SRGC Crocus Pages

Notes of papers where some new crocus species are described and other websites which may be of use:

Crocus danfordiae Maw and C. chrysanthus (Herbert) Herbert (Iridaceae) and some of their allies in Turkey and Iran. Jānis Rukšāns, Dr. biol.

Received: 09-04-2014 Accepted: 12-04-2014 Published online: 25-04-2014

International Rock Gardener - Online Journal. ISSN 2053-7557

Abstract: Features of Crocus chrysanthus s.str. from type locality are specified. Four new species are described, status of one changed.

Key words: Crocus brickellii, Crocus chrysanthus, Crocus danfordiae, Crocus henrikii, Crocus kurdistanicus, Crocus minutus, Crocus muglaensis, Crocus uschakensis.

See all descriptions, plus photos, here:

http://www.srgc.org.uk/logs/logdir/2014Apr241398364476IRG52April.pdf

This issue of the IRG also includes changes made to the naming of plants published in The Alpine Gardener; 80 (2012) and 81 (2013). http://www.alpinegardensociety.net/pdf_files/publication/Crocus-paper-finalSmall.pdf Seven New Crocuses from the Balkans and Turkey Janis Ruksans - - names revised in IRG.

Crocus brachyfilus (*Iridaceae*), a new species from southern Turkey**Author:**

Schneider, Ingo **Source:** Willdenowia - Annals of the Botanic Garden and Botanical Museum Berlin-Dahlem, Volume 44, Number 1, 5 April 2014 , pp. 45-50(6) **Publisher:** Botanic Garden and Botanical Museum Berlin-Dahlem

Open access here : http://www.ingentaconnect.com/content/bgbm/will/2014/00000044/00000001

Fourteen new species of Crocus (Liliiflorae, Iridaceae) from West, South-West and South-Central Turkey.

Kerndorff H, Pasche E, Blattner F R, Harpke D **STAPFIA 99 (2013): 145–158**

Key words: **Crocus mawii** , Crocus karamanensis, Crocus abracteolus,

Crocus antherotes , Crocus tahtaliensis, Crocus mediotauricus ,

Crocus arizelus , Crocus lyciotauricus, Crocus ziyaretensis,

Crocus oreogenus, Crocus calanthus, Crocus multicarinatus,

Crocus incognitus, Crocus coloreus

Crocus mawii in wild and cultivation photos Jānis Rukšāns

http://www.srgc.net/forum/index.php?topic=11230.msg291601#msg291601

A new species of Crocus (Liliiflorae, Iridaceae) from Turkey.

Kerndorff H, Pasche E, Blattner F R, Harpke D **Stapfia 99 (2013) 141-144.**

Crocus strialatus belongs to section Nudiscapus but flowers in autumn.

Crocus biflorus Miller (Liliiflorae, Iridaceae) in Anatolia - Part IV.

Kerndorff H, Pasche E, Blattner F R, Harpke D **Stapfia 99 (2013) 159-186.**

https://www.researchgate.net/publication/263025613_Crocus_biflorus_MILLER_in_Anatolia_-_Part_IV

ABSTRACT In the course of our research on Turkish crocuses in areas of the Anatolian Diagonal (central east Turkey) a new understanding of the genus Crocus was received. Phenotypic and morphological parameters were used for comparison purposes, as well as geographical distributions of genetic groupings. Eleven new species were found and are described.

Crocus munzurense Kernd. & Pasche -- Stapfia 99: 179. 2013 [23 Dec 2013]

Crocus munzurense HKEP-9911-07 **Crocus munzurense SASA- 211 -01**

Seven new species of Crocus (Liliiflorae, Iridaceae) from Turkey.

Kerndorff H, Pasche E, Harpke D, Blattner F R **Stapfia 97 (2012) 3-16.**

Crocus mersinensis, Crocus taseliensis, Crocus babadagensis, Crocus simavensis, Crocus mysius, Crocus bifloriformis, Crocus adamioides

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Two New Taxa of Crocus (Liliiforae, Iridaceae) from Turkey

H. Kerndorff & E. Pasche **STAPFIA 95 (2011): 2–5**
Crocus roseoviolaceus, Crocus minutus

http://www.srgc.net/forum/index.php?topic=7914.msg215335#msg215335

Further comments on C. minutus :
http://www.srgc.org.uk/logs/logdir/2014Apr241398364476IRG52April.pdf

Crocus roseoviolaceus

Crocus minutus

Many photos and comments on these can be found in the SRGC Forum, Crocus Section

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Three new species of Crocus (Liliiflorae, Iridaceae) from Turkey.

