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A new crocus in the *Adamii* series is described here by Mahfouz Advay from Iran and Jānis Rukšāns, Dr. biol. h.c. from Latvia.

A new crocus species growing wild in Kurdistan Province, Iran, is described and illustrated with photographs and distribution maps provided. As is stated in the article, “new discoveries continue to add to our knowledge of the crocus diversity.”

Crocus in all its forms, whether species, cultivars or hybrids continue to be popular amongst growers, who seem captivated by the varieties available - most of which are quite amenable to culture.



[Mahfouz Advay](#) is a Ph.D Student of Plant Systematic at University of Tehran.

From the magazine of the Klub skalničkářů Praha, “Skalničky” comes a plant portrait from [Zdeněk Řeháček](#) in North-East Chechia. Zdeněk lives in the town of Hradec Kralove, but his garden is at a country cottage near the village of Ceska Rybna in northeast Bohemia. A great lover of high elevation cushion plants, he also grows bulbs and rhododendrons.



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--- Species Description ---

A new crocus species from Series *Adamii* from Western Iran

Mahfouz Advay (Iran)

mahfouzadvay@gmail.com

Jānis Rukšāns, Dr biol. (Latvia)

janis.bulb@hawk.lv

Photos – both authors, unless otherwise noted.

Summary. A new crocus species growing wild in Kurdistan Province, Iran, is described and illustrated. Photographs and distribution maps are provided.

Key words. Flora Iranica, Kurdistan, geophyte, new species.

Introduction

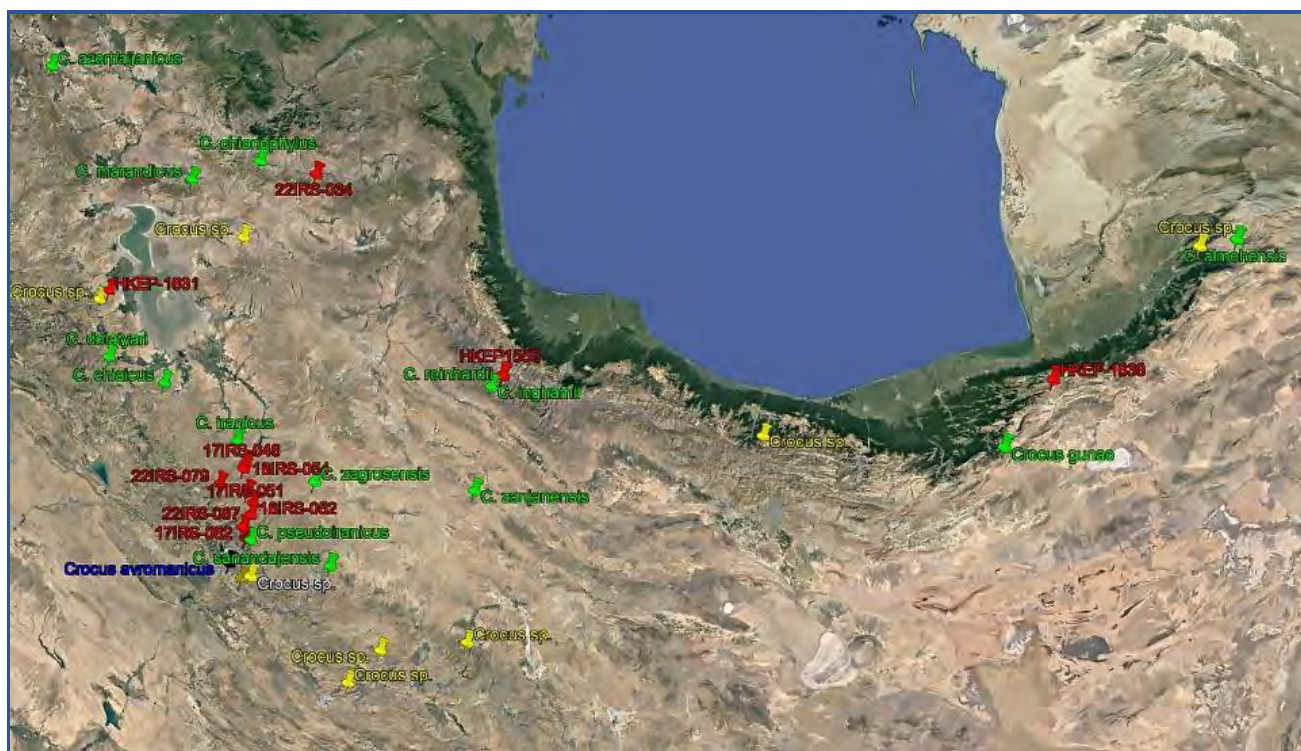
The taxonomy of the genus *Crocus* L. has undergone dramatic changes over the past decades. Back in 1982, when B. Mathew published his monograph of the genus, he included 80 species and 37 taxa at the subspecies level. Since then, the approach to crocus taxonomy has been subjected to significant changes. Subspecies are no longer recognized by the leading crocus researchers, and they are all now considered full species, although not all botanists, especially from the older generation, agree with that. At the turn of the century, intensive research on crocus species began, first in Turkey, then in the Balkans and later in the Pyrenees. Iran was not left out either. In 2017, the total number of recognized species reached 235, six years later (2023) – 262 (Rukšāns, 2017, 2023), and after that the number increased by another seven. New discoveries continue to add to our knowledge of the crocus diversity.

