Crocus Group Bulletin No. 30 Autumn 2002

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Editorial

Would any *Crocus* Group member who has an e-mail address and would like to receive bulletins and other information by e-mail please e-mail me at <u>thecrocusgroup@hotmail.com</u> to be added to the *Crocus* Group e-mail register. **S**

Membership

Getting very close to the 200 mark, have to have another cull soon.

Seed exchange to the US

It would appear that US customs are getting very difficult when it comes to the sending of seed to the US. Phytosanitary certificates appear to be required. The *Crocus* Group cannot possibly get into the issuing of such certificates so it looks like we can no longer exchange seed with our US friends. If any member thinks I have got this wrong let me know. **S**

One mans recipe for growing pelistericus, scardicus and vallicola

My routine for pelistericus, scardicus and vallicola is the same: 3.5 inch plastic pot, extremely well drained but moisture retentive compost, (a mix of peat, leafmould, Seramis, perlite and grit in equal proportions - hence 60% is drainage material & holds both moisture and nutrients and effectively replaces loam without the drainage problems loam can cause). This compost was an accidental discovery but I use it for a lot of things now - terrestrial orchids love it if I exclude the peat & add some sand & more leafmould. The pots are placed in a cool, semi shady place outdoors as soon as the leaves are well developed and are stood with my potted woodland plants (asarums etc) on a 2" deep tray filled with Hydroleca capillary aggregate. This tray has no hole in the base but has a hole drilled in the side about 1" up, this means that there is a water reservoir at the bottom and the Hydroleca stays permanently damp - I do need to add water occasionally during the summer. Feeding is half strength Tomorite & a dash of seaweed extract, when I remember to do it. As soon as the leaves start to go back - usually late August for pelistericus here - the pots are plunged in my alpine house and allowed to dry a little. In November I let them dry out to a depth of an inch or so (just above the tip of the corm) and try to maintain this state right through to the start of leaf development in spring. I'm still very careful with water until at least mid-April and water round the edge of the pot. They only get exposed to our plentiful Cumbrian rain from mid April until late August. The plant I'm growing as pelistericus is showing slow but definite increase, vallicola increases very well, scardicus does not increase but is a horrible squinny form which will probably get composted this year anyway! I have repotted it once in August and it survived the experience. The compost works here but then we have high rainfall during most summers and it seems to strike the right moisture balance. I suspect that it would dry too easily for safe use in the southeast. Darren Sleep - Barrow-in-**Furness**

Crocus of Greece - Central and eastern Macedonia and western Thrace

Liberal quantities of ouzo and retsina in the 'stimulating company' of those intrepid travellers Chris Lovell and Peter Bird the previous evening had added credence to the theory I had been developing about finding boryi in northern Greece, some 50 miles northeast of Thessaloniki. We had been told by Neils Jacobsen that it could be found in the olive grove of a certain monastery and in the environs of a nearby church. My imagination leapt on to the idea of a monk in times past visiting his community at another monastery down in the Pelopponnese, where boryi would be expected to grow and bringing some back as a momento, much as the Cluniac monks had done with nudiflorus in Britain. This flight of fancy was firmly dashed the next day when we found boryi at other sites on the southern slopes of Mt. Menikion, not just at the specified sites. I am not sure just how far north boryi has been found in Greece, but this is probably the furthest and was found by Neils Jacobsen who had been in the area in previous years. Neils also reported a first time find for Greece; on the road between Drama and Xanthi, where a small population of pallasii had been discovered out of flower and has subsequently flowered as that species. We visited this population, and a few days later found further colonies of what must be the same plant to the southwest, between Serres and Thessaloniki. It is not very surprising to find pallasii in Greece, indeed, it is more surprising that it has not been previously cited as it grows relatively nearby in the FYR of Macedonia and in southern Bulgaria. The problem we currently have is in identifying the subspecies involved. The obvious choice for subspecies is the type, pallasii pallasii, the other subspecies occurring much further east in Turkey and the Levant. However, Brian states that one of the differences between the subspecies lies in the length of the neck fibres. These are stated as <2 cm in pallasii,

