornishman (well, an adopted Cornishman) made it all the more interesting to stop and eat a '*paste*' and, after practically nothing all day, they were delicious.

The unlikely but true story behind this is that in the 19th century Cornish miners came to this part of Mexico to lend their expertise to the industry, bringing pasties with them. The idea caught on and the '*paste*' has now been fully incorporated into Pachucan life. The miners also brought a little game called football which, apparently, also proved popular.

We skirted north around the horrid concrete splat that is Pachuca and headed for the hills again. Way up in the mountains there is a thriving ecotourist industry, with Mexicans escaping the city pollution at the weekends to walk and cycle in the fresh, clean mountain air of the Parque Nacional Mineral del Chico. This is an extremely attractive, densely wooded area where occasionally the skyline is punctuated by the jagged eroded tips of long-since dormant volcanoes. It is also the home of *Furcraea parmentieri*, found only on this kind of mountain at pretty high altitudes, in this case nearly 3000m.

We thought this place might be selling '*pastes*'

To my extreme annoyance, my camera suddenly developed a fault, so no more pictures that afternoon. This was doubly annoying as Neil and I spotted some huge furcraeas in the distance which, when we trekked over to them, were 4m-trunked monsters just pushing up flower spikes.

Trebly annoying was that when we got to our hotel I found the problem was a silly little thing cured in a second or two, affecting just the viewfinder. Never mind, I have the memory, if not the pictures.

Phil with a relatively small but densely crowned specimen of *Furcraea parmentieri*

The area is also home to this fine form of *Agave salmiana*

A pretty little echeveria growing at the same altitude

Day 11

We hit the road by 8.40am and headed off east towards Tulancingo but the Mexican Road Improvement Project halted us very quickly. The main road was being widened and we were diverted off to Lord knows where. After around 20 minutes driving we came upon a place called Zempoala, and shortly after that things became interesting as we came to a hillside covered in *Nolina parviflora*. We investigated and found a huge stand of these plus *Dasylirion acrotrichum* – some of which were just enormous.

I have seen *Nolina parviflora* growing in a few places but these were the most handsome yet. They seemed very keen to make multi-headed plants and kept their old petticoats very attractively. They are evidently supremely drought tolerant and, at over 2600m altitude, I would guess pretty cold tolerant too.

As an aside, there are plants in the commercial loop available from Italian and Spanish growers that they call *Nolina longifolia* (or, in some cases, *Dasylirion longifolia*). These are very similar to the plants pictured here and therefore would be considered to be *Nolina parviflora*. Another interesting thing was that Toby spoke to the local landowner who referred to these nolinas as '*palma de gata*' – cat palms. I hadn't heard that before.