Already in 1886, the author of the first significant and comprehensive monograph on crocuses, G. Maw, distinguished 6 centres of distribution and diversity: A – the region of Western Europe (the Pyrenees) and North Africa, including a part of France; B – the Alps and Italy (the Apennines); C – the Balkans to the north, extending into the very south of Poland; D – Asia Minor: Turkey and the Caucasus; E – the Middle East, and F – Central Asia. The boundaries of this division are highly ambiguous, although for the most part they describe quite well the diversity and mutual kinship of the species occurring within them. We would like to distinguish from this division another – the Iranian group (or sub-group), which includes species that grow in the mountains along the southern coast of the Caspian Sea, reaching

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the Caucasus (the Alborz Mountain range), and continue southwardly through the mountains of the western part of Iran (the Zagros Mountain massif).

In 1975, volume 112 of Flora Iranica was published. It was dedicated to the iris family, including the genus *Crocus*. P. Wendelbo and B. Mathew, following the knowledge of the time, included 8(9) species representing two sections – *Crocus* and *Nudiscapus* B.Mathew. According to Flora Iranica, Section *Crocus* is represented by 2 autumn-flowering species, now it has increased by a third species – *Crocus hakkariensis* (B.Mathew) Rukšāns, published in 1980 from Hakkâri Province, on the border between Turkey and Iran. In Iran it was first found in 2018 by J. Rukšāns. It is not excluded that further research will identify other new species of the section. Significant changes have taken place within Section *Nudiscapus*. As is stated in Flora Iranica, the section includes 6 species – three blooming in autumn and three blooming in spring. Changes have taken place in both of these groups. *C. speciosus* M.Bieb. *sensu stricto* is not found in Iran, and actually several related species hide under this name, two of which have been described and published, namely *C. archibaldiorum* (Rukšāns) Rukšāns and *C. zubovii* Rukšāns. The biggest changes have affected the spring-flowering species, which are included in Flora Iranica under the common name *C. biflorus* Mill. The fact that *C. adamii* J.Gay (in accordance with the understanding of the time) counts as its synonym allows us to conclude that the authors believed that it was *C. adamii* (in the modern sense) that grew in Iran.



Map 1

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Map 1: Crocus series *Adamii* localities in Iran: green pins – already named species of *Crocus*; red pins – populations still under research; yellow pins – approximate localities of populations mentioned in Flora Iranica, found by other researchers (HKEP) and seen on internet, not found by authors; blue pin – localities of *C. avromanicus* described here.

