Oxotica

The Newsletter of the Oxford Branch of the British Cactus and Succulent Society

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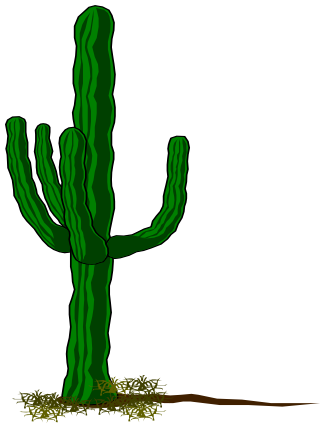

KEITH GRANTHAM

A tribute to Keith Grantham, who died this May.

It would be almost impossible to do full justice to Keith's vast contribution to our hobby. Many members of our Branch regarded him as a personal friend, while our Branch thought of him as a special friend of our Branch. Actually, he was a very special friend of many individuals and Branches up and down the country, for he was unstintingly generous with his time and good will to anyone who was the slightest bit interested in succulent plants.

Keith had visited many of the succulent plant habitats which most of us have only seen in photographs. In July he was due to give Oxford Branch a brand new talk about what he saw in Brazil last year: "Uebelmannias as big as footballs! No, bigger! This big! And thousands of Discocacti all in flower at once!" He had toured Madagascar from top to bottom, and had come face to face with a rhinoceros in Southern India.

Some of us last met Keith at our last AGM, which he enlivened with one of his matchless quizzes. The more seriously he took the hobby, the more fun he managed to extract from it and share with everyone else.

Keith was one of the great innovators. He can share a lot of the praise (or blame) for introducing the wide variety of curious vegetables that now horrify the cactus purist and entrance the more ecumenical plant lover.

Some exhibitors in shows, faced with ten thousand eligible species, resign themselves to accepting the result as "just the judge's personal opinion." But Keith had always insisted that objective standards of judging can be contrived and applied; he was always prepared, when asked, to explain in detail, persuasively and incontrovertibly, why any competent, trained judge would rate one particular plant higher than another. Without formal accepted standards it would be impossible to hold shows as we know them. But shows are the most important meeting places for Society members, and our most important shop windows for attracting the general public. Keith had agreed to judge our show this year, characteristically all by himself.

Our condolences go out to Keith's wife and family; also to Luton Branch.

John Watmough

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FORTHCOMING MEETINGS

15TH JULY Oxford Branch Show and International Asclepiad Society Show at Langdale Hall, Witney. After the Show **JOHN LAVRANOS** will give a lecture. Tickets (lecture only) £5 from Bill Darbon.

26th JULY *Change from published programme.* Following the sad death of Keith Grantham, this month's lecture has been altered. We have been very fortunate to secure the services of Dr Jeff Ollerton, who is Senior Lecturer in Ecology at the School of Environmental Science, University College, Northampton. Jeff has paid the occasional visit to our Branch in the past. He is a professional botanist and has recently returned from a field trip in Borneo. His speciality is Asclepiads, and his talk is officially entitled "The diversity of Flower Form in the Asclepiads – pollination field work on three continents." This talk will fit in very neatly after our Show.

23rd AUGUST. Alistair Kirkbright "With Charlie Glass in Mexico". Alistair, who is the son of David Kirkbright, the BCSS National Treasurer, has a good reputation as one of our younger speakers. He spent a year with the late Charlie Glass helping with conservation schemes in Mexico, and admirers of Charlie (and who isn't) will gain some new insights into the local flora and the work involved in looking after it.

27th SEPTEMBER. Curt Lamberth "The Art of Observation". Members who attended the April Branch Meeting will be aware that there is a new force in the Branch. Curt is a professional chemist, who has set himself the task of re-educating the cactus growing public in how to grow plants, based especially on the analysis of soil chemistry. Some of us are already reporting better results with our North American cacti. Curt has a knack of telling you exactly what you want to know in such a way that your own experience starts to make much more sense. Support your own Branch Member.

25th OCTOBER. Dr Gillian Evison is also a member of Oxford Branch. Longer standing members will know Gilly as a wonderful lecturer and one of the best growers of rare and difficult plants in the country. She is a regular winner of first prizes at National Shows. Her talk "The Greenhouse Year" will show us something of how it is done, tweak a few consciences among the lazy, and encourage us perhaps to be a little more courageous in what we attempt.