Kerndorff H, Pasche E, Harpke D, Blattner F R **Stapfia 95 (2011) 99-105.**

Crocus fauseri, lydius, beydaglarensis – photos next page….

Crocus fauseri – far left

Crocus beydaglarensis - left

[Phylogeny of *Crocus* (Iridaceae) based on one chloroplast and two nuclear loci: Ancient hybridization and chromosome number evolution Harpke D, Meng S, Rutten T, Kerndorff H, Blattner F R
Mol. Phylogenet. Evol. 66 (2013) 617-627.]

Crocus demirizianus Sp. Nov. From Northwestern Turkey

Erol O., Can L., Şik L., **NORDIC JOURNAL OF BOTANY, vol.30, pp.665-667, 2012**

Crocus demirizianus Left by Ibrahim Sozen Right by Jānis Rukšāns

https://www.researchgate.net/publication/236177666_Crocus_demirizianus_sp._nov._from_northwestern_Turkey

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Two new taxa of the Crocus biflorus aggregate from Turkey

Kerndorff H, Pasche E **Linzer biol. Beitr. 36/1 5-10 26.3.2004**

Crocus biflorus, subspecies caricus, C. biflorus subspecies ionopharynx

http://www.landesmuseum.at/pdf_frei_remote/LBB_0036_1_0005-0010.pdf

Crocus yakarianus Sp. nov. from eastern Turkey Yıldırım & O. Erol

Nordic Journal of Botany Volume 31, Issue 4, pages 426–429, August 2013

Crocus yakarianus Yıldırım & O. Erol (Iridaceae) is described as a new species. Diagnostic morphological characteristics, descriptions and detailed illustrations are given on the basis of the type material. Crocus yakarianus is restricted to the province of Malatya in eastern Anatolia, Turkey. It is related to and compared with Crocus biflorus subsp. tauri (Maw) B. Mathew.

Seven new taxa of Crocus L. from the Balkans and Turkey described.

Jānis Rukšāns Publ. by AGS

Crocus speciosus subsp. sakariensis, Crocus speciosus subsp. bolensis, Crocus speciosus subsp. hellenicus, Crocus speciosus subsp. elegans,
Crocus vaclavii, Crocus macedonicus, Crocus laevigatus subsp. pumilus ***

A large group of Forumists : Ibrahim Sözen, David Stephens, Johan Nilson, Henrik Zetterlund, Christopher Greenwell and Simon Silcock, Dimitry Zubov and Zhirair Basmajyan are among those thanked by Janis in the paper published by the AGS.

*****N.B. For changes made by Jānis Rukšāns to these names, see here:**

http://www.srgc.org.uk/logs/logdir/2014Apr241398364476IRG52April.pdf - these have all been given full species status.

We are fortunate in the SRGC Forum to have Janis Ruksans share with us his thoughts on many plants as well as great tales and photos of his many travels to research crocus in the wild. This means we are able to see and discuss many "new" species as they are found and learn a great deal about their individual features.
For instance, Janis first showed us the plant now named as C. macedonicus in the forum as C. pallasii:

http://www.srgc.net/forum/index.php?topic=9820.msg261807#msg261807

Many photos and comments on these can be found in the SRGC Forum Crocus Section, where many of Janis' photographs were first shown.

http://www.srgc.net/forum/index.php?board=10.0

For example : ***Crocus ibrahimii*** – named for Ibrahim Sözen by Henrik Zetterlund, photo Jānis Rukšāns

http://www.srgc.net/forum/index.php?topic=9774.0

***Crocus chrysanthus* s. latu in Turkey** Feyza Candan & Neriman Özhatay Annales Botanici Fennici 50(6):423-430. 2013 New taxa in Crocus are described from Turkey*:*

C. chrysanthus subsp. *chrysanthus* var. *bicoloraceus* F. Candan & N. Özhatay var. nov. and *C. chrysanthus* subsp*. chrysanthus* var. *atroviolaceus* F. Candan & N. Özhatay var. nov.; *C. chrysanthus* subsp. *punctatus* F. Candan & N. Özhatay subsp. nov., ***C. chrysanthus* subsp. *kesercioglui*** F. Candan & N. Özhatay subsp. nov. and *C. chrysanthus* subsp. *sipyleus* F. Candan & N. Özhatay subsp. nov. A new classification of the species is based mainly on the colour of flowers and anthers, type of pollen grains, seed surface ornamentation, and chromosome numbers.