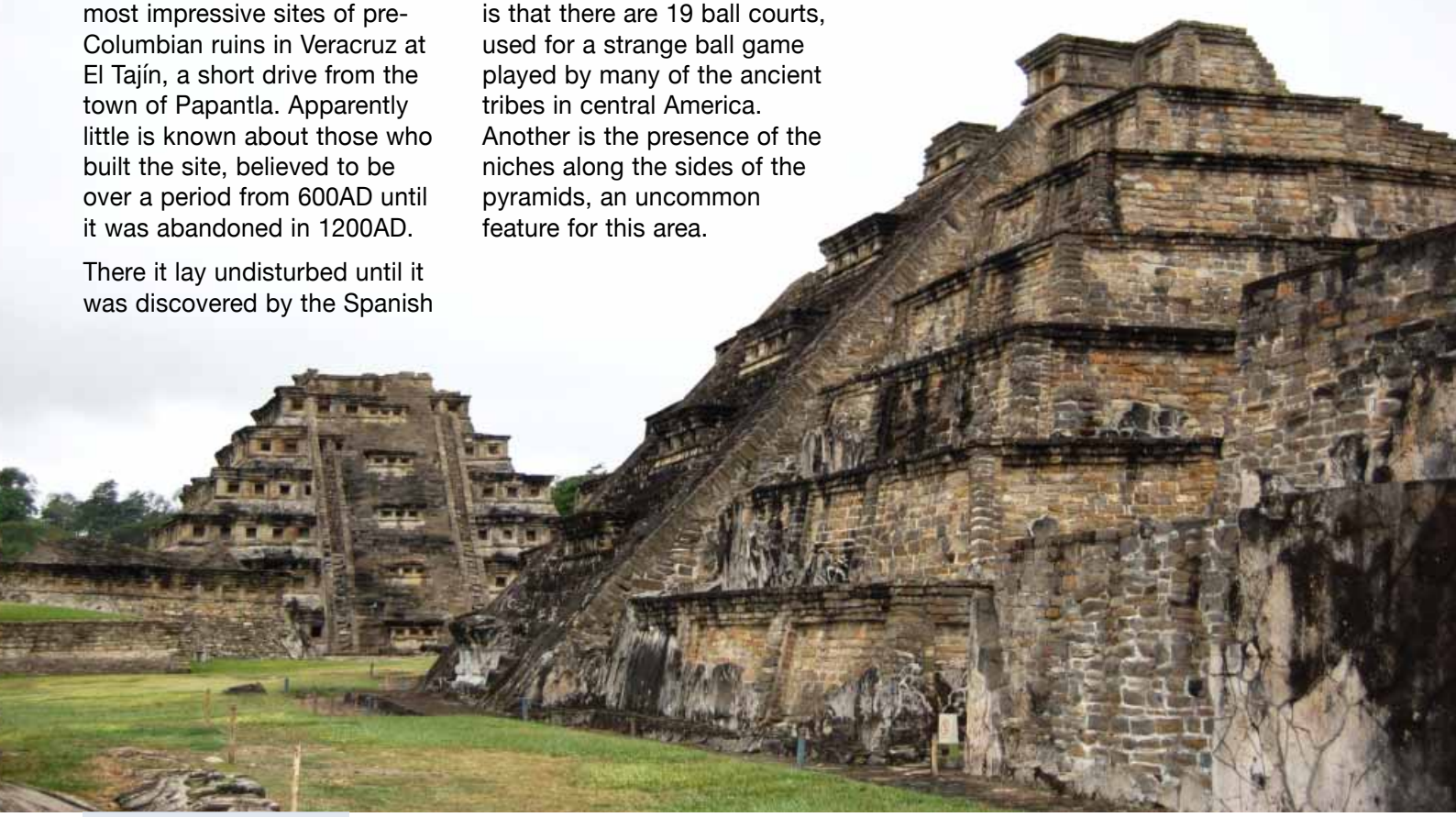
The nolina forest with dasylirions and opuntias

Anyway, we left the nolinas and carried on east, picking up our original route, dropping down in altitude into the warmer subtopics and into Veracruz, where the vegetation changed as the conditions became warmer and moister. We also picked up our old friend, the mist, along the way making the journey along the winding roads rather slow.

Neil with one of the huge *Dasylirion acrotrichum*

Our destination was one of the most impressive sites of pre-Columbian ruins in Veracruz at El Tajín, a short drive from the town of Papantla. Apparently little is known about those who built the site, believed to be over a period from 600AD until it was abandoned in 1200AD.

