

## CROCUS BYZANTINUS AND C. BANATICUS

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The student of the petaloid monocotyledons requires a strong sense of the continuity of botanical history, for no group will dispel more quickly any illusion that the year 1753 constitutes a real break in the literature of systematic botany. A history of *Crocus* certainly has no beginnings this side the work of Clusius (published between 1576 & 1611) and the classification of the genus is deeply rooted in his writings.

In the years immediately succeeding the publication of Linnaeus's *Species Plantarum* this sense of continuity was naturally strong. The botanists of the 1760's were attentive to the views of Tournefort, for instance, as well as to those of Linnaeus himself. As the years have progressed the date 1753 has seemed to become not only a milestone in botanical progress, but something of a barrier in the tracing back of botanical histories. The practice of applying a binary name to a description some 200 years old is by no means an admirable one, but those who were faced with the disastrous omnium gatherum of Linnaeus's *Crocus sativus* resorted to it not infrequently. Their doing so emphasises again the way in which they felt themselves in unbroken contact with earlier writers and impels us to re-establish that continuity.

In the case of *Crocus vernus* the dependence of modern nomenclature on the work of Clusius and his contemporaries has already been elucidated (Burtt, in Bowles, *Handb. Crocus & Colchicum*, ed. 2: 1952). Among the autumn crocuses there has been discussion whether *Crocus byzantinus* Ker-Gawl. is the correct name for the plant which has also been known, and unequivocally known, as *C. iridiflorus* Heuffel. Such discussion has too often ignored the first requisite for a correct decision: a critical study of the basis of the names.\*

Gawler probably had a cultivated plant in mind when he proposed *C. byzantinus*, but he gave no description of it. The name is validated only by the two synonyms he quoted:—

*Crocus montanum* III, Clus. Hist. i, 209 (1601).

*Crocus byzantinus argenteus*, Park. Parad. 168, t. 169, f.3 (1629).

It is, therefore, one of these that must now provide the nomenclatural lectotype of the species. Each account is of sufficient importance to merit full quotation. That of Clusius I give in translation, thus:—

"The flower of the third sort is also odourless, or with a very delicate and evanescent scent; it has six petals, as have the other sorts of crocus, of which the three inner are a little shorter, all however with an orbiculate point, at first of a whitish colour, later somewhat weakly suffused with blue; three yellow stamens arise from the throat and in the middle the style, or little brush divided into three or several

\* I now find that the conclusions reached in this paper have already been put forward by Witasek in an annotation issued with *Flora Exsiccata Austro-Hungarica* no. 3473: *Crocus banaticus* Gay. This publication has, however, been so ineffective that the more extensive statement given here remains justified.

threads also of a yellow colour; when the flower fades or has already withered, five, six or rarely more leaves arise around it from the thin membrane which at first covered the flower, almost similar to the leaves of *Crocus vernus latifolius*, that is somewhat broader than in *C. sativus*, marked with a single white line running the length of the back and two on the underside; so far I have seen no seed, though I have cultivated it for many years; the root is of the thickness of a finger or even a thumb, almost orbicular, white, solid, covered with a nut-brown tunic, provided with many white fibres arising below it and is quite productive of flowers; for it bears them now in threes, now in fours, and occasionally even five together.

"It was sent from Byzantium in 1587, in the month of October, under the name *Zafran maby*, that is blue crocus, although, as I have said above, the flower is not at first blue: this one month made clear: for eight days after planting it began to produce flowers."

Here Clusius gives us the description of an ordinary autumn crocus lacking in any distinctive characters. The yellow stigma militates decisively against its being *C. iridiflorus*, as also does the number of foliage leaves, which in *C. iridiflorus* does not exceed 2 or 3. There is no other positive feature in the description which tempts me to combat that verdict.

George Maw already added a question mark when citing this synonym, but he did not discuss the point further. Clusius's description turns my mind towards *C. Pallasii*, but there can be no question of accepting a name based upon it for any definite species: its identity must remain uncertain.

Parkinson's account is as follows:—

"2. *Crocus byzantinus argenteus*. The silver coloured Autumn Crocus. "This Saffron flower springeth up in October, and seldome before, with three or four short greene leaves at the first, but growing longer afterwards, and in the midst of them, presently after they have appeared one flower for the most part, and seldome two, consisting of six leaves the three outermost whereof are somewhat larger than the other three within, and are of a pale bleake blew colour, almost white, which many call a silver colour, the three innermost being of a purer white, with some yellow chives in the middle, and a longer pointell ragged or fethered at the toppe; this very seldome beareth seede, but when the year falleth out and bee very milde; it is small, round and of a dark colour: the root is pretty big, and rounder than any other crocus, without any flat bottome, and covered with a darke russet skinne."