C. chrysanthus subsp. *kesercioglui* – photos Jānis Rukšāns

Crocus biflorus (Liliiflorae, Iridaceae) in Anatolia (Part Three) Linzer biol. Beitr. 38/1 165-187 21.7.2006 H.KERNDORFF & E.PASCHE

A b s t r a c t: Results of field studies of 15 populations belonging to Crocus biflorus sensu lato are presented from Caria and Pisidia as well as of additional populations in adjacent parts of Anatolia for comparative purposes. The evaluation considers all south-west Anatolian populations (including the 16 ones of part two from the Lycian and Pisidian Taurus) and the 14 ones for comparative purposes under morphological, statistical, taxonomical, geographical and phytogeographical aspects. New and unexpected facts were revealed concerning the relationship and distribution of C. biflorus taxa in this area of which two new taxa are described for. Key words: Crocus biflorus, south-west Anatolia, field studies, morphology, phytogeography, new subspecies **yataganensis and caelestis**.

http://www.landesmuseum.at/pdf_frei_remote/LBB_0038_1_0165-0187.pdf

Crocus biflorus subsp. caelestis Kernd. & Pasche Linzer Biol. Beitr. 38: 179 (2006)

C. biflorus subsp. yataganensis C. biflorus subsp caelestis photos Jānis Rukšāns

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Crocus flavus subsp. sarichinarensis Rukšāns

urn:lsid:ipni.org:names:77111139-1:1.1 published In Crocuses 157 (pl. 214-215). 2010

Two forms of C. sarichinarensis photos Jānis Rukšāns
http://www.srgc.net/forum/index.php?topic=6837.msg189741#msg189741

Crocus jablanicensis (Iridaceae), a new species from the Republic of Macedonia, Balkan Peninsula Novica Ranđelović, Vladimir Ranđelović, Nikola Hristovski Annales Botanici Fennici (Impact Factor: 0.66). 01/2012; 49(1-2):99-102. DOI:10.5735/085.049.0116

ABSTRACT Ranđelović, N., Ranđelović, V. & Hristovski, N. 2012: Crocus jablanicensis (Iridaceae), a new spe-cies from the Republic of Macedonia, Balkan Peninsula. — Ann. Bot. Fennici 49: 99–102. Crocus jablanicensis N. Randj. & V. Randj. sp. nova (Iridaceaeis described from the Balkan Peninsula. It is found on Mt. Jablanica in the western part of Macedonia, where it grows in alpine grasslands around snowmelts. It is compared with the morphologi-cally similar C. cvijicii and C. veluchensis. In contrast to these species, C. jablanicen-sis has white styles and stigmas and a glabrous, white perianth throat.

http://www.srgc.net/forum/index.php?topic=8199.msg222341#msg222341

The Crocus Section of the SRGC Forum contains a wealth of information on Crocus and many new species can be seen in its pages, even before formal descriptions have been made: http://www.srgc.net/forum/index.php?board=10.0

The SRGC Forum is fully searchable from the "search" option near the **upper left hand side** of any forum page. **

COMPILATION OF CROCUS CHRYSANTHUS/BIFLORUS CULTIVARS by Thomas Huber : http://www.srgc.net/forum/index.php?topic=5060.0

Other Websites:

http://crocusmania.blogspot.com/search/label/Crocus İbrahim Sözen

http://www.pacificbulbsociety.org/pbswiki/index.php/CrocusCompared David Pilling on PBS site.

Link for individual Stapfia papers available to buy at modest cost : http://www.landesmuseum.at/biophp/stapfia.php

The IPNI site gives lists of papers: Crocus starts here and continues to here

List of Crocus current at 19th February 2014 :

Crocus adamioides (B.Mathew) Kernd. & Pasche -- Stapfia 97: 11. 2012 [21 Dec 2012]

Crocus antalyensis B.Mathew subsp. gemicii Şik & Erol -- Pl. Syst. Evol. 294(3-4): 284 (fig. 1, map). 2011 [Jul 2011]

Crocus antalyensis B.Mathew subsp. striatus Erol & Koçyiğit -- Nordic J. Bot. 28(2): 187 (-188; figs. 1-3, map). 2010 [4 Apr 2010]

Crocus atticus Orph. subsp. nivalis (Bory & Chaub.) Rukšāns -- Crocuses 173. 2010

Crocus atticus Orph. subsp. sublimis (Herb.) Rukšāns -- Crocuses 171. 2010

Crocus babadagensis Kernd. & Pasche -- Stapfia 97: 7. 2012 [21 Dec 2012]

Crocus beydaglarensis Kernd. & Pasche -- Stapfia 95: 100 (-101, 104; figs.). 2011 [31 Dec 2011]

Crocus bifloriformis Kernd. & Pasche -- Stapfia 97: 11. 2012 [21 Dec 2012] ; nom. illeg.