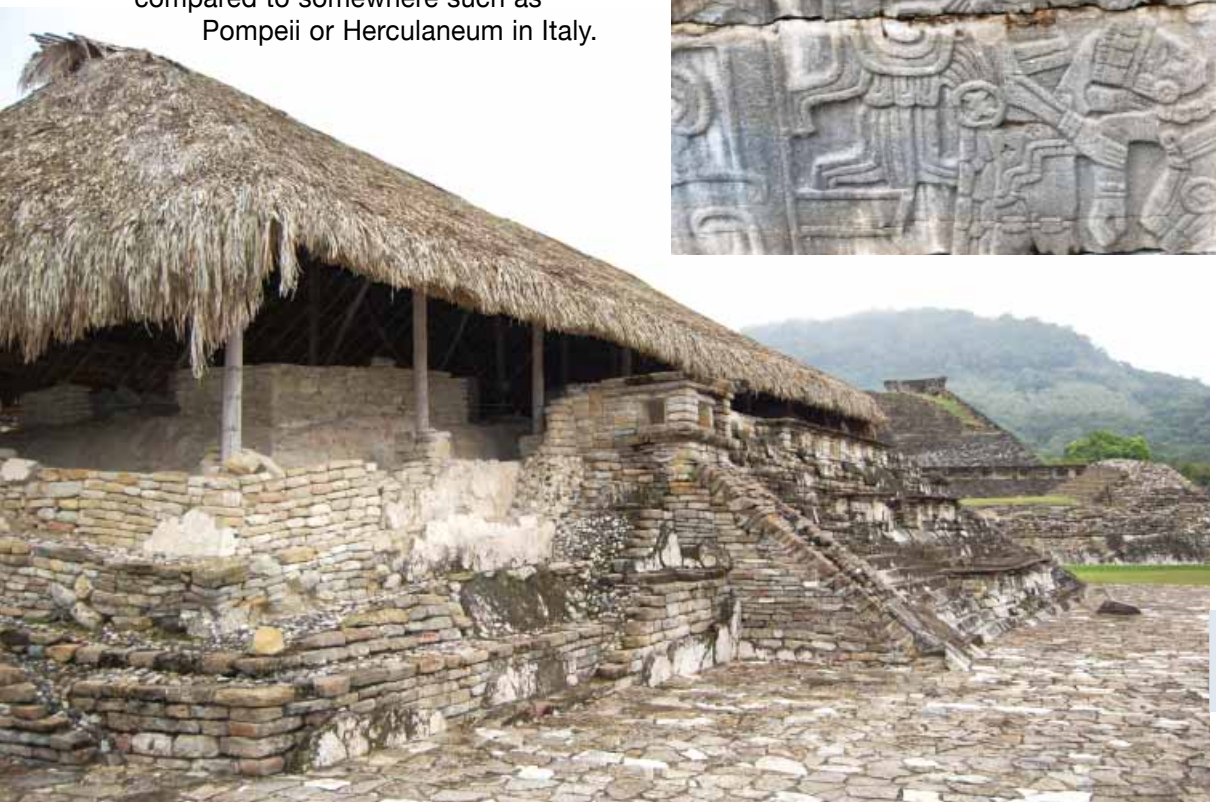
There it lay undisturbed until it was discovered by the Spanish in 1785. One feature of the site is that there are 19 ball courts, used for a strange ball game played by many of the ancient tribes in central America. Another is the presence of the niches along the sides of the pyramids, an uncommon feature for this area.



Pyramids at El Tajin

Fascinating as the site was, I found it hard to make any kind of connection with the people who had built these magnificent structures. The culture is so alien to that of modern Europeans and, as most of what little is known is largely guesswork, it is difficult to imagine day to day living compared to somewhere such as Pompeii or Herculaneum in Italy.

Carved panel at the base of a ball court wall depicting a participant about to have his heart removed – I think I prefer rugby!



Reconstruction of a thatched living area

Day 12

A fairly long drive was ahead of us, taking us back to the cooler highlands to the south-west. Once again mist and drizzly rain prevented too much exploration of our route, though I did stop at one point to photograph these tree ferns, a *Cyathea* species of some sort, that were obligingly hanging over the road.

We travelled for a short distance along the Gulf Coast road and stopped briefly so that we could enjoy a closer look at the sea. I needed some nimble footwork to avoid getting soaked when trying to feel the water temperature as a large wave rushed up to where I was standing. But there was nothing much to see, so we carried on, heading for Xalapa (Hal-A-pa) via the small town of Las Vigas.

Cyathea sp.

We climbed in altitude as we drove up the mountainside and, all of a sudden, the mist and drizzle cleared and we found ourselves in lovely warm sunshine. Reaching Las Vigas we could see the mist was still looming only a few hundred metres below us but for now we were clear.

So why did we want to go to Las Vigas? Not a large or impressive town by any means but home to *Agave atrovirens* var. *mirabilis*. This is to be seen in mixed boundary planting with *Agave salmiana* – but not that commonly. We had to scour most of the town for these few shots of this illusive, massive plant.

So what is so special about *Agave atrovirens* var. *mirabilis*? Well, the weather here is awful. It is cold in winter and constantly drenched in mist and drizzle. In his book, *Agaves of Continental North America,* Gentry mentions this area as enjoying a rainfall of over 1300mm annually. All in all it is possibly the most ideally suited agave for growing in cool wet climates. It needs to be tested, but it certainly sounds promising. Add to that the sheer presence of such a hulking brute.

Practically as soon as we got back in the jeep the weather closed in again, so we felt our way to our next stop at Xalapa.

Above: Neil with *Agave atrovirens* var. *mirabiis*
Right, above and below: two fine specimens of *Agave atrovirens* var. *mirabiis*

Day 13

This morning's task was to find the Clavijero Botanical Garden. We did.