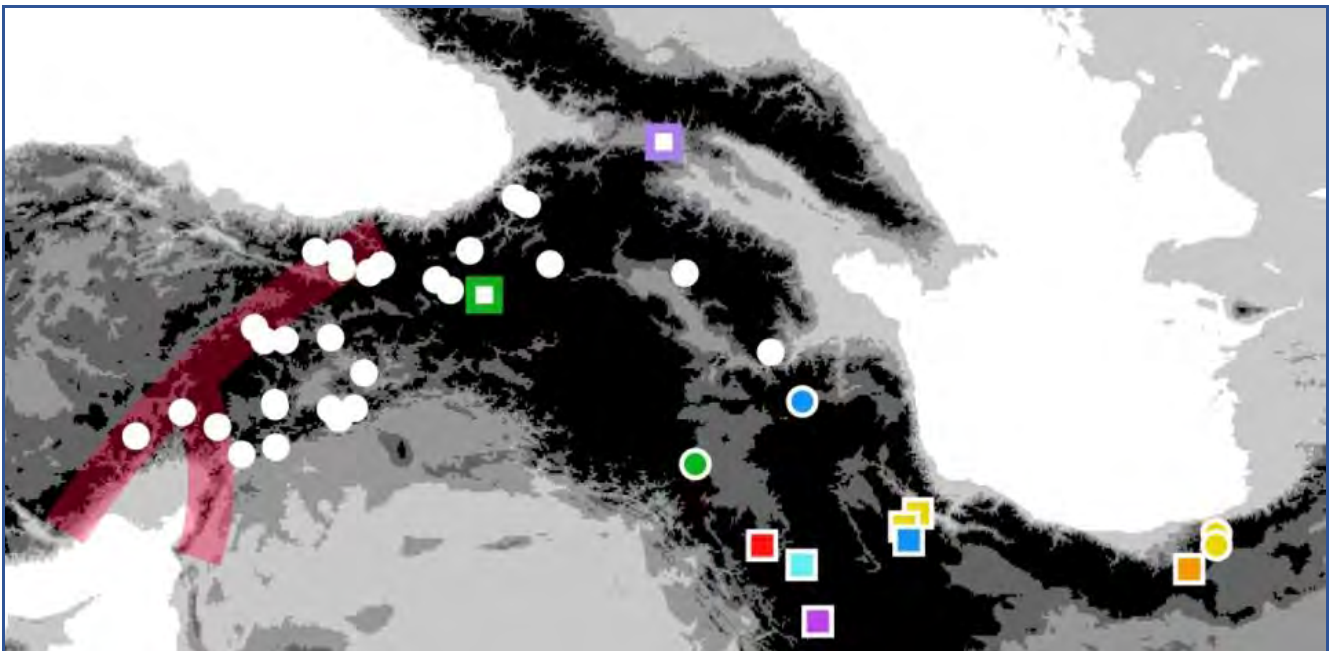
In the new millennium several authors (Maroofi & Assadi – 2002, Rukšāns – 2014, 2022; Kerndorff & al. – 2017; Dolatyari & Rukšāns – 2022) discovered and published 13 new spring-flowering species growing wild in Iran, 12 of which would have been given the epithet “*Crocus adamii*” *sensu* Flora Iranica. Iranian crocus species form a separate centre of diversity and distribution in the Middle East. According to N. Vavilov's theory about the centres of origin of species, the greatest diversity is to be observed in their epicentres, where the ranges of individual species are relatively small. The further from the epicentre, the number of species becomes less numerous, although their distribution areas become larger. That is evident also with the Iranian crocuses – the largest number of species has been discovered in the northwestern part of Iran, though the majority come from only one or very few localities (it should be mentioned that this region is still very little studied in botanical terms).

Taxa of *Crocus* species of series *Adamii* are distributed in Iran as follows: *C. almehensis* in the restricted zones of Almeh (very west of Kopet Dag mountain range); in the Alborz mountain system along South coast of Caspian Sea and in Northern to Central Zagros. Eastwardly the number of species gradually decreases, and beyond Almeh, as far as China, only 3 crocus species (all belong to series *Orientalis* Mathew) are found, of which only one grows in Iran. (The 4th species of series *Orientalis* - *C. caspius* Fischer & C.Meyer is distributed in Iran and Azerbaijan along South and SW coast of Caspian Sea in Talish and Alborz mountains. – Harpke & al., 2012.) Several taxonomic changes are possible in the future, as the majority of the new species have been described on the basis of their morphological characters. Various kinds of revelations might come to light while studying the number of chromosomes in different populations of the “same” species. For example, *C. haussknechtii* Boiss. & Reut. ex Boiss. presumably holds several currently unrecognized species (Sanei et al. 2007).

During several expeditions to Iran, numerous crocus specimens have been collected there, some of which have already been recognized as distinct species and described. Many still require further research in order to clarify their taxonomic status. While studying crocuses, it is of paramount importance to observe living plants, because many features are difficult to

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determine in an herbarium: the flower colour can change significantly, usually fading, although rarely the opposite process has also been observed – white flowers in nature turn blue in the herbarium (Gabrielian, 2001; Rukšāns, 2022). Furthermore, very often too small a number of specimens had been mounted on herbariums which did not allow the adequate description of the variability of the species. It is an undeniable fact that the morphological characters of crocuses even within one species can vary greatly and be affected by the seasonal whims and the age of the observed plants (flowers). This makes it difficult to study crocus species when focusing only on morphological features. Kerndorff & al. (2015) have described in detail the essential morphological characters needed to distinguish crocus species, emphasizing the need to observe a sufficient number of randomly selected individuals to characterize the variability of these features within the species. In cases of doubt, genetic research methods (which were not available to the authors of this article) should be used to distinguish between morphologically similar species. However, these also cannot always give a decisive verdict. Kerndorff et al. (2017) found that *C. gunae* Rukšāns is molecularly identical with the morphologically very different *C. zagrosensis* Kernd. & Pasche. And this is not the only such case and shows that other markers should be used for genetic differentiation of these species.