Crocus demirizianus Erol & Can -- Nordic J. Bot. 30(6): 665. 2012 [26 Nov 2012] [epublished]

Crocus fauseri Kernd. & Pasche -- Stapfia 95: 99 (-100, 103; figs.). 2011 [31 Dec 2011]

Crocus flavus Haw. subsp. sarichinarensis Rukšāns -- Crocuses 157 (pl. 214-215). 2010

Crocus ilvensis Peruzzi & Carta -- Nordic J. Bot. 29(1): 7 (-8; figs. 1-2). 2011 [20 Feb 2011]

Crocus jablanicensis Randjel. & V.Randjel. -- Ann. Bot. Fenn. 49(1-2): 99. 2012 [26 Apr 2012]

Crocus × leonidii Rukšāns -- Crocuses 162 (pl. 227-231). 2010

Crocus lydius Kernd. & Pasche -- Stapfia 95: 101 (-102, 105; figs.). 2011 [31 Dec 2011]

Crocus macedonicus Rukšāns -- Seven New Crocuses Balkans Turkey 24. 2013 [Jun 2013]

Crocus mersinensis Kernd. & Pasche -- Stapfia 97: 3. 2012 [21 Dec 2012]

Crocus minutus Kernd. & Pasche -- Stapfia 95: 3. 2011 [31 Dec 2011]

Crocus mysius Kernd. & Pasche -- Stapfia 97: 10. 2012 [21 Dec 2012]

Crocus roseoviolaceus Kernd. & Pasche -- Stapfia 95: 2 (-3). 2011 [31 Dec 2011]

Crocus simavensis Kernd. & Pasche -- Stapfia 97: 7. 2012 [21 Dec 2012]

Crocus speciosus M.Bieb. subsp. archibaldiorum Rukšāns -- Crocuses 59 (-60; pl. 25-26). 2010 ; nom. inval.

Crocus speciosus M.Bieb. subsp. bolensis Rukšāns -- Seven New Crocuses Balkans Turkey 16. 2013 [Jun 2013]

Crocus speciosus M.Bieb. subsp. elegans Rukšāns -- Seven New Crocuses Balkans Turkey 18. 2013 [Jun 2013]

Crocus speciosus M.Bieb. subsp. hellenicus Rukšāns -- Seven New Crocuses Balkans Turkey 17. 2013 [Jun 2013]

Crocus speciosus M.Bieb. subsp. sakariensis Rukšāns -- Seven New Crocuses Balkans Turkey 14. 2013 [Jun 2013]

Crocus taseliensis Kernd. & Pasche -- Stapfia 97: 6. 2012 [21 Dec 2012]

Crocus vaclavii Rukšāns -- Seven New Crocuses Balkans Turkey 22. 2013 [Jun 2013]

Crocus yakarianus Yıldırım & Erol -- Nordic J. Bot. 31(4): 426. 2013 [4 Jul 2013] [epublished]

Kerndorf and Pasche 2013 :

Crocus abracteolus Kernd. & Pasche -- Stapfia 99: 147. 2013 [23 Dec 2013]

Crocus antherotes Kernd. & Pasche -- Stapfia 99: 147. 2013 [23 Dec 2013]

Crocus arizelus Kernd. & Pasche -- Stapfia 99: 151. 2013 [23 Dec 2013]

Crocus berytius Kernd. & Pasche -- Stapfia 99: 185. 2013 [23 Dec 2013]

Crocus calanthus Kernd. & Pasche -- Stapfia 99: 153. 2013 [23 Dec 2013]

Crocus coloreus Kernd. & Pasche -- Stapfia 99: 157. 2013 [23 Dec 2013]

Crocus incognitus Kernd. & Pasche -- Stapfia 99: 156. 2013 [23 Dec 2013]