22nd NOVEMBER. This is the ANNUAL GENERAL MEETING. Any member who is not also a member of the Committee is most especially welcome. The Secretary is hoping to arrange a demonstration of Botanical Art to entertain us before teatime. If you can't come, please let the Secretary or any member of the Committee have your views beforehand.

John Watmough

The Branch meets at 7.30 p.m. on the 4th Thursday of each month (except December) at the John Bunyon Baptist Chapel, Cromwell Road, Cowley, Oxford.

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NEXT YEAR

Most Branch Secretaries get their speakers for the next year sorted out in September, partly because that is when the Judges' Course takes place and most of them can be buttonholed and arm-twisted. So please let the Secretary know what or who you would like at Branch Meetings.

THE PROGRAMME CARD – AN APOLOGY

I am sorry that November's Table Show schedule got truncated during the highly complex production process.

Would you please insert before the two classes shown the following :

Cereus Gp Mesembryanthemum Gp

JW

NEW WEB PAGES FOR THE BRANCH

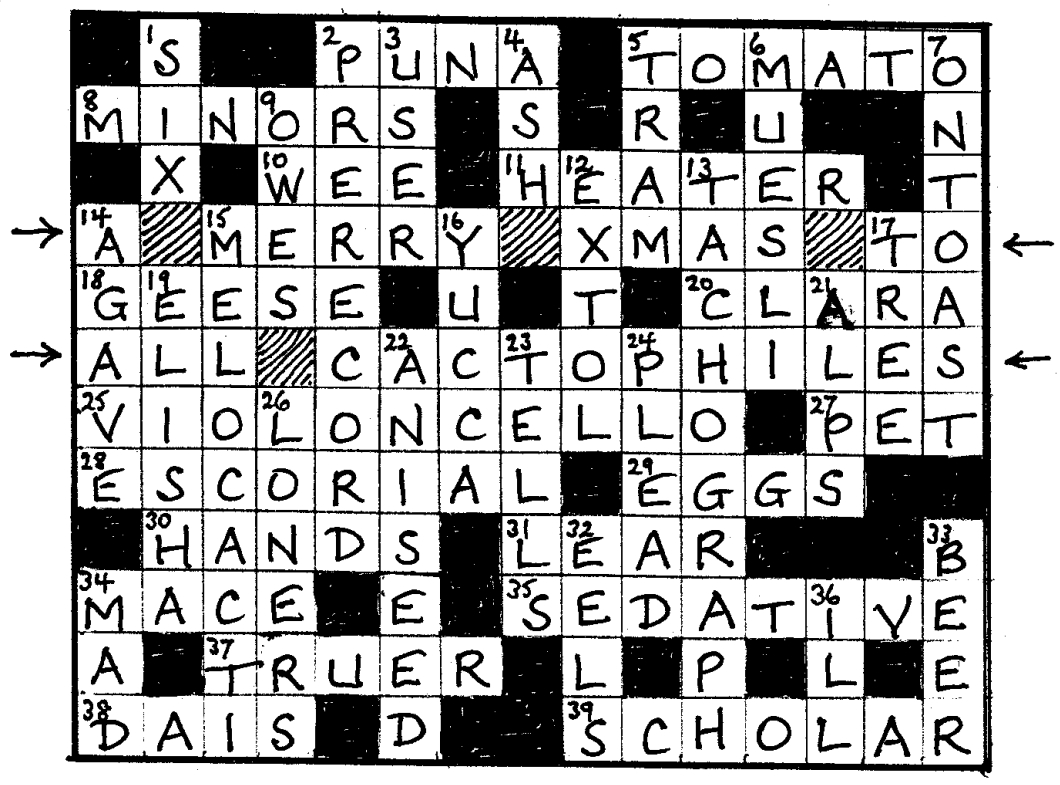
Using the facilities of the CommuniGate software, some web pages have been set up for the Oxford Branch, and our intention (!) is to update them regularly. Those of you with Internet access and a browser can find them on:

http://www.communigate.co.uk/oxford/bcssoxfordbranch/

The pages can also be found by people casually browsing the CommuniGate Oxford pages under 'Clubs and Societies'.

DG

And here is the answer to John's Crossword set in the December 2000 issue of *Oxotica:*



STERILE METHODS FOR RAISING CACTI FROM SEED

By Curt Lamberth

This article is for those growers who are unafraid of trying some alternative methods of raising cacti from seed.

For best results seed requires surface sterilization prior to sowing as the seedlings will remain in their containers for up to 6 months or longer and any fungus contamination will certainly kill them. Most microbial contamination originates from the seed coat or sometimes from the seed embryo itself.

