

# CROCUS GROUP NEWSLETTER No. 46: Spring 2016

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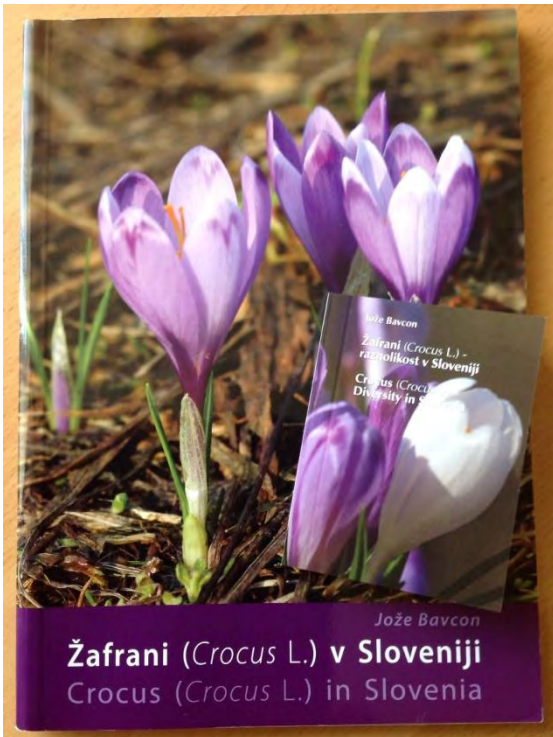


A superb display of large-flowered *Crocus* cultivars on the lawn outside the Laboratory, RHS Garden Wisley, in early March.

## DISENTANGLING CROCUS VERNUS

John Grimshaw

At the end of February I had the pleasure of visiting Slovenia for a far too short visit, principally to speak the first Slovenian Snowdrop Festival, held at the University of Ljubljana Botanic Garden. The Director there, Dr Jože Bavcon, is well known for his detailed studies of natural variation in Slovenian wild plants and has published attractive books on the subject for snowdrops, hellebores, *Cyclamen purpurascens* and *Crocus*. They are in both Slovenian and English and are available from: <http://www.botanic-gardens-ljubljana.com/en/the-shop/publication>



In addition to the A5 book on *Crocus*, a mini-version (7.5 x 5.8 cm) has just been published – a perfect stocking-filler for any croconut's Christmas.

According to this work (Bavcon 2010) Slovenia has five taxa in its flora (*C. reticulatus*, *C. biflorus* subsp. *biflorus*, *C. biflorus* subsp. *weldenii*, *C. vernus* subsp. *vernus*, *C. vernus* subsp. *albiflorus*). The so-called *C. vernus* subsp. *vernus* was just starting, but was everywhere! In the botanic garden they are naturalized in the grass with snowdrops, and Jože has a frameyard where he grows selections in pots for study.



A nice selection at the botanic garden.

On an afternoon excursion into the countryside north of Ljubljana we found crocuses wherever the ground was not ploughed, in open fields and under trees – some south-facing woods were already purpled with them. Unfortunately it was a dull chilly day so they were not open – but one could imagine how spectacular they must be in good weather.



A woodland edge population of the common Slovenian *Crocus*

But what are they? The slim flowers were soft mauve, lighter or darker, with a dark tip of varying extent, and with hairs in the throat (in all those I looked at). Jože Bavcon sticks resolutely to the 'Mathewian' view that these are *C. vernus* subsp. *vernus*, whereas Jānis Rukšāns (2010) considers the eastern plants with dark-tipped segments to be *C. heuffelianus*, with hairy-throated plants being referable to *C. heuffelianus* subsp. *scepusiensis* - but implies that this is principally from the Polish Carpathians. Brian Mathew (1982) noted, however, that pubescent and glabrous-throated plants occur in mixed populations across the range of the eastern taxon.