Neils had also alerted us to another first time citation for Greece, in the mountains above Drama, he had found reticulatus. When we found the plant in flower, I almost thought we would have to rewrite Brian's monograph, as the first flower seen had dark anthers. Panic subsided as further flowers were examined and all had yellow anthers, it is the type and not hittiticus. We had wanted to look closely around this area, as the road from Drama to Granitis at the base of Mt Falakron had many years before been the site for a Norman Stevens collection of a biflorus subspecies which he had assumed was weldenii. I have grown this plant for a long time and it is in my opinion subspecies alexandri, so I wanted to see the wild populations to be sure. The differences between the two subspecies cannot be settled on flower colour or markings alone. Norman's plants ranged from white to dark blue, some of which look like the cultivars of weldenii called 'Fairy' and 'Miss Vain', whilst others look like the alexandri cultivar 'Major'. Peter Bird had made another collection of the same plant at a different site in the same area and these too had the same variation. Neils Jacobsen found other populations higher up the mountain. He also found hybrids with chrysanthus that grows there as well. Neils opinion is also that the plant is subspecies alexandri. A quick examination with a hand lens to confirm that there were no ribs in the grooves on the underside of the leaves made the identification watertight. This is another first for the flora of Greece.

and >2 cm and up to 10 cm in the other subspecies. The plants we found all have neck fibres much longer than 2 cm, the average being in the 4-6 cm range, and in several very robust

individuals up to 10 cm.

One of the reasons for the trip to this not overly visited part of Greece was to visit the site we know for *biflorus stridii*. This is a not particularly remarkable form of *biflorus* that is very similar to the type only with dark anthers. It is cited for Mt Chortiatis just outside of Thessaloniki, but it does not appear to be very abundant. Salmon, Bird and Lovell have only found this one site and Neils Jacobsen has diligently searched elsewhere and found no other sites. Both Peter Bird and Neils have seen hybrids with *chrysanthus* that grows there as well. If it is the case that *biflorus stridii* is confined to this one population, that would make it a very endangered species indeed, as the site is very small and few individuals were seen.

After discussing the above-mentioned species, the other *Crocus* growing in the area appear almost mundane: *chrysanthus* and *pulchellus* are almost ubiquitous and *chrysanthus* in particular will grow on any soil type and at all altitudes. Neils Jacobsen reports that the eastern forms of *chrysanthus* tend towards forma *brunnellus* by having brown markings and suffusions on the external segments.

High altitudes find *veluchensis* and one particular population found contained 50 or more albino forms. This is a beautiful snowmelt plant that varied from pale blue to dark purple. The western part of the area under discussion also had *olivieri olivieri* whilst the eastern part had *flavus flavus*. This brings the *Crocus* tally for the area up to 10, viz: - *biflorus alexandri*, *biflorus stridii*, *boryi*, *chrysanthus*, *flavus flavus*, *olivieri olivieri*, *pallasii ssp*, *pulchellus*, *reticulatus reticulatus and veluchensis*. **S**

Crocus Pages - an update on the Crocus Web Site

The *Crocus* Pages web site has evolved somewhat since my rather ham fisted first attempt was reported a year ago. The current version has some basic information about all the 127 taxa with digital images of the 86 that I grow and flower. I have also been assisted by two other growers who have sent me pictures of 'missing' taxa. The site has had 1820 individual visitors in the eight months since it was launched with a total of over 3000 'hits' suggesting that a fair proportion return to follow up the first visit.

My aim is to provide an online resource for anyone interested in growing *Crocus*. Therefore some (perhaps much) of the information will not be new to CG members but hopefully the images of the taxa, their variants, tunic details and in some cases the differing seed characteristics will still be of interest. I am very keen to acquire images of the 'missing' taxa (ie those which I have yet to illustrate.) If you have photographs or slides that can be scanned or better still digital images of these plants, you may be able to help complete the project. If you think that you may be able to help in any way please contact me.

The future development of the site will depend in part on how much spare time I have in the long winter evenings. (We are expecting a baby in November which will probably slow me down a bit!) I plan to acquire some more sophisticated web design software (and the skills to use it) for a future revision of the site but family considerations have pushed this into the 2003/04 diary. This autumn I hope to add a significant number of new images especially of the missing taxa. More information on the taxonomy of the genus is overdue — Would anyone like to volunteer a few paragraphs? (All outside contributions are properly accredited). I may add more articles from past CG newsletters, but as space is limited these will not get priority. I am keen to have feedback from other CG members and suggestions for improvements both immediate and longer term.

