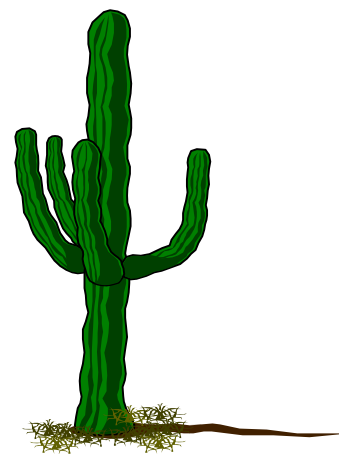


Oxotica

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

June 2002

Volume 7, Number 1



A NEW WAY FORWARD

One might think "why bother to look for a new way forward?" Well, something has to be done to promote new ideas, or a new look at what we are doing within the branch and The Society. It seems that interest in showing our plants in a competitive way is in decline. Any show day seems to fall flat after about 3 pm. The judging has finished, you have been to the sales table and back again, spoken to all your friends and other passers by, been round the classes and made comments about some of the decisions - *lets face it, the judge is never right in some eyes* - so what to look forward to? The melee at the end, packing up your plants and the trip home!

Well, we in Oxford Branch decided to try a new concept by combining our show with other specialist interest groups. Other branches, Birmingham for example, have had shows with the Haworthia Society and Euphorbia Study Group. Bristol Branch holds a Succulent and Mesemb show every two years. In 2000 the committee decided to try a bi-annual Succulent and Mesemb show on alternate years to the Bristol show, and this was a great success. Shortly after this show we were approached by the International Asclepiad Society to have a section within our 2001 show. A decision was made to close the show early and invite a Speaker to do a short talk after the show, this proved to be an

outstanding success, attracting internationally known botanists (as reported in the December edition of Oxotica). We now feel that this is the way forward to attract a larger attendance and interest in future events.

So what to try next, perhaps another new concept, a show for Cactus Plants only?

No Succulents - so we approached the Tephrocactus Study Group to be associated with our next show in July 2002 and they were pleased to accept.

Again we have invited an international speaker to attend in July and also at the October show this year, so watch out for the schedule. Hopefully this might encourage some of you who don't normally attend meetings to come along.

Bill Darbon
Show Secretary

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BCSS OXFORD BRANCH
Tephrocactus Study Group

ALL-CACTUS SHOW

On Sunday 14th July 2002 at 10:45
a.m. at Langdale Hall, Witney.

Followed by a lecture on Tephrocactus
(Tickets Only) by Franz Kühhas of
Austria, starting at 4:30.

Information: Bill Darbon 01993 881926

JOURNAL POPULARITY

(This is an extract from the Mexican diaries of Brian Thomson. We hope to publish more extracts in Oxotica as space permits - Ed.)

Having looked through hundreds of cactus and succulent journals during the last three months, I am intrigued by the number of publications of new species/varieties that have appeared. More interesting yet, is that they appear, more often than not, in the same few journals.

I am assuming that the publication of one's new species/variety is done in the journal that will give one's new plant the widest possible audience, and that therefore this also reflects the overall popularity of said journal.

I am currently sitting in the Can Te library studying the KuaS journals for the years 1974 & 1975 and am impressed by the number of new species/varieties that are currently being published. I have therefore decided to check the other major journals for the same two-year period in order to see how many new publications that they

contain. A couple of other points are worth taking into consideration. KuaS also gives a brief coverage of new plant descriptions that appear in other journals, complete with a translation of the description in German. Also, it is noticeable that in KuaS the bulk of the new publications are in full colour, the proportion of full colour/monochrome being more or less 2/1.

Apart from KuaS, the journals that I will cover for this little exercise are as follows: American, Mexican, the two British journals and Kaktusy, of Czechoslovakia.

Results

Kakteen und andere Sukkulenten

26 new species/varieties in colour.

11 = = = = monochrome.

6 from other journals.

A total of 43 new publications.

Cactus and Succulent Journal (America)

8 new species/varieties in colour.

5 = = = = monochrome.

3 from other journals.

A total of 16 new publications.

Cactaccas y Succulentas Mexicanas

9 new species/varieties in monochrome.

The National Cactus and Succulent Society

1 new species/variety in monochrome.

The Cactus and Succulent Society of Great Britain

No new species/varieties published.

Kaktusy

No new species/varieties published.

Enough said!

Brian Thomson

FORTHCOMING MEETINGS

25th July Dr John Miller – Cacti in Mexico.