A magnificent bromeliad

Part of the cloud forest area

Gunnera mexicana

A section of the palmetum

Day 14

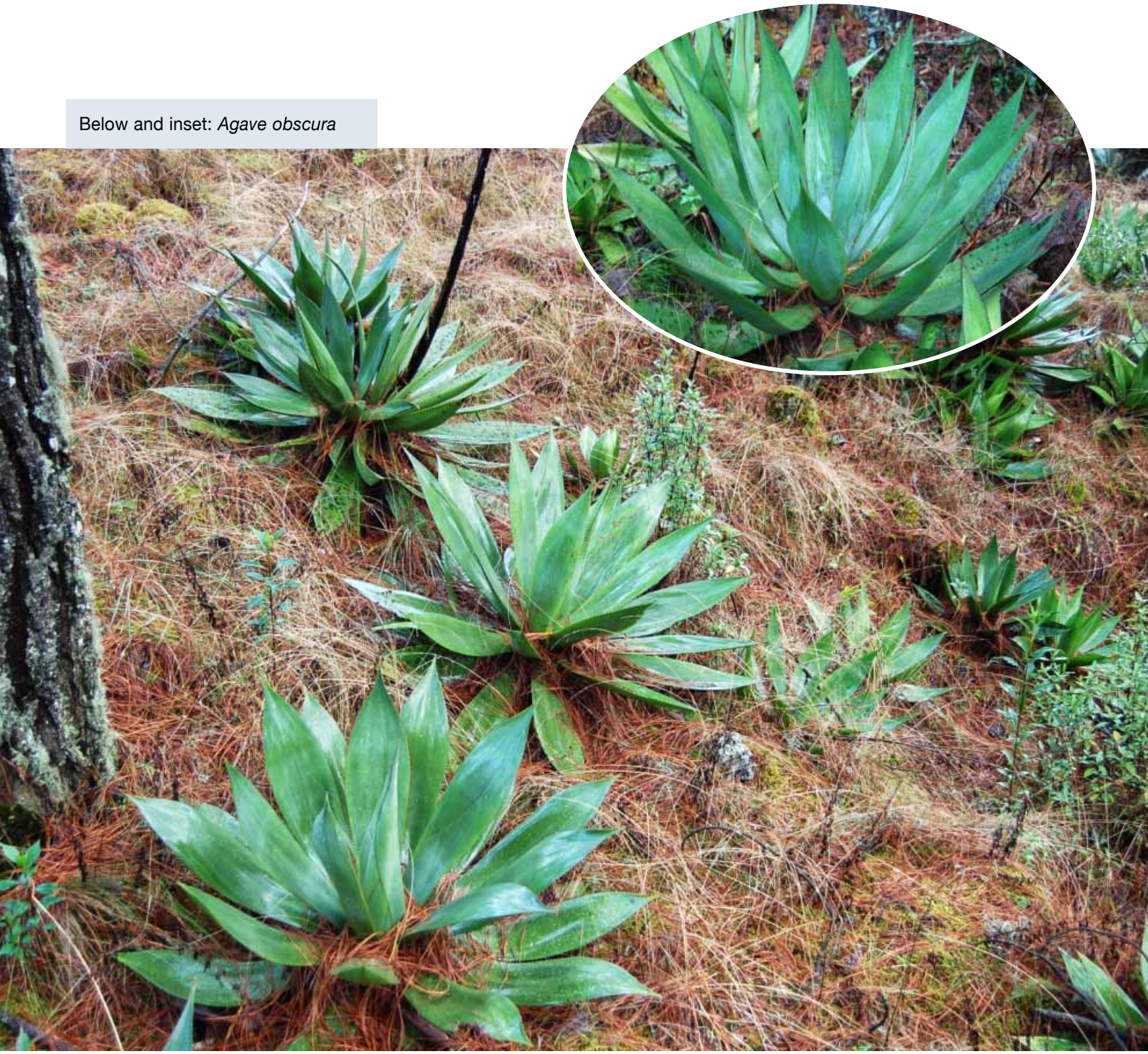
A drive full of potential traffic problems lay ahead, our aim being to get to Mexico City by the afternoon, so we were up and away by 7.00am

We stopped just down the road at a place that is the type location of *Agave obscura* (*Agave polyacantha* var. *xalapensis*, as was) and had a wander around the open woodland where they live. Amazingly the mist cleared for long enough to enable a few photographs. Closely related to *Agave mitis,* some would say they are much the same, these particular plants were larger and ground dwelling, whereas *Agave mitis* is usually seen clinging to rock faces. Yet another agave showing a preference for forest under-storey in shade.