The missing taxa list: Cc. alatavicus; almehensis; autranii; biflorus subspecies (except alexandrii, biflorus, isauricus, melantherus, pulchricolor, weldenii;) boulosii; cancellatus damascenus; cancellatus pamphylicus; fleischeri; hartmannianus; hyemalis; karduchorum; kerndorffiorum; kotschyanus hakkariensis; kotschyanus suworowianus; leichtlinii; michelsonii; pallasii turcicus; paschei; scardicus; scharojanii; sieheanus; veneris.

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What no 'Spotless'! What next?

Whilst repotting my *Crocus* collection in 2001 I was dismayed to find, particularly amongst the autumnal flowering species, significant levels of what appeared to be a fusarium infection. This malady manifests itself by the development of brown, sunken, scab like lesions on the corm surface. In mild attacks these can just be small, treatable blemishes, but when severe, the lesions tend to coalesce until a large percentage of the corm is engulfed especially around the dormant shoots and the basal area.

This problem has occurred sporadically in the past among my collection but only to a limited degree. I suspect therefore that last years more acute attack was due to the high rainfall and poor light levels during the winter of 2000/01.

My response to this problem up to now has been to destroy all heavily infected corms, and to immerse all slightly infected or suspect corms in a strong solution of 'Supercarb' or 'Spotless' (active ingredient Carbendazim) followed by a thorough drying before repotting. At the end of summer dormancy, say end of August, I give all the pots and the surrounding sand plunge a generous soaking with the hose, or better still with the fine mist spray unit provided with Access

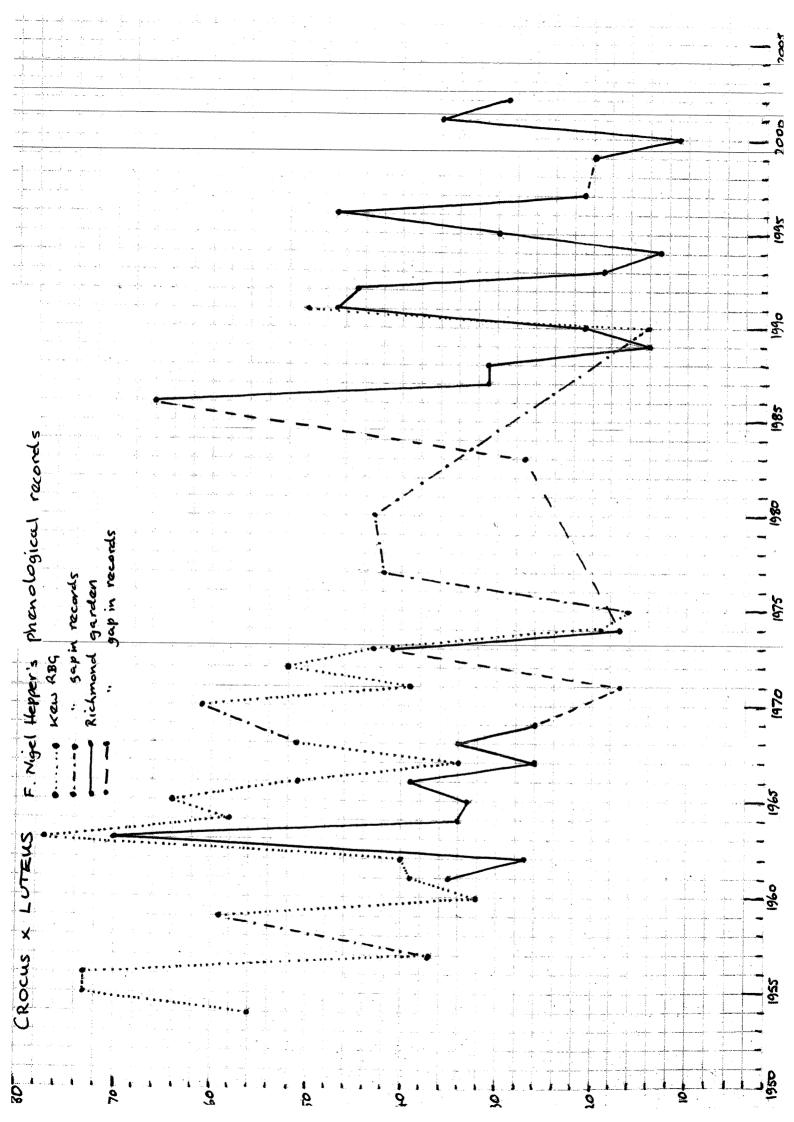
frames until I am confident that the compost is moist right down to the crocks. This essential irrigation is followed a day or two later with a good drench of Carbendazim at the rate of 1 sachet (1.4gm)/gallon. My modus operandi appears to be effective as my repotting this year has revealed only minor instances of the disease. I say this has been my routine 'up to now' because collection holders and we amateur growers have to come to terms with the imminent withdrawal of Carbendazim from retail outlets. Scotts who hitherto have produced 'Spotless' say they have no plans to replace it with an effective alternative. So, what's to be done? Well, the amateur grower who is now theoretically left defenseless can only resort to the trade for help, either directly with discretion, or indirectly via an obliging nurseryman friend. Reference to the catalogues of leading horticultural wholesalers such as Fargro and Avoncrop will reveal that Carbendazim is still available to the trade under the name 'Bavistin'. This is produced by BASF and costs £11.40 + VAT for a one kilo pack. Compare this with 'Spotless' sold at £4.99 for 5 x 1.4gm sachets! Even after allowing for the fact that 'Spotless is 80% and 'Bavistin' is only 50% Carbendazim, that's quite a mark up.