John Miller is an expert on Mexican plants, and is sure to draw attention to the climate and soil where the cacti grow. Expect to see some beautiful cacti in their natural habitat, with a link to how we can best look after them in our own collections.

22nd August Brian Bates – The Cacti of Chuquisaca.

Brian emigrated to Bolivia a few years ago, and he now lives in the province of Chuquisaca, where he takes visitors on guided tours. He is over in England during the month of August, and we are very fortunate to have obtained his services, which could only have been done through the internet.

26th September Cathy Darbon – Mini Judges' Course.

Most members who attend Branch meetings will have experienced Cathy's Mini Judges' Course, which has become a popular feature of Branch programmes up and down the country. By special request, she is adapting it for us to give us special insights into how to show the Other Succulents, in time for our Mesemb and Other Succulent Show on 13th October.

24th October Curt Lamberth – The Art of Conservation from Seed.

Curt's lecture and demonstration last year, based on real scientific observation and analysis, has had a great influence on

Branch members, who are trying to grow things that they never thought they ever could. His article in Oxotica has been spread around the country and has produced several spin-offs, not least the pressure that hobbyists and nurserymen are now putting on suppliers of grits and composts to provide the best materials. Prepare to learn a lot more – this time in pursuit of one of the Society's most cherished objectives.

28th November Chris Cooper – My Favourite Plants.

Chris from Reading Branch has been one of our most welcome visitors in the last few years. She has very kindly consented to produce an entertaining look at her own plants to get members in the mood for the AGM. What are her favourite plants? She has a lot of interests, but mention white-spined Mammillarias and you won't go far wrong.

John Watmough
Secretary

Oxotica

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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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PINYA DE ROSA



Would you be surprised to learn that (probably) the best *Opuntia* collection in the world is in Spain? And that on the same site there is one of the best collections in Europe of *Agaves*, *Aloes*, *Yuccas*, and *Mesembs*? All this has been said of Dr Riviere's botanic garden 'Pinya de Rosa', between Blanes and Lloret de Mar, on the Costa Brava.

Jean and I visited the garden in June 2000, on a day trip out from the French resort of Banyuls, just across the border, where we were spending a few days. I thought it was worth the effort on our part. It is well-maintained on the whole, but is possibly not quite in its heyday any more: after all, Dr Riviere started it in 1945, so he may not be around now! Propagation houses and other covered areas were not accessible, which is probably why we missed the collection of *Conos* and *Lithops*. The write-up on their web site is part of the information on the leaflet they give out at the entrance, which, as it says, was written in 1975. Don Fernando Riviere de Caralt, a civil engineer, bought the terraced coastal property, and started to develop the garden on a grand scale:

"Work proceeded as the various collections were laid out systematically in large rock-enclosed beds. *Opuntias* and *Platiopuntias* filled 27 beds, *Cylindropuntias* and *Austrocylindropuntias* 12 beds, *Agavaceae* 32 beds and *Aloes* 11 beds. Plants came mainly from their natural habitats but also from other botanical gardens and private collections all over the world. American specialists regard the *Opuntia* collection as the most important in the world: it contains 600 species of 18 genera. The entire collection contains more than 7000 species excluding the local flora."

If you are ever out that way on holiday - or on business - why not have a look at this place? If you are travelling by car, and are visiting Barcelona, you can get up to Blanes easily by train.

¡Bueno viaje!

David Greenaway



Jean among the Saguaros at Blanes

PLANT SALES

Now that the Summer Show is nearly on us, could members please dig out some plants for the Branch Sales table? Plant sales are one of the few ways we have of financing Branch activities (including Oxotica). There are a few conditions attached. Firstly, the plants should be clean and presentable, potted up in decent pots with proper compost and a proper label. As juniors used to chant in bygone days, "No garden soil, no yoghurt pots, no plastic spoons". Additionally there should be a second label bearing the price required and an identifier to show whose plant it is, for use in divvying up afterwards. Please note that your price should not be so low as to embarrass the professional nurserymen

also selling at the Show, and should include the 20% rake-off (sorry, commission) which the Branch will demand.

If you can donate some small plants that could be given away free to children on the tombola stall, they will be very welcome.

Any unsold plants remain your property and should be collected at the end of the Show, or else the Plant Sales manager will go apoplectic.

Finally (and this is only a beautiful fantasy) – wouldn't it be nice if the Cactus Only Show had not even a vestige of the Other Things, and the Autumn Show were not polluted by those prickly horrors?