Crocus kangalensis Kernd. & Pasche -- Stapfia 99: 182. 2013 [23 Dec 2013]

Crocus karamanensis Kernd. & Pasche -- Stapfia 99: 146. 2013 [23 Dec 2013]

Crocus kartaldagensis Kernd. & Pasche -- Stapfia 99: 174. 2013 [23 Dec 2013]

Crocus lyciotauricus Kernd. & Pasche -- Stapfia 99: 153. 2013 [23 Dec 2013]

Crocus malatyensis Kernd. & Pasche -- Stapfia 99: 179. 2013 [23 Dec 2013]

Crocus marasensis Kernd. & Pasche -- Stapfia 99: 175. 2013 [23 Dec 2013]

Crocus mawii Kernd. & Pasche -- Stapfia 99: 145. 2013 [23 Dec 2013]

Crocus mediotauricus Kernd. & Pasche -- Stapfia 99: 150. 2013 [23 Dec 2013]

Crocus multicostatus Kernd. & Pasche -- Stapfia 99: 155. 2013 [23 Dec 2013]

Crocus munzurense Kernd. & Pasche -- Stapfia 99: 179. 2013 [23 Dec 2013]

Crocus oreogenus Kernd. & Pasche -- Stapfia 99: 155. 2013 [23 Dec 2013]

Crocus pelitensis Kernd. & Pasche -- Stapfia 99: 175. 2013 [23 Dec 2013]

Crocus ponticus Kernd. & Pasche -- Stapfia 99: 183. 2013 [23 Dec 2013]

Crocus romuleoides Kernd. & Pasche -- Stapfia 99: 174. 2013 [23 Dec 2013]

Crocus schneideri Kernd. & Pasche -- Stapfia 99: 178. 2013 [23 Dec 2013]

Crocus sivasensis Kernd. & Pasche -- Stapfia 99: 183. 2013 [23 Dec 2013]

Crocus striatulus Kernd. & Pasche -- Stapfia 99: 141. 2013 [23 Dec 2013]

Crocus tahtaliensis Kernd. & Pasche -- Stapfia 99: 150. 2013 [23 Dec 2013]

Crocus ziyaretensis Kernd. & Pasche -- Stapfia 99: 154. 2013 [23 Dec 2013]

Crocus chrysanthus Herb. var. atroviolaceus Candan & Özhatay -- Ann. Bot. Fenn. 50(6): 427. 2013 [6 Nov 2013] [epublished]

Crocus chrysanthus Herb. var. bicoloraceus Candan & Özhatay -- Ann. Bot. Fenn. 50(6): 424. 2013 [6 Nov 2013] [epublished]

Crocus chrysanthus Herb. subsp. kesercioglui Candan & Özhatay -- Ann. Bot. Fenn. 50(6): 427. 2013 [6 Nov 2013] [epublished]

Crocus chrysanthus Herb. subsp. punctatus Candan & Özhatay -- Ann. Bot. Fenn. 50(6): 427. 2013 [6 Nov 2013] [epublished]

Crocus chrysanthus Herb. subsp. sipyleus Candan & Özhatay -- Ann. Bot. Fenn. 50(6): 427. 2013 [6 Nov 2013] [epublished]

Crocus naqabensis Al-Eisawi & Kiswani -- Arab Gulf J. Sci. Res. 19(3): 167 (2001). (IK)

Crocus ser. Baytopi B.Mathew -- Plantsman n.s., 8(1): 57. 2009 [Mar 2009]

Type Name: Crocus baytopiorum B.Mathew

Newer papers:

Crocus brachyfilus I. Schneider - a new crocus species in series *Speciosi* B. Mathew

http://www.ingentaconnect.com/content/bgbm/will/2014/00000044/00000001

Crocus brickellii, Crocus chrysanthus, Crocus danfordiae, Crocus henrikii, Crocus kurdistanicus, Crocus minutus, Crocus muglaensis, Crocus uschakensis 25th April 2014 : http://www.srgc.org.uk/logs/logdir/2014Apr241398364476IRG52April.pdf

The genus Crocus, series Crocus (Iridaceae) in Turkey and 2 East Aegean islands: a genetic approach Turkish Journal of Biology 01/2014; 38:48-62

journals.tubitak.gov.tr/biology/issues/biy-14-38-1/biy-38-1-6-1305-14.pdf

Osman Erol, Hilal Betül Kaya, Levent Şık, Metin Tuna, Levent Can, Muhammed Bahattin Tanyolaç