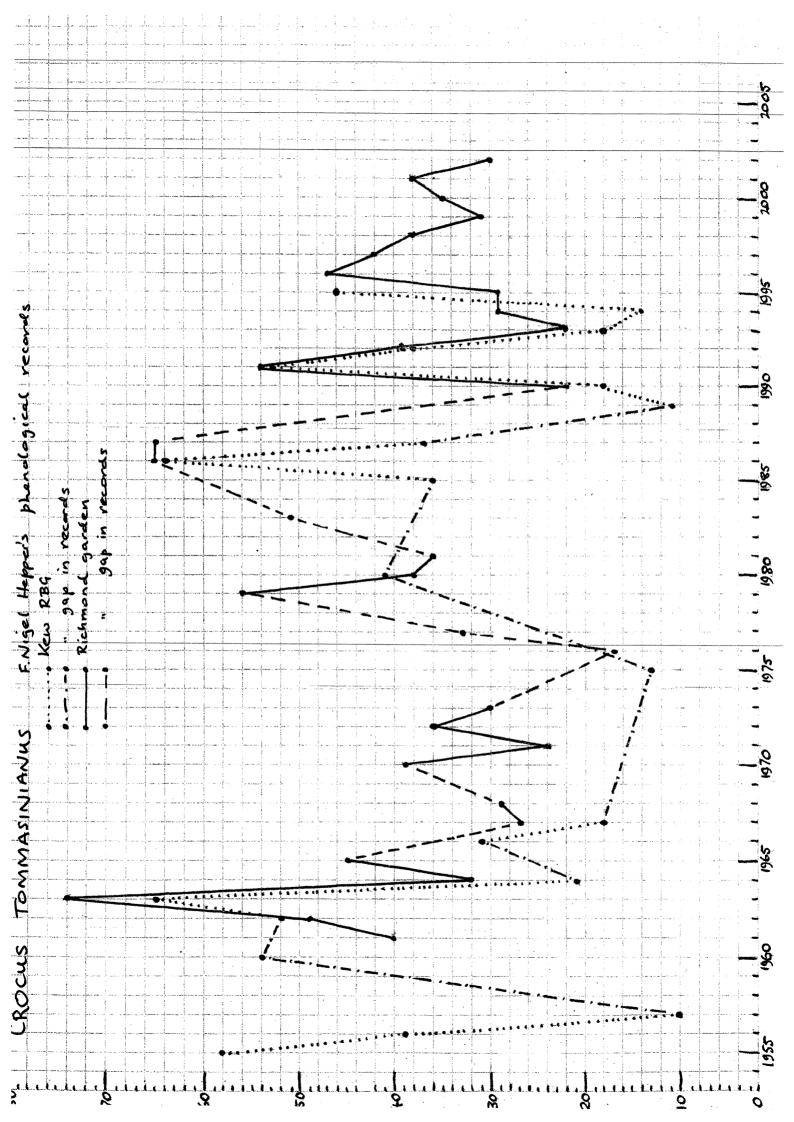
Carbendazim is a systemic fungicide and is said to be curative and protective against a wide range of diseases including botrytis, powdery mildew and presumably fusarium. Another fungicide manufactured by Scotts for trade outlets under the brand name 'Octave' (active ingredient Prochloraz, 46% w/w) is advertised as having contact and translaminar action a wide range of pathogens including botrytis, fusarium, pestalotiopsis, phomopsis and thieleviopsis. Unfortunately 'Octave' is relatively expensive at £106.50 + VAT, per one kilo pack. Those who attended the series of talks on *Crocus* at the RHS *Crocus* Day in February will recall that a Dutch bulb grower recommended the use of Metalaxyl in the war against cormous or bulbous diseases. If any member of the *Crocus* Group has used this agent we would be glad to have their opinion and advice regarding its efficacy. So far as I can determine it is used in the glasshouse trade as a protection against downy mildew rather than botrytis and fusarium. So it would seem that there are alternatives available for the determined amateur grower, but whatever you decide to use, do follow the safety instructions. **Alan Edwards**