A couple of recent papers by Italian and German researchers have looked at the *Crocus vernus* complex and come to some interesting conclusions. First, Lorenzo Peruzzi, Angelino Carta and Fabio Garbari (2013) from the University of Pisa, have looked at the Linnaean name *Crocus sativus* var. *vernus* to try to work out what Linnaeus meant by that name, on which the modern *Crocus vernus* (L.) Hill is based. They went back to specimens in Uppsala known to have been used by Linnaeus; there are five sheets of specimens there and all can be taken to be part of his concept of the spring crocus. To cut a long story short, they have chosen the specimens on one sheet to represent the name *Crocus vernus*, on the basis that they are complete (including corms and tunics) and are from an identified wild provenance, the St Gotthard Pass in Switzerland, which also corresponds to Linnaeus's note in the original description *Habitat in Alpibus Helveticis*. Unfortunately,

perhaps, this material is clearly what we are accustomed to calling *C. vernus* subsp. *albiflorus*/*C. albiflorus* – on the strength of this work the alpine, short-styled taxon becomes *Crocus vernus* (and the *albiflorus* epithet disappears into synonymy). The reasoning behind the decision seems sound so I think the botanical world will adopt this usage.

The second paper, with lead author Dörte Harpke (2015), examines the morphology, cytology (chromosomes) and DNA of *Crocus* series *Verni*, concluding that this contains *C. etruscus*, *C. ilvensis*, *C. kosaninii*, *C. tommasinianus*, *C. longiflorus* and five distinct species from the former *C. vernus* complex, but excludes *C. baytopiorum*. *C. vernus* (former *albiflorus*) and *C. siculus* from Sicily both have styles shorter than the anthers, whereas in *C. heuffelianus* (eastern Europe, with dark tips to the segments), *C. neapolitanus* and *C. neglectus* the stigma overtops the anthers. The latter two names are unfamiliar. *C. neapolitanus* (Ker-Gawl.) Loisel. is the large-flowered purple species from the Italian peninsula from which it is probable that the large '*Crocus vernus*' cultivars are derived. *C. neglectus* Peruzzi & Carta is a new species, which encompasses purple (etc) flowered plants from northern Italy and probably elsewhere in non-alpine Europe, including Alsace, Austria and the Czech Republic but its exact distribution needs to be confirmed. They differ in details of the tunic (slightly thicker fibres in *neglectus* than in *neapolitanus*) and in stigma details (more deeply lobed in *neglectus* than in *neapolitanus*), as well as in cytology ( $n = 8$  in *neapolitanus*,  $n = 16$  in *neglectus*) and DNA features.

It's rather remarkable - but exciting - to think of such an apparently familiar 'species' from western Europe being in fact so diverse, but *C. vernus* in the traditional sense has always seemed to me to be rather neglected and taken for granted. *Crocus neglectus* is a telling name! Perhaps now we can pay it more attention, and get to understand the species better. At least it's now clear that the Slovenian plants I enjoyed so much are indeed *C. heuffelianus* – I must plan a spring visit to Italy to see the others, I think.

The correct name for the large-flowered cultivars was not addressed by Harpke *et al.*, however, so there is an anomaly to be resolved there. Jānis Rukšāns recommends using the name *C. × cultorum*, which has its merits, but the assertion of hybridity needs to be confirmed.

Thoughts on this from *Crocus* Group members will be very welcome – perhaps we can help elucidate the distribution of these taxa, for example.

## Bibliography

Bavcon, J. (2010). *Žafrani (Crocus L.) v Sloveniji*. Botanični vrt Univerze Ljubljani, Ljubljana.

Harpke, D., A. Carta, G. Tomović, V. Randelović, F.R. Blattner, & L. Peruzzi (2015). Phylogeny, karyotype evolution and taxonomy of *Crocus* series *Verni* (Iridaceae). *Plant. Syst. Evol.* 301: 309-325.

Mathew, B. (1982). *The Crocus*. BT Batsford Ltd, London.

Rukšāns, J. (2010). *Crocuses, a complete guide to the genus*. Timber Press, Portland.

Peruzzi, L., A. Carta & F. Garbari (2013). Lectotypification of the name *Crocus sativus* var. *vernus* L. (Iridaceae) and its consequences within *Crocus* ser. *Verni*. *Taxon* 62: 1037-1040.