ABSTRACT: In this study, a total of 26 Crocus specimens from different locations across Turkey and 2 East Aegean islands (Chios and Samos) were analyzed using 12 amplified fragment length polymorphism (AFLP) primer combinations to obtain information on genetic diversity, population structure, and genetic relationships. A total of 369 polymorphic AFLP bands were generated and scored as binary data. Genetic similarities were determined. Cluster analysis revealed 4 major groups among the 26 genotypes examined in this study. The nuclear DNA contents (2C) of the 26 Crocus specimens were found to range from 5.08 pg in C. asumaniae to 9.75 pg in C. sativus. Polymorphic information content (PIC) values were used to examine the capacity of the various primer pairs to amplify polymorphisms in the Crocus specimens. The PIC values ranged from 0.218 (M-CAA/E-AGC) to 0.512 (M-CAT/E-AAG) and showed an average of 0.34. In sum, we herein used AFLP analysis to identify a high level of polymorphism among Crocus specimens collected from various locations in Turkey and Greece, and our structural analysis yielded 2 reconstructed populations. These findings provide new insight into the relationships among different Crocus genotypes and show that AFLP analysis can be useful for Crocus diversity studies.

Genetic diversity of Crocus antalyensis B. Mathew (Iridaceae) and a new subspecies from southern Anatolia

Osman Erol, Levent Şik, H. Betül Kaya, Bahattin Tanyolaç, Orhan Küçüker

Plant Systematics and Evolution (Impact Factor: 1.31). 01/2011; 294(3):281-287. DOI:10.1007/s00606-011-0465-8

ABSTRACT Crocus antalyensis B. Mathew is a bulbous plant endemic to Turkey. It is morphologically variable within the western part of Anatolia. Amplified fragment length polymorphism (AFLP) marker system was used to detect genetic variation among the Crocus taxa. Twenty-two primer combinations were used to screen for polymorphism among the samples. Genetic variation ranged from 0.44 to 0.69. We demonstrated the efficiency of the AFLP marker system for discriminating between individual C. antalyensis specimens. A high level of genetic variation was present among C. antalyensis specimens collected from different locations in Turkey. We also observed that C. antalyensis subspp. are genetically distinct from their relative Crocus flavus Haw. subsp. dissectus Baytop & B. Mathew. A new subspecies of C. antalyensis B. Mathew from southern Turkey is described. It is characterized by striped outer perianth segments, waist-shaped flowers,

and glabrous throat of the perianth. A composite image of the new subspecies is presented.

https://www.researchgate.net/publication/225129930_Genetic_diversity_of_Crocus_antalyensis_B._Mathew_%28Iridaceae%29_and_a_new_subspecies_from_southern_Anatolia

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Phylogeny, karyotype evolution and taxonomy of Crocus ser. Verni (Iridaceae)

Doerte Harpke, Angelino Carta, Gordana Tomovic, Vladimir Randelovic, Novica Randelovic, Frank R. Blattner, Lorenzo Peruzzi

Plant Systematics and Evolution (Impact Factor: 1.31). 06/2014;

ABSTRACT The taxonomically complicated Crocus series Verni is characterized by high intra- and interspecific variability of karyotypes (2n = 8 to 23). With the aim to get more insights into complex karyotype evolution and to clarify the taxonomy of this group we combined morphological (twelve characters), molecular (chloroplast DNA: trnL-trnF, ndhF; nuclear DNA: ITS, pCOSAt103), and karyological analyses. Samples of different populations of C. etruscus, C. ilvensis, C. kosaninii, C. tommasinianus, C. vernus sensu lato, and C. longiflorus (series Longiflori) were analyzed. Quantitative karyotype parameters were calculated for all taxa involved based on available literature. For the taxon traditionally known as C. vernus, the analyses suggest that it should be split in five species: C. heuffelianus, C. neapolitanus, C. neglectus sp. nov., C. siculus, and C. vernus. The comparison of genome total haploid lengths suggests that in the evolution of the group polyploidization only played a role within the C. vernus species complex, where we also detected two hybridization events. In all other taxa, chromosome evolution is probably characterized by chromosome fusions and fissions, sometimes affecting the entire haploid chromosome set. Comparative cytogenetics of the group indicates that series Verni is subject to a peculiar type of unequal change in chromosome size, i.e. that not both chromosome arms gain or lose equally in DNA content. As a taxonomic consequence of our study, series Verni is newly circumscribed, now including the autumn-flowering C. longiflorus and excluding C. baytopiorum.