John Watmough

ARTIFICIAL LIGHTING FOR CACTI

by Curt Lamberth

...Concluded from the previous issue

How far away should the lamp be from the plants?

Cheat: Take a guess at the light level of a plant and look up the recommended distance in the 'Exposure Tables'. Exposure Tables give the best optimum distance between a light source and plant. There are two tables included, one for a metal halide lamp (Table 1) and one for fluorescent tubes (Table 2). It is important to stress that the air temperature should remain between 15 and 25°C and that seed germination will be retarded if the temperature rises above 30°C. Metal halide and sodium lamps are much hotter than fluorescents. Some shading may be required for seedlings that have just germinated and this can be estimated by the colour of the seedlings. If the seedlings turn red they have too much light. If the seedlings are thin and spindly and have a very light green colour, then they have too little light. Be aware that the seedlings of some species such as *Ariocarpus*, *Uebelmannia* and *Setiechinopsis* are naturally red in colour.

Calculate: Alternatively the light intensity can be calculated by using a formula for a point source (MH or similar) or a line source (fluorescent).

However, you need to know how many lux your plants need. The following general points may be helpful:

For a point source the intensity, I , in lux is given by the following formula where L is the lumen output for the lamp and r is the distance (in metres) from the point source to the plants.

$$I \text{ (point source, lux)} = \frac{L}{4\pi r^2}$$

For a line source the intensity, I , in lux is given by:

$$I \text{ (line source, lux)} = \frac{L}{2\pi r}$$

For either of these equations, multiply L by 2 if a reflector is used.

Table 3 lists four examples for lamps A, B, C and D.

- Lamp A is a typical metal halide lamp with a reflector. Sunlighter 500, 400 W MH lamps have initial 31,500 lumens output.
- Lamp B is a typical 20 W fluorescent Growlux tube without reflector. Growlux have an initial 1000 to 2000 lumen output (20 to 40 W).
- Lamp C is a special quartz-halogen 12 V spot light with corrected light frequency to mimic sunlight. Light output is 7,500 lumen but as a 36° beam, 50 W.
- Lamp D is a typical 40 W fluorescent cool light without reflector. Cool lights have an initial 3000 lumen output (40 W).

So how many lux do my plants need?

- Intensive sunlight: > 10,000 lux.
- Medium light (morning and afternoons, bright shade): 5,000 to 10,000 lux.
- Lower light (dawn and dusk, shade): 500 to 5,000 lux.

You can now use Table 3 to estimate the distance from lamp to plant, knowing the light requirements of the plant.

Plant damage through scorching

Plants damaged through excessive artificial light are characterised by having a white corky epidermis on the surfaces facing the light. The damage is usually concentrated on young surfaces such as the upper part of tubercles on *Ferocacti*.

Plants grown under lights should be watered during the dark period otherwise

scarring, usually white or red in colour, will form on the upper surfaces especially with *Lophophora* and *Myrtillocactus*.

Fluorescent strip lights which have no phosphor (a colourless glass tube) and are commonly used for removing algae in ornamental ponds will burn seedlings in a matter of minutes with damage being evident in 24 hours. This type of light may be used to irradiate seed pots when

outbreaks of fungi have started, but before the seeds have germinated. *Warning:* the ultraviolet radiation emitted by these lights is harmful to the eyes!

Have fun!

Curt Lamberth

Table 1. Exposure table for 400 W metal halide lamp with reflector.

Light source: 400 W metal halide lamp, "SUNLIGHTER SYSTEMS" model S 500 with lamp type 400 L / 360 S. Distances in metres. Source 31,500 Lumens, Lamp A.				
Genus	Just Germinated	Up to 1 Year	Up to 2 Years	Mature Plants
Ariocarpus	0.10	0.85	0.80	0.65
Astrophytum	0.80	0.80	0.70	0.70
Aztekium	0.80	0.70	0.60	0.60
Blossfeldia	0.10	0.10	0.90	0.90
Cereus	0.80	0.70	0.60	Not Suitable
Cleistocactus	0.80	0.60	0.60	Not Suitable
Discocactus	0.80	0.80	0.70	0.70
Echinopsis	0.80	0.60	0.60	0.60
Epithelantha	0.80	0.70	0.60	0.60
Escobaria	0.80	0.60	0.60	0.60
Eulychnia	0.80	0.60	Not Suitable	Not Suitable
Ferocactus	-	-	0.50	0.50
Geohintonia	0.80	0.70	0.70	0.60
Lophophora	0.90	90	0.70	0.70
Mammillaria	0.80	0.80	0.70	0.70
Melocactus	0.80	0.70	0.60	0.60
Myrtillocactus	0.80	0.75	Not Suitable	Not Suitable
Obregonia	0.80	0.90	0.70	0.70
Pelechyphora	0.80	0.70	0.70	0.70
Setiechinopsis	0.80	0.80	0.70	0.70
Solisia	-	-	0.60	0.60
Strobocactus	0.80	0.70	0.70	0.60
Toumea	0.80	0.65	0.60	0.60
Turbinicarpus	0.80	0.65	0.60	0.60
Uebelmannia	0.80	0.80	0.70	0.70