We carried on westwards, through Puebla, passing hillsides covered in huge stands of *Nolina parviflora* and *Yucca periculosa* (the southern counterpart to *Yucca filifera*, perhaps of neater habit).

Then on to Mexico City where we spent a couple of hours at the Museum of Anthropology. The word ‘awesome’ doesn't really do the place justice.

Below and inset: *Agave obscura*



Images from the Museum of Anthropology

Day 15

So here it was, our last day in Mexico. The flight was due to leave at around 8.30pm, so we had until late afternoon to do some touristy things.

I packed my camera away so no more pictures. The day was filled with a visit to the Palacio Nacional to see a tiny, but quaint, little garden and a stupendous mural by Diego Ravera depicting the whole of Mexican History. Quite remarkable.

Then on to some markets for a little souvenir hunting before finally picking up our luggage and heading for the airport.

This was my third visit to Mexico and the country just becomes more and more appealing.

Botanically we saw some indescribably beautiful plants – some of the finest on the planet.

Also this time we scheduled in more time to do 'non-planty' activities. We tried to absorb a little more of the culture and colour that Mexico has to offer and our experience was all the richer for it.

Another trip? You bet – *hasta la proxima!* ■

Photos: Paul Spracklin

These articles are derived from Paul's complete article published online with more details of the trip and more pictures. This can be found at:

http://www.oasisdesigns.co.uk/mex07/mex07/adventures_in_mexico_intro.htm

Marquees, mezcal and mariachi

by Vicky Davies

The weather gods certainly smiled on this year's Cactus at the Castle. After a tormenting week of torrential downpours and high winds the weekend was blessed with sunshine. The backdrop of Lullingstone Castle and the World Garden continues to make this event one of the highlights of the year for visitors and sellers alike, reflected in a record attendance of 1000 people over the weekend.

Cactus at the Castle 2025 was the biggest and best yet

The centrepiece of the event was again the extensive mart that ran throughout the weekend. This year we welcomed over 40 nurseries, growers and plant societies from across the country providing a wide range of plants to tempt visitors.

The Cactus at the Castle team were delighted that Bryan and Linda Goodey of Southfield Nurseries accepted our offer to transport and sell on their behalf some of their remaining plants following their retirement and the closure of the nursery to the public. They have been an integral part of the hobby in the UK for so long that it was our small way to say thank you for all the joy their plants have given so many of us over the years.

Mellie Lewis's Aeonium Workshops throughout both days proved ever-popular with visitors; and those attending the Lullingstone 20th Anniversary Convention on the Sunday heard three excellent talks from Graham Charles, Roger Ferryman and Ian Woolnough. Several attendees commented on how poignant they found Roger's talk showing the loss of habitat in Chile and Argentina over the last 20 years.

The third Lullingstone Open Show took place on the Sunday under the watchful gaze of Show Manager, Stirling Baker. The show attracted the highest number of entrants so far and the benches were full of plants to instil envy. The battle for the Lullingstone Trophy was a tight finish with Graham Charles receiving the most points in the show. Visitors to the show also had the chance to vote for their favourite plant in the

Mariachi music made for a songful Sunday

People's Award. This year's winner with the most votes was a beautiful *Astrophytum* 'Onzuka' also belonging to Graham.

The Mexican celebrations were in full swing once again with Tom Hart Dyke's lively tours showing off many of the Mexican plants within the gardens and greenhouses. Christian Hamilton's Blue Agave Bar provided plentiful tequila cocktails and Mexican beers alongside traditional Harvey's ales from Sussex while T's Tacos returned to serve up more delicious Mexican street food. On the Sunday visitors were serenaded by a marvellous mariachi band roving rhythmically among the marquees and setting smiles on everyone's faces.

Cactus at the Castle will be returning for another festival of flora on 5-6 September 2026 at Lullingstone Castle in Kent's garden of England. We are delighted to announce that the new group Haworthia Growers UK will be joining us on the Sunday when we will host their show.

More information will be shared shortly on the Cactus at the Castle website and, of course, in future editions of *Cactus and Succulent Review*.

Photos: Vicky Davies

The Lakeside Marquee

Cactus classes with classy cacti

All things aeonium with Mellie Lewis

So long Southfields, thank you for everything

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