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https://www.researchgate.net/publication/230271622_Crocus_ilvensis_sp._nov._%28sect._Crocus_Iridaceae%29_endemic_to_Elba_Island_%28Tuscan_Archipelago_Italy%29

Crocus ilvensis sp. nov. (sect. Crocus, Iridaceae), endemic to Elba Island (Tuscan Archipelago, Italy)

Lorenzo Peruzzi
Angelino Carta
Nordic Journal of Botany (Impact Factor: 0.6). 02/2011; 29(1):6 - 13. DOI: 10.1111/j.1756-1051.2010.01023.x

ABSTRACT A new species of Crocus sect. Crocus is described as an endemic of Elba Island (Tuscan Archipelago, Italy): C. ilvensis Peruzzi & Carta sp. nov. (2n=8). The new species was wrongly referred

to C. corsicus Vanucchi (2n=18), C. etruscus Parl. (2n=8) or C. vernus Hill. subsp. vernus (2n=8, 16) by previous authors. Its karyotype structure, asymmetry and chromosome dimensions show affinity with C. etruscus, and no clear relations with other related taxa. From a morphological point of view, C. ilvensis appears intermediate between C. etruscus and C. vernus subsp. vernus, showing however a peculiar combination of character-states. The new species is completely allopatric with other Crocus sect. Crocus taxa and its possible role in the origin of tetraploid races of C. vernus is discussed.

Crocus ilvensis sp. nov. (sect. Crocus, Iridaceae), endemic to Elba Island (Tuscan Archipelago, Italy)

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ABSTRACT A new species of Crocus sect. Crocus is described as an endemic of Elba Island (Tuscan Archipelago, Italy): C. ilvensis Peruzzi & Carta sp. nov. (2n=8). The new species was wrongly referred to C. corsicus Vanucchi (2n=18), C. etruscus Parl. (2n=8) or C. vernus Hill. subsp. vernus (2n=8, 16) by previous authors. Its karyotype structure, asymmetry and chromosome dimensions show affinity with C. etruscus, and no clear relations with other related taxa. From a morphological point of view, C. ilvensis appears intermediate between C. etruscus and C. vernus subsp. vernus, showing however a peculiar combination of character-states. The new species is completely allopatric with other Crocus sect. Crocus taxa and its possible role in the origin of tetraploid races of C. vernus is discussed.

Contributo alla conoscenza della flora vascolare endemica di Toscana ed aree contermini. 1. Crocus etruscus (Iridaceae).

Contribution to the knowledge of the endemic vascular flora of Tuscany and neighboring areas.
A Carta B Pierini A Alessandrini F Frignani L Peruzzi
Informatore Botanico Italiano 01/2010; 42(1):47-52.

ABSTRACT ABSTRACT - Contribution to the knowledge of the vascular flora endemic to Tuscany and neighbouring areas. I. Crocus etruscus (Iridaceae) - The distribution of the narrow endemic Crocus etruscus Parl. (a name lectotypified) is reported, by the analysis of herbarium specimens, bibliographic references and records in the field. This species occurs only in a restricted range of continental Tuscany (EOO: about 1892 Km2). Many of historical signallings of this species are confirmed or were recently confirmed by other authors, but for Volterra area (Pisa). Other reports of the species for Mount Pelato (Livorno), Tuscan Archipelago (Elba, Livorno) and Emilia-Romagna are shown to be erroneous. In particular, the plants from Elba Island are referred to a unit close to C. corsicus (Gay) Vanucci, still under study. On the other hand, new stands are documented

for C. etruscus, in Cornate di Gerfalco (Grosseto) and Piombino Promontory (Livorno). The extinction risk for the species is mainly due to the possible habitat degradation and reduction, leading an assessment as Nearly Threatened (NT) according to the IUCN criteria for Red List categories.