Phenology of Crocus

Phenology is the study of natural phenomena such as the annual dates of the appearance of bird migrants and bird nesting; the spawning of frogs; the flowering and fruiting of plants, and so on. I have been keeping records of flowering dates since 1947, at first in Leeds and from the 1950's at Kew and Richmond. The latter ones are now being collated into a database at Kew that will facilitate reference and analysis. Now that I have retired, recording of a selection of 100 species is being continued indefinitely by staff at Kew as the Kew 100', which includes *Crocuses chrysanthus*, *vernus* and *nudiflorus*.

I should mention that because this was a personal interest, the records of several thousand species range from one to a few years, others have more or less consecutive years and there are some with runs back to the 1950's. Such a long run occurs with Crocus x luteus with a few gaps. The dates recorded at Kew and in my Richmond garden I have plotted together (Fig.1) with year against day of the year; dotted lines cover the gaps. When I showed these to Brian Mathew he thought it was worth a note in this newsletter because some members say they have observed a tendency toward earlier flowering, but without concrete evidence. While my graph shows an enormous range of variation from year to year, there seems to be a mean which shows that flowering now commences some 20 days earlier than in the 1950's. However, one should not jump to a conclusion on the basis of one species that global warming is proved, since my graph of Crocus tommasinianus (Fig.2) shows no such trend. As I analyze species of other genera I notice a similar pattern; with some showing an early trend and others maintaining a regular mean. I think it is possible to see from both of these graphs that clusters of records make a 'wave action'. Note the late springs 1960 - 1963 were followed by an earlier series in the 1970's; then a later trend during the 1980's; and earlier again in the 1990's. Such waves I have noticed in many of the graphs of other species. While mild winters bring flowering forward, do warmer summers push back flowering of those plants (such as Crocus nudiflorus) that flower later in the year? This is still to be resolved. F. Nigel Hepper, 25A Montague Road, Richmond, TW10 6QW UK.





In the footsteps of Erik and Helmut – from The Financial Times 2/3/02 by Robin Lane Fox It may not have been much of a month for investors, but it's been even more difficult for *Crocuses*. Torrential rain hit them when their buds first appeared above ground. They were at their best in the short break of sunshine but rain returned to flatten their hopes. However, it takes more than a stormy February to shake my yearly faith in the *Crocus*. In sympathy, I have just spent a specialized day of study on the subject, organized by experts under the umbrella of the RHS.

At this elevated level, old favourites such as 'Blue Pearl' and 'Cream Beauty' were dismissed as well known varieties that give plenty of colour in the garden. To my eye they are two of the most beautiful flowers in the world and I bless their existence. The experts in this arena report on *Crocuses* in the wild, alerting us to recent introductions and giving checklists of *Crocuses* that prefer to be kept slightly damp.

There is a respectable light industry called *Crocus* hunting. We were advised that the warm winter was confusing the old division between autumn-flowering and spring-flowering species. We may be entering an era when *Crocuses* flower indiscriminately between September and February. *Crocus* hunting may soon be the only form of hunting left through which to engage with wild nature.

We still do not know the full truth about this extraordinary family. You and I probably think of it as natural to the grass slopes from Marble Arch to the other side of Hyde Park. We imagine *Crocuses* in fields and plains and, indeed, one famous battle in ancient history was actually fought on the *Crocus* Plain in central Greece. Nobody has rediscovered the site or the *Crocuses*. In fact, *Crocuses* are much more at home on mountains, where they are deeply appreciative of snowmelt.