Surface sterilization of seed. Twenty-four hours before you want to sow the seed, wrap up each batch of seed in a small piece of white cotton or polyester and use a wire tie to hold the bundle together. Leave sufficient wire projecting, say 10 cm, so that the bundle can be held easily and a label can be attached. If the seed is fine, then mix some silver sand with the seed to help dispersion. Put the bundles into chinosol or Cheshunt Compound solution for 24 hours. It may be necessary to add a very small amount, like the amount that will adhere to a pinhead, of washing up liquid to act as a wetting agent. It is important the seeds are soaked for at least 24 hours to encourage the spores to germinate and be killed by the fungicide. The seeds could be left for 2 days, but it is not recommended to leave the any longer or they may germinate. It is also possible to sterilise seed using a 10% solution of bleach and reduce the soaking period to 20 minutes, and then soak in cool, boiled water to remove the bleach solution. After the soaking period, place the bundles of seed on a newspaper or paper towel to wick away the excess fungicide. After about 30 minutes, put the bundles of seed on a clean paper towel and allow them to dry naturally at room temperature (not in the sun). Once dry, the *seed is ready to sow.*

Embryo sterilization of seed. There are fungicides developed to kill spores present within the embryo. VITAVAX 200 FF has been commonly used and is available only in super-large quantities but you may be able to persuade the manufacturers to send you a research sample. Look on the WWW if you are interested.

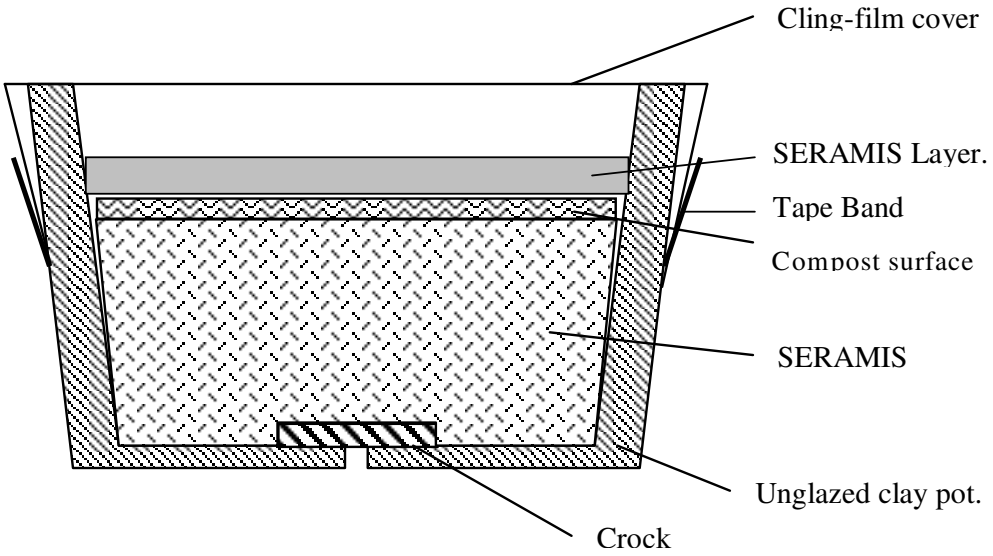
Sowing the seed. There are many variations on this theme, here is one example. Use clean, unglazed clay pots (no more than 6 cm deep) and cover the drainage hole with a piece of crock or gravel and fill with SERAMIS to within 2 cm of the rim. It is important to leave sufficient head-room for the seedlings to develop sufficient size before they have to be transplanted. Tap and firm gently. Cover the surface of the SERAMIS with fine sandy compost to form a layer about 3 mm deep. Place a single layer of SERAMIS on top of the sandy soil so that the seeds can fall between the granules and onto the sandy soil. Some seedlings need to push against the soil to remove the seed case and develop properly, whilst other seeds will need light to germinate and must not be buried. Seedlings will eventually grow roots through the compost to develop fully in the SERAMIS layer.

Cover the pots with aluminium foil and bake at 150 to 160°C for 1 hour (gas mark 2). If necessary, bake at the same time some coarse and fine sand for covering the seed.

Allow the pots to cool to at least 40°C prior to sowing seed.

The next stage should be performed in one operation as all the surfaces and utensils must be clean (i.e. boiled, or swabbed with methylated spirit/water 90:10 mixture) and ready to hand. Wear clean rubber gloves, or disposable gloves during this next stage to

Figure 1. Clay pot method of seed raising.



prevent contamination from hands. It is best to use a room where draughts are kept to a minimum so that fungal spores are not wafted into the pots.