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https://www.researchgate.net/publication/266897153_Phylogeny_geographic_distribution_and_new_taxonomic_circumscription_of_the_Crocus_reticulatus_species_group_%28Iridaceae

Phylogeny, geographic distribution and new taxonomic circumscription of the Crocus reticulatus species group (Iridaceae)

Doerte Harpke; Lorenzo Peruzzi; Helmut Kerndorff; Theofanis Karamplianis; Theofanis Constantinidis; Vladimir Randelovic; Novica Randelovic; Marina Juskovic; Erich Pasche; Frank R. Blattner

Turkish Journal of Botany. 09/2014; DOI: 10.3906/bot-1405-60

ABSTRACT

Recent phylogenetic analyses proved several infrageneric units within the genus Crocus to be para- or polyphyletic. In an attempt to arrive at a system of Crocus that closely reflects species relationships, we provide here phylogenetic, morphometric, geographic and nomenclatorial data for the species of a narrower defined, monophyletic Crocus series Reticulati. We sequenced the ETS and ITS regions of the nuclear ribosomal DNA in 9 Reticulati and 19 outgroup species. Three chloroplast loci (trnL–F, rps16–trnQ, matK–trnK) were sequenced in the newly defined series Reticulati species and 1 outgroup. Data were analyzed with Bayesian and parsimony algorithms. The phylogenies resulted in two clearly separated, geographically defined species groups within series Reticulati. The southern one comprising only the taxa from Turkey, while the species of the second group are distributed from Italy in the west through the areas north of the Black Sea to the Caucasus in the east. To arrive at monophyletic species we describe here C. danubensis sp. nov., C. filis-maculatis sp. nov., and C. orphei sp. nov. as new species, and define C. reticulatus s.s. to comprise only the populations in the area north and east of the Black Sea.

See also: http://www.srgc.net/forum/index.php?topic=12528.0

Recent Crocus papers published December 2014:

Crocus yaseminiae (Iridaceae) Phytotaxa 188 (2) © 2014 Magnolia Press

https://www.researchgate.net/publication/269398743_Crocus_yaseminiae_%28Iridaceae%29_a_new_species_from_South_Anatolia_Turkey

Crocus yaseminiae (Iridaceae) a new species from South Anatolia, Turkey

Osman Erol ; Levent Can ; Orhan Küçüker

12/2014; 188(2):103-111. DOI: 10.11646/phytotaxa.188.2.4

ABSTRACT

Article PHYTOTAXA ISSN 1179-3155 (print edition) ISSN 1179-3163 (online edition) Accepted by Lorenzo Peruzzi: 18 Oct. 2014; published: 10 Dec. 2014

Crocus yaseminiae is described as a new species from Alanya province in South Anatolia. A short literature history of the closely related taxon Crocus isauricus Siehe ex Bowles (≡ Crocus biflorus subsp. isauricus (Siehe ex Bowles) Mathew) is given together with a lectotypification of its name, and a discussion of the type specimen and locus classicus. Diagnostic characters were discussed of the taxa belonging to the "isauricus group" (C. biflorus subsp. isauricus, C. roseoviolaceus, C. mersinensis, C. taseliensis, and C. karamanensis). Fenugreek scented flowers are reported for the first time for the genus.

Flower bouquet variation in four species of Crocus ser. Verni (Iridaceae)

Angelino Carta ;Guido Flamini; Pier Luigi Cioni; Luisa Pistelli; Lorenzo Peruzzi

Journal of Chemical Ecology (Impact Factor: 2.46). 12/2014;

ABSTRACT

Flowering plants employ a wide variety of signals, including scent, to attract pollinators. The aim of this work was to examine whether flower volatile compounds in four closely related Crocus species are linked to species divergence and to the current knowledge on their pollination syndromes. Fragrances of freshly opened flowers in Crocus etruscus, C. ilvensis, C. neglectus, and C. vernus, all belonging to ser. Verni, were analyzed using GC/MS analysis. The results are congruent with the knowledge about systematic relationships among taxa and the four species fall into two main fragrance types, based on the identity of their volatile compounds. In C. etruscus, C. ilvensis, and C. neglectus oxygenated monoterpenes (lilac aldehyde B and A) are the most represented, while C. vernus has a fragrance rich in monoterpene hydrocarbons (α-pinene and limonene). Our results point towards outcrossing mating strategies for C. etruscus, C. ilvensis, and C. neglectus, whose volatile compounds are known as pollinator attractants. This is congruent with their flower architecture, showing a style of variable height, often overtopping stamens. On the contrary, a self-pollination strategy was repeatedly suggested in literature for C. vernus, marked by flowers with style deeply inserted within the stamens and also by a completely different flower bouquet.

Many photos and comments on these can be found in the SRGC Forum:

http://www.srgc.net/forum/index.php?board=10.0

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