Table 2. Exposure table for low wattage fluorescent lights.

Light source: TRITON 20W, 18W and 15W fluorescent lamps placed 0.14 m apart. Distances in metres. Source 1000 Lumens, Lamp B.		
Genus	Just Germinated to 3 months	Over 3 Months
Acanthocalycium	0.14	Not Suitable
Aporocactus	0.14	Not Suitable
Ariocarpus	0.14	0.14
Astrophytum	0.14	0.14
Aztekium	0.14	0.14
Azureocereus	0.14	Not Suitable
Blossfeldia	0.18	0.15
Cereus	0.14	Not Suitable
Cleistocactus	0.14	Not Suitable
Discocactus`	0.14	0.14
Echinopsis	0.14	Not Suitable
Epithelantha	0.14	Not Suitable
Escobaria	0.14	Not Suitable
Eulychnia	0.14	Not Suitable
Ferocactus	0.14	Not Suitable
Geohintonia	0.14	Not Suitable
Lophophora	0.14	Not Suitable
Mammillaria	0.14	Not Suitable
Melocactus	0.14	0.14
Myrtillocactus	0.14	Not Suitable
Obregonia	0.16	0.14
Pelechyphora	0.14	Not Suitable
Setiechinopsis	0.14	Not Suitable
Strobocactus	0.14	Not Suitable
Toumea	0.14	Not Suitable
Turbincarpus	0.14	Not Suitable
Uebelmannia	0.14	Not Suitable

Table 3 Example calculations of the light output from three typical lamps at different distances.

Lamp A		Lamp B		Lamp C		Lamp D	
Light Output, lu	31500	Light Output, lu	1000	Light Output, lu	7000	Light Output, lu	3000
Light type	Point	Light type	Line	Light type	Point	Light type	Line
Reflector	Yes	Reflector	No	Reflector	36° Flood	Reflector	No
Distance from lamp, m	Lux	Distance from lamp, m	Lux	Distance from lamp, m	Lux	Distance from lamp, m	Lux
0.05	1003185	0.05	3185	0.05	222930	0.05	9554
0.1	250796	0.1	1592	0.1	55732	0.1	4777
0.15	111465	0.15	1062	0.15	24770	0.15	3185
0.2	62699	0.2	796	0.2	13933	0.2	2389
0.3	27866	0.3	531	0.3	6192	0.3	1592
0.4	15675	0.4	398	0.4	3483	0.4	1194
0.5	10032	0.5	318	0.5	2229	0.5	955
0.6	6967	0.6	265	0.6	1548	0.6	796
0.7	5118	0.7	227	0.7	1137	0.7	682
0.8	3919	0.8	199	0.8	871	0.8	597
0.9	3096	0.9	177	0.9	688	0.9	531
1	2508	1	159	1	557	1	478
1.1	2073	1.1	145	1.1	461	1.1	434
1.2	1742	1.2	133	1.2	387	1.2	398
1.3	1484	1.3	122	1.3	330	1.3	367
1.4	1280	1.4	114	1.4	284	1.4	341
1.5	1115	1.5	106	1.5	248	1.5	318
1.6	980	1.6	100	1.6	218	1.6	299
1.7	868	1.7	94	1.7	193	1.7	281
1.8	774	1.8	88	1.8	172	1.8	265
1.9	695	1.9	84	1.9	154	1.9	251
2	627	2	80	2	139	2	239
2.1	569	2.1	76	2.1	126	2.1	227
2.2	518	2.2	72	2.2	115	2.2	217
2.3	474	2.3	69	2.3	105	2.3	208
2.4	435	2.4	66	2.4	97	2.4	199
2.5	401	2.5	64	2.5	89	2.5	191