Take one of the aluminium foil covered pots and loosen (but do not remove) the foil.

Unwrap the sterile seed bundle, carefully sprinkle the seed onto the dry SERAMIS surface. You may need to break up the seed mat gently. Cover large seeds (up to 0.8 mm) with sterilized coarse potting sand. Cover small seeds with fine sharp sand only or do not cover at all.

If necessary, spray the surface of the pot with potassium 8-hydroxy quinoline sulphate (Chinosol fungicide) at a 1 to 500 concentration (about 1 g per litre in cool boiled water with a small quantity of surfactant added (washing up liquid)).

Seal the pots with 'cling-film' and a band of PVC electrical tape. See Figure 1.

Prepared pots (covered in their own cling film) are then soaked in full strength fungicide so that the solution wicks up into the pots and wets the seed. Then sink the pots into a heated sand tray preferably at a temperature of 15°C (night) and 25°C (day). Some species (*Blossfeldia*) require that the initial temperature be lower, no more than 20 to 25°C, as higher temperatures impede germination. The sand is then moistened with a copper containing fungicide solution and the whole tray surface covered with plastic, glass or cling film to reduce evaporation.

If sufficient natural light is not available, artificial light can be supplied for a 10 to 16 hour light period using 15 to 20 W TRITON strip lights, mounted 9 cm from the pot surfaces, six tubes per square metre. It is vital that there is a light / dark cycle for cacti to grow correctly.

Refluxing of water which condenses on the inside of the cling film should start within 48 hours which will provide a clean water supply to the seeds. Germination will depend on the supply of water and temperature, and usually starts at the edge, progressing towards the centre of the pots.

Once germinated, there should be just sufficient water to encourage growth, but not sufficient to saturate the compost. To achieve this, the temperature can be

reduced. Most seedlings can be allowed to grow undisturbed for up to 4 months after which growth slows down. As a rough guide, transplant *Turbinicarpus*, *Lophophora*, *Obregonia* and *Ariocarpus* when the second set of spines develop; transplant *Strombocactus* when 2 to 3 mm across preferably into SERAMIS in which they grow well even from such a small size. Leave *Blossfledia* until they are over 2 mm in diameter. All other species will out-grow the headroom and will require pricking out sooner.

After 3 to 6 months, open the pots and transfer the seedlings to sterilized SERAMIS or other potting media and spray with fungicide. Other growth substrates can be used such as pumice or BIOSORB. Pumice tends to encourage the growth of moss and BIOSORB is extremely efficient at distributing all available moisture and thus tends to dehydrate seedlings. Allow to dry for 4 days after pricking out before making the SERAMIS just damp with the half strength SERAMIS plant nutrient (flowering plant product) or similar hydroponic growth nutrient developed for cacti (e.g. CHEMPAK Cactus Fertilizer - make up a concentrate of 6 g in 200 ml water; use this solution at 6 ml per 1000 ml). The water used should be clean (preferably tap water) and partially sterilised by boiling. Full strength SERAMIS solution causes offsetting to occur. Water only when seedlings are just dry and maintain the temperature at 18°C or above. Watch out for red spider mite and dehydration of smaller seedlings like *Blossfeldia*.

Seedlings growing under artificial light and (to the right) a sealed seed tray.

Ariocarpus seedlings several months old growing in SERAMIS.

Blossfeldia seedlings growing in sterile conditions on SERAMIS.

WILD AND ENDEMIC SUCCULENTS PLANTS OF LANZAROTE

By David Greenaway

Euphorbia balsamifera - near Playa Blanca

Lanzarote, the most easterly of the Canary Islands, is 28 degrees north of the equator, and has a semi-tropical to semi-desert climate: the country of Western Sahara, on the African mainland, is only 60 miles away. Summers are generally dry and sunny with temperatures in the range18°C to 28°C. Winter temperatures are 14°C to 21°C. Annual rainfall is 150 - 200 mm. The highest ground is in the north of the island, where the Famara massif reaches 670 metres. This is not usually high enough to trigger rain from the trade winds that blow year-round. In this respect Lanzarote is like the neighbouring island of Fuerteventura, and in marked contrast to all the other major islands of the Canaries each of which has a very high central peak which causes substantial rainfall on the north side of each island. Nevertheless, the northern high ground in Lanzarote is damper due to cloud and fog condensation and it does support a significantly different range of succulents than do the very dry coastal plains.