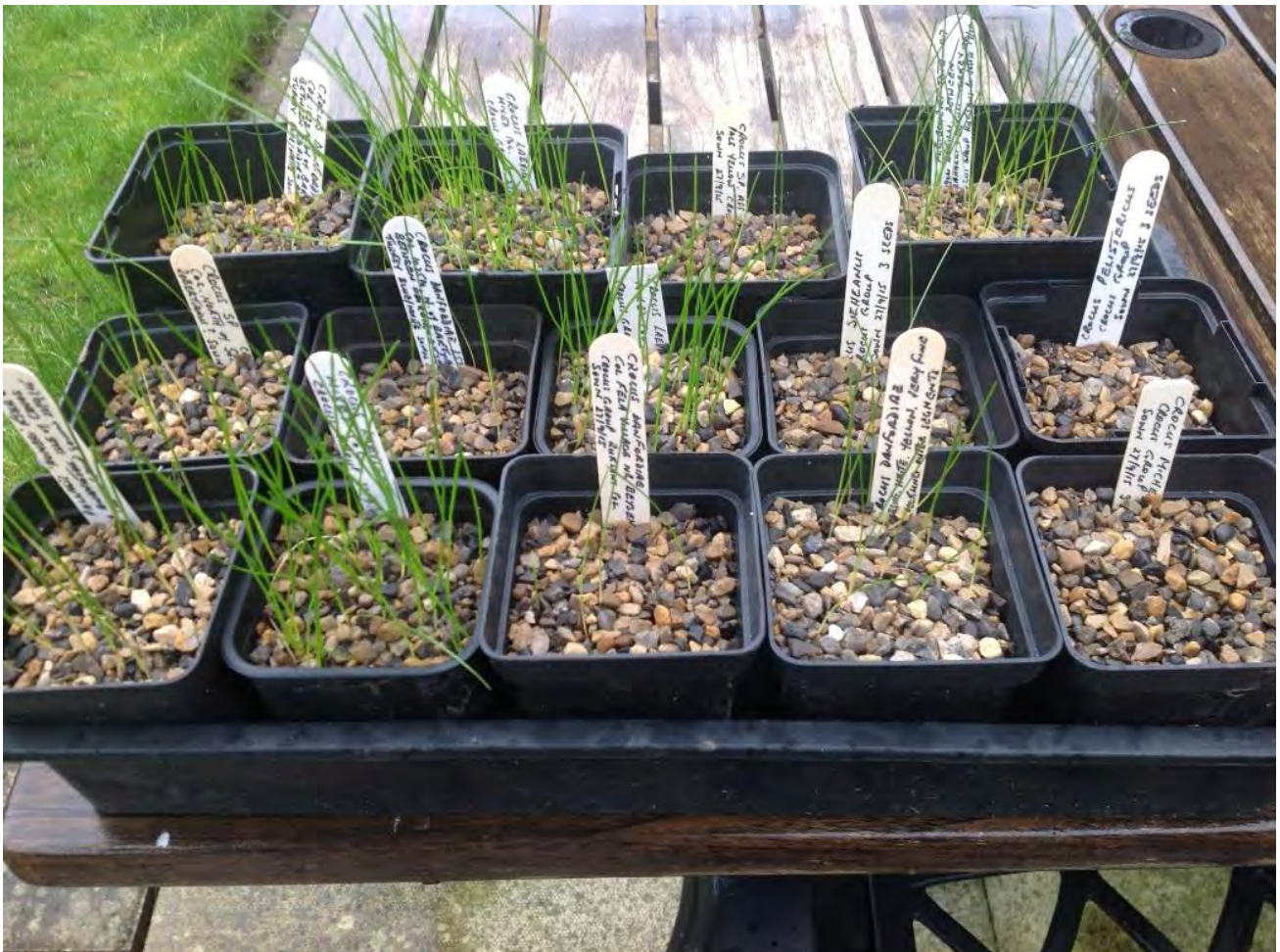
## SEED GERMINATION

Eric Rainford

I have over many years obtained *Crocus* seeds from many sources, mainly from abroad but also from the AGS and SRGC. These seeds usually arrive late on in the year, or early in the New Year. On receiving any seed, sowing takes place immediately in my standard compost. J1 seed compost 3/4mm grit, grit sand and vermiculite, 50% compost and equal mix of the other ingredients sown in plastic pots and left out on a north facing aspect until germination takes place, at which time pots are moved into a covered frame.