There were some energetic and expert reports from hunters with names such as Erik and Helmut, who have been trying to plot distribution maps of *Crocuses* at high altitudes. The great mystery of the moment is the range of *Crocuses* to be found on the mountains in Lycia in southwest Turkey. A questioner kindly voiced our thoughts by asking how prevalent the particular varieties had been outside each portrait photograph. Their hunter simply remarked that he was not showing anything with a distribution of less than a sq. km. in the wild. Fortunately these *Crocuses* grow at such remote altitudes that urban Turks have yet to discover them, dig them up and sell them dubiously in to the bulb trade.

Not that the really rare *Crocuses* of the wild are safe. From Lebanon, extending south to Jordan, *Crocuses* are almost always the varieties that flower in autumn. Some are extremely rare. There is a pleasant biblical ring to *Crocus moabiticus* in the land of Moab that the psalmist regards as his 'washpot'. He was evidently uninterested in the local *Crocus*, which turns out to be extraordinarily beautiful and difficult to grow. On Mt. Hermon there is another autumn flowerer, *Crocus hermoneus*, seldom seen, which has been totally out of bounds to civilians at this high altitude. Perhaps it is safer in its prohibited zone.

Jordan appears almost hell bent on building over its most exquisite floral habitats. The outskirts of fast growing Amman have already done for several wild zones of *Crocuses*. In Turkey, the growth of Istanbul looks set to do the same to exceptionally rare and pretty varieties on hilltops just outside the city. This botanical vandalism shows up the nonsense of trying to ban any import or receipt of plant material from other countries and even to suggest paying royalties to the countries in which they happen to grow. So many of those countries are acting to destroy them. Nobody has suggested paying royalties to the country of origin when we welcome their human refugees.

The most stunning spectacle of all has been discovered in northern Greece, in the mountains above the Macedonian plains, the birthplace of Alexander the Great. On these mountains, local operators have started to build ski lifts and have unintentionally made the surrounding uplands more accessible to those of us who can only think wistfully of the late spring flowers shuddering beneath the piste.

Great swathes of the most magnificent deep lilac purple wild *Crocus* have now been located by botanists there. They look like a greatly improved version of Scotland in the season of heather haze. The variety in question is the awkward *Crocus pelistericus*, which has long puzzled experts seeking to cultivate it. In Macedonia, it has been found growing by the mile in marshy

sedge and semi bogland. I had never realized that one section of *Crocuses* in the wild actually prefers to grow in wet places.

The holder of Britain's National *Crocus* Collection kindly distributed lists of the rare varieties that must be watered from August onwards if they are to flower well in pots or cold greenhouses. One of them is the lovely lilac blue *Crocus banaticus* that hit the trade about 20 years ago. Nobody had ever explained to me before that it prefers to be wet, not dry. Its large, rounded petals have such quality that any keen grower should try it as a pot plant. Correctly watered, it should be magnificent.

Listening to reports of *Crocus* hunts all over Greece, I realize that botanical blindness is not only the curse of our present Dark Age. We were shown spectacular *Crocuses* in Macedonia, many others from the region of Sparta and the lovely *Crocus goulimyi*. This was first found in 1954 and is now a highly recommended garden plant, although its natural home is the Mani, also the residence of the king of travel writers Paddy Leigh Fermor.

When you see slides of these spring and autumn flowers in profusion, it seems incredible that the sharp eyed and sensitive ancient Greeks said almost nothing about their existence and failed to distinguish any of the varieties. In a few areas they grew and prized saffron *Crocus* for its very valuable crop. But for all we know, the great sheets of *Crocus pelistericus* meant absolutely nothing to the young Alexander or his tireless tutor, Aristotle. Like modern city dwellers they went through natures garden with their eyes shut.

By watering hard, experts have produced a few flowers in captivity from the lovely *pelistericus*. They were more reassuring about others that grow easily in the garden and I have come away with a new willingness to pay the price for bulbs of goulimyi and its lovely form called 'Mani White'.

Another winner seems to be *Crocus hadriaticus*. In autumn, I have always favoured the common blue *speciosus* and I have now learned that the paler lilac *kotschyanus* is quick spreading and almost indestructible. My personal success at the moment is a vivid little white variety called 'Ard Schenk' Nobody was going to mention him in expert company and I must admit he sounds more like an over priced footballer on the transfer list.

So often well worn travel writers carry on as if the world has now been fully explored from Sicily to the Caspian Sea. I find it miraculous, in a natural way, that new *Crocuses* continue to turn up in the mountains away from the tourists and that so many millions of these great survivors have been flowering in this central band of civilization for so many years, often unknown and still unnoticed by their greatest predator, man.