This description may lack some of the technical details that the modern systematist values highly, but it is a vivid word-picture of a crocus which, to me, bears little resemblance to *C. iridiflorus*. The latter species does not have the leaves already above ground at flowering time: the capillary segments of its stigma are ill-described as "ragged or fethered" although that description would fit most crocuses: the corm is very definitely not "rounder than any other crocus," it is decidedly depressed-globose (oblate) and its flat bottom is a conspicuous feature.

*C. iridiflorus* is probably the most distinctive species in the whole genus: the great inequality of the inner and outer perianth segments (the inner

are somewhat smaller in nearly all crocuses), and the mauve capillary stigmatic branches are unmistakable. I find it impossible to believe that two such gifted botanists as Clusius and Parkinson could have written descriptions of it that are now unrecognizable, and my conviction that neither of them knew the species is firm.

Only one conclusion is possible: the name *Crocus byzantinus* Ker-Gawl. must be abandoned.

In 1832 the French botanist Jacques Gay published a number of short descriptions of new species of *Crocus*. Gay was engaged on an extensive study of the genus and these short descriptions were undoubtedly put into print at that time merely to effect the publication of the names. Gay's herbarium and manuscripts are at Kew, but the notes on *Crocus* are entirely abstracts from published work. There must have been considerable original manuscripts for the monograph of the genus on which he was working, but unfortunately nothing is known of their whereabouts. As a result we cannot even hazard a guess as to what Gay may have understood by the name *Crocus byzantinus*, but it is quite clear from his herbarium that it was the iris-flowered crocus that he described as *C. banaticus*, and, with *C. byzantinus* cast aside, that is the earliest name for the species.

The more popular name for this plant in gardens has been *C. iridiflorus*, a name proposed by Heuffel (probably about 1835) but only published by Reichenbach in 1847. It is thus clearly antedated by *C. banaticus* J. Gay. It appears that Heuffel was completely unaware of Gay's *C. banaticus*, for not only did he rename the species *C. iridiflorus*, he made use of the epithet *banaticus* again for a completely different, spring-flowering species. This vernal crocus was renamed *C. Heuffelianus* by Herbert in 1847, and again, unnecessarily, *C. Heuffelii* by Körnicke in 1856. Botanically it may be regarded as the Carpathian and Transylvanian replacement of *Crocus purpureus* Weston (that is the large form of "*C. vernus* (L.) Hill"—cf. Burt in Bowles, Handb. *Crocus* & *Colchicum*, ed. 2, Chap. vi: 1952).

The following citations and synonymy serve to summarise the position. They are by no means complete and reference should be made to Maw's Monograph for further details. It should be noted that *C. Herbertianus* Körnicke, quoted as a synonym of *C. banaticus* J. Gay, is not involved in the nomenclatural synonymy. Körnicke proposed it as a distinct species, giving the following points of difference: the petals rather obtuse (not acuminate), sepals and petals broader in proportion to length; anthers slightly overtopping the petals (not shorter than them) and stigmas but scarcely longer than the anthers. To the best of my knowledge all later authors have included all the "iris-flowered" crocuses in a single species.

**Crocus banaticus** J. Gay in Férussac, Bull. Sc. Nat. xxv, 320 (1831); Körnicke in Flora, xxxix, 473 (1856); Javorka & Csapody, Icon. Fl. Hung. 89 (1929).

Syn.: *C. iridiflorus* Heuff. ex. Reichb. Ic. Fl. Germ. ix, 10, t. 361 (1847); Maw, Monogr. *Crocus*, 75, t. 1 (1886); Bowles, Handb. *Crocus* & *Colchicum*, 42 (1924).

"*C. byzantinus*" auctt.: Herb. in Bot. Reg. xxxi, t. 37, fig. 2 (1845); Bot. Mag. t. 6141 (1875); Bowles, Handb. Crocus & Colchicum, ed. 2, 46 (1952); Chittenden in R.H.S. Dict. Gard. ii, 578 (1951)—non Ker-Gawl.

*Crociris iridiflorus* (Heuff. ex. Reichb.) Schur in Verh. Siebenb. Ver. Naturw. iv, 73 (1853)—non vidi.

*Crocus Herbertianus* Körnicke in Walpers, Ann. vi, 51 (1861).

**C. Heuffelianus** Herb. in Journ. Hort. Soc. ii, 273 (1847); Chittenden in R.H.S. Dict. Gard. ii, 579 (1951); Bowles, Handb. Crocus & Colchicum, ed. 2, 77 (1952).

Syn.: *C. banaticus* Heuffel in Flora, xviii, 255 (1835); Maw, Monogr. Crocus, 145, t. 24 (1886); Bowles, Handb. Crocus & Colchicum, 77 (1924).

*C. Heuffelii* Körnicke in Flora, xxxix, 476 (1856).

"*C. veluchensis*" auctt. ; Bot. Mag. t. 6197 (1875)—non Herbert.