The germination rate of these seeds can be and is usually very erratic over a period of 1 to 4 years, after which time the pots are turned out onto my alpine garden and I have found that further germination takes place.

I moved house in 2010. My new property has a walled garden which houses my alpine house and frames. It quickly became clear my bulbous collection enjoyed this new environment. Being a member of the AGS, SRGC, Frit Group, Cyclamen Society and the Sax Group the next logical step was to join the Crocus Group. In 2015 I donated my spare *Crocus* corms to the seed exchange and waited for the seed list to arrive. On receiving the e-mailed list I forwarded my list of wants over the next couple of days. Seed arrived the third week of September and sown on the 27th September 2015 within a matter of weeks germination had started and by the end of the year near 100% had been achieved all except for two pots, *Crocus pelistericus* and *C. michelsonii*. I hope in due course that germination will take place.



The photograph of the tray of seedlings gives you an idea how successful germination has been. I will look forward to receiving seed from the Crocus Group exchange for the foreseeable future.

## SEED EXCHANGE

Dear fellow-Croconuts,

Another year has gone by since I last asked for your donations of *Crocus*-seeds and corm(let)s. So, I've awakened from my "slumber" to begin collecting and cleaning the seeds you send in. This year has shown quite a good seedset here in Belgium, so I'm confident that we can once again get a lot of seeds from many people all over the world...with your cooperation we can share those wonderful gems with each other, so a big thank you goes out to all donors in advance. Please don't hesitate to send in small amounts of seeds, even a couple of seeds can make someone else very happy! Also, seeds of more common species and cultivars are more than welcome, since those are asked for too and are especially good for starting croconuts and people who want to sow them directly in the garden to get a more naturalised look.

This year, as last year, I will be accepting corms and cormlets in the exchange too. It has shown to be a good formula; many members only want seed, but quite a few like to get young cormlets or some bigger flower-sized corms too. So if you have any corms and/or cormlets to spare, please send them in.

Here's the rundown: like in the previous year's it's the aim of the seed exchange to get *Crocus* seed to members as close as possible to the correct time for them to be sown during the higher temperatures of late summer for optimal germination. *Crocus* seed has been shown to germinate best if sown during the higher temperatures of late summer before the lower temperatures of autumn and winter initiate germination. The best time for sowing is therefore at the same time as nature does it in the wild, when the ripe seed is expelled from the mature seedpod in late spring to early summer. For that reason, we normally ask members to send seed as soon as possible after they have collected it, and in any case **before the 15<sup>th</sup> of August.**

During the last weeks of August, I'll compose the list and e-mail it to members who have requested it (Donors who are members will receive the list automatically). Your **request for the seedlist** should reach me before **the 15<sup>th</sup> of August too.** See e-mail address below.

This year I'll use the same system as last year, so donors will be allowed to choose from the list first and non-donors will also be able to make a choice from the list and I will take into account what they ask for as well. **Orders** should reach me by e-mail before **the 15th of September.** I will try to send all orders out before the end of September. Seeds should be sown immediately and left exposed to the weather until they germinate, after which they may be brought under cover.

Also, this is probably the last year in which the seedex will be free of charge, next year the funds will have run dry and we'll have to create a system in which you pay for postage.

**Requests for the seedlist should be e-mailed (before the 15<sup>th</sup> of August) to:**  
[seedexcrocusgroup@gmail.com](mailto:seedexcrocusgroup@gmail.com)

**Donations of seed and corm(let)s can be send to:**

**(For the UK):** Tony Goode, 3 Woodland Road, Hellesdon, Norwich. NR6 5RA

**(For the rest of the world):** Wim Boens , Brugsesteenweg 17, 8750 Wingene, Belgium

With the kindest regards

Wim

## **EDITORIAL**

Mat Murray or John Grimshaw will be delighted to receive information and comment for inclusion in future Newsletters, and please remember to inform Tony Goode of any changes to your email address



*Crocus minimus*, taken by Bill Baker (RBG Kew) in Sardinia in early April 2016, at 1000 m in the Foresta di Montes, near Orgosolo, on a track leading to Monte Nuovo San Giovanni.