I'll take the low ground first, starting with the extreme south-west of the island, near Playa Blanca. This was a small fishing village in the mid-eighties, but is now developing rapidly - but tastefully - as EU money pours in; it is where Jean and I have stayed every year since 1989. The principal vegetation on the walk from our resort westwards to the lighthouse at Punta Piechiguera is of Euphorbia balsamifera, which forms low, wide mounds of green. These are still numerous, but it is clear that most of them will go under as this coast is developed - every year we see the spread of hotels and villas, and more rapidly than ever over this past year.

Fortunately the plant occurs elsewhere, in particular at the other end of the island where they are very numerous. These are on the wide coastal plain of the Malpais de Corona in the extreme north-east. These 'badlands' are the result of the eruption of Monte Corona 4000 years ago. There has been time enough for knee-height vegetation to develop, and there is relatively little modern, human development. Kleinia neriifolia (previously called Senecio kleinia) is also common there, and Caralluma burchardii is said to be there but I have never seen it in habitat - the terrain is too rough to explore easily; this Asclepiad is endemic to Lanzarote and Fuerteventura. Euphorbia regis-jubae is common here also, as well as in other parts of the island (and the Canaries in general). E. obtusifolia is also to be found on the island.

Kleinia neriifolia - Ermitage des Nieves road

Up now to the high ground, where it is just that little bit cooler and moister. At the highest point that can be reached by paved road, the Ermitage des Nieves (608 metres), a most charming little plant is found nestling in north-facing rock crevices - Aichryson tortuosum, which is also endemic here and in Fuerteventura. This is a robust form, whereas the form I found on the Mirador de Haria road is somewhat sparser, with smaller leaves and rosettes, and a thinner, pinker stem. The Aichryson can be found at many places along the island's northern ridge and has yellow flowers. Another endemic member of the Crassulaceae - Sedum lancerottense, is around these parts in places, but I have yet to see it. I have also never spotted Monanthes laxiflora v. microbotrys, but I hope to find both of them on our next visit. As light was fading on the last day of our visit at New Year, I at last discovered the 'secret' zig-zag path down the Risco de Famara. These are the very steep 500 m cliffs that terminate the massif on its seaward side, and is one place that the plants are reputed to occur.

Aeonium lancerottense is another endemic succulent, and is very common over parts of the Famara Massif, especially alongside the road down from the Mirador de Haria, where there are huge numbers. I have also found it on the narrow coastal plain at the foot of the Famara cliffs. Much more elusive is the only other Aeonium on Lanzerote - A. balsamiferum, which is said to smell strongly of balsam. Although very rare in habitat, it is, or was, cultivated on Lanzerote and Fuenteventura, the sticky balsam once being used to preserve fishing lines (Bramwell). I have not positively identified one yet. It has yellow flowers, unlike A. lancerottense that has pink. Lastly (and leastly!) there is a bush succulent growing on parts of the coast - Zygophyllum fontanesii, Othonna Group - which is a small, twiggy shrub with yellowish fleshy leaves. There are a couple of exotics, Mesembranthemum crystallinum and M. nodiflorum, which crop up in many places; the former was once grown on the island for soda extraction.

Cultivation in the UK: the main thing to note is that like most Canarian plants they are autumn and winter growers, so reckon on growth somewhere between September and March. Rest in late spring and summer, with just a little water. Full sun with good ventilation for the stem succulents, a bit of shade for the leafy succulents, if under glass. Ease of propagation from cuttings is variable: for instance, Aeonium is a doddle, Kleinia a pig, and E. balsamifera impossible (?).

A VISIT TO RENÉ ZAHRA

Last month, Jean and I visited Malta for the first time, and it has to be said that part of the reason for going there was to renew our acquaintance with Nina and René Zahra, and to see René's collection. You will all know him as a regular contributor to the BCSS Journal, and in the January 1998 issue he described his collection and methods of cultivation in detail.

He has a great interest in the ceroids, and also specialises in South American plants - Gymnocalycium, Notocactus etc, of which he has just about every species and form. A new love is Haworthias. Most of his plants are, by necessity, grown from seed, and spares are sold to other enthusiast in Malta. Between them they raise enough money by this means to fund a 20-page annual journal (in Malti) plus a single-page monthly news-sheet, and to bring a speaker from abroad once a year. Graham Charles was over there earlier this year. I left a few recent issues of *Oxotica* with René.

David Greenaway