RHS Crocus Day

We can forgive the slightly tongue in cheek tone and minor inaccuracies of the excellent article by Robin Lane Fox (reproduced above) about *Crocuses* and the RHS *Crocus* Day held in London last February.

Speakers at the event were Brian Mathew, Alan Edwards, Ray Cobb, Rannveig Wallis, Rod Leeds, David Stephens, Erich Pasche and Helmut Kerndorff.

Brian took the opportunity among other things to talk through his thoughts about updating the information contained in his 1982 monograph.

Alan showed us the wonderful Crocus to be found in Northern Greece whilst Ray showed us their counterparts in Southern Greece.

Rannveig walked us through *Crocus* (and other genera) of the Levant as seen on her and others travels in Syria, Lebanon and Jordan.

Rod gave practical advice on what grows well (what doesn't) in his and Jane's splendid garden in Suffolk.

I don't remember quite what I waffled on about except that I was meant to be talking about cultivation but couldn't for the life of me keep to the point (friend's won't be at all surprised) The 'piece de resistance' was a two-handed dissertation by our German friends Erich and Helmut, who have been travelling and studying *Crocus biflorus* in Turkey. They proposed and discussed a whole new classification for this puzzling species and the taxa involved in it from that region. This was a very erudite and deeply researched piece of work by them and I look forward to reading their paper when it is published. **S**

New biflorus ssp from Turkey

Erich and Helmut announced as part of their talk about the *biflorus* complex in Turkey that they were describing two new subspecies; biflorus atrospermus and biflorus munzurense. These come from southwest and northeast Turkey respectively. We look forward to reading the type descriptions when published.

Crocus almehensis

The Alborz Mountains extend along the southern side of the Caspian Sea in Iran and eastwards through the Kuh-e Aladag to the Koppe Dag and on to the border of Afghanistan. Where the Alborz runs in to the Kuh-e Aladag there is an area known as the Golestan National Park and within that park is Almeh after which *Crocus almehensis* is called.

Golestan used to be a hunting reserve for the Shah's brother and no domestic animals were allowed in the park. This happy state still continues with the result that the park remains an area of almost pristine wilderness. This is not to say that there is no grazing at all. On the contrary, there are considerable populations of gazelle, wild sheep (urials), wild goat (ibex), and wild boar. There are also some quite large carnivores such as cheetahs and many foxes, maybe even leopards.

I visited this park in April this year (2002) and was able to see the *Crocus* for myself. We stayed at a guest lodge at Almeh where there were a number of *Crocus* plants scatted around but not in flower. However, a short walk away there were some large snow patches and around the outer rim of these, on bare ground and coming up through the thinning snow were a few of the plants in flower. Young grasshoppers were eating the ones away from the snow but there were enough of the others to show the range of colour on the outer segments. Most had dark, almost black lines on the bright yellow flowers but a few were completely yellow with no markings. The markings when present, usually took the form of a pronounced median stripe with shorter lines on either side. The anthers, filaments and style all seemed more or less the same yellow colour as the rest of the flower. The points of the leaves were level with the base of the flower or just above and each corm seemed to have a cluster of flowers wrapped in quite conspicuous white cataphylls. The individual flowers had white bracts enclosing the tube. Altogether a memorable sight against a background of dark earth and shining snow. **Ann Borrill.**

Crocus Up-date

In the new series of 'The Plantsman' Volume 1 Parts 1 and 2, March and June 2002, Brian Mathew published an update to his 1982 monograph. I will at a later date, with Brian's permission write a short article that summarizes the main findings. Amongst the discussions of the various new taxa described since his monograph, Brian described scharojanii subsp. lazicus, to distinguish the Turkish and Caucasian forms of this species.

Seed exchange

As the flowering season is now beginning, just a reminder to hand pollinate your *Crocus* so that you can participate in the next seed exchange as a donor.**S**

Fritillaria Group meeting

As we have done for the last two years, we are invited to attend the autumn meeting of the *Fritillaria* Group at Wisley on Sunday, 13th October 2002 starting at 0930. We are invited to bring flowering *Crocus* for a display table and any *Crocus* material we have for sale or auction. See you there.**S**

Spring visit

Mike Salmon has kindly agreed that we can visit him at his new nursery in the West Country in spring. I shall agree a date with Mike and announce this in the spring newsletter. Probably late February/early March.**S**