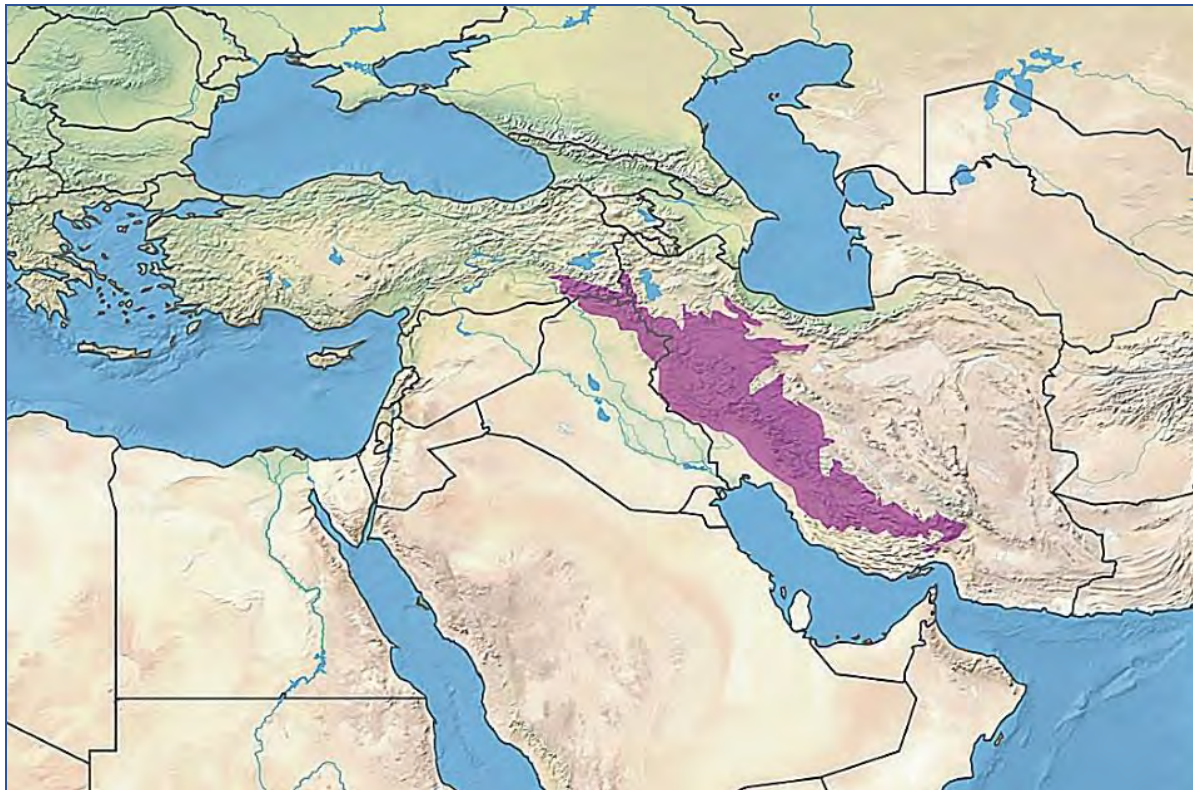
Map 2: Crocus series *Adamii* area (Anatolian Diagonal coloured in red) according Kerndorff & al. (2017) – [URL of data record](#).

B. Mathew regarded the yellow *Crocus almeheensis* C.D.Brickell & B.Mathew as the most closely related to *C. chrysanthus* (Herb.) Herb. which in the wild grows more than 1500 km to the west. Recent genetic studies, however, have shown that its closest relatives are the blue-

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flowered species occurring in the wild in the Caucasus, NE Turkey (along the Anatolian Diagonal) and in NW Iran. According to Kerndorff & al. (2017), the entire aggregate proved to be one of the genetically most distinct and largest in the genus and would be later defined as Series *Adamii*. B. Mathew and P. Wendelbo in their treatment of “*C. biflorus*” in Flora Iranica had already listed the name *C. adamii* as its synonym. The group is known to have members in the Anatolian Diagonal (Turkey) and in the Caucasus (Kerndorff & al., 2013). New findings support the suggestion that it might also be widely distributed in Iran.

Kerndorff & al. (2017) analysed 9 crocus samples collected over a wide area in Iran – from the mountains on the southeastern coast of the Caspian Sea to western Iran. They concluded that “*It is probably a recently evolved group with rapid radiation, which is reflected by the low degree of differences in the used phylogenetic marker and the comparatively large distribution area... ..However, although the molecular data do not reflect the clear morphological differentiation it also supports that some of the investigated Iranian populations clearly represent new species.*”



Map 3: Zagros mountains in purple ([from Wikipedia](#)).

These studies allow to accept practically without doubt that other spring-flowering species with ring-like corm tunics from this region also belong to Series *Adamii*. The only exception is the yellow-flowering *Crocus kurdistanicus* (Maroofi & Assadi) Rukšāns that is related to the *C. danfordiae* Maw group.

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During five expeditions to Iran the authors collected samples of species from Series *Adamii* from a total of 26 populations; this has resulted in descriptions of 10 new species. Not all of the localities mentioned in Flora Iranica have been identified, several populations mentioned by Kerndorff & al. (2017) were not re-found despite searches. A few more were come across in photos posted by other travellers or mountain climbers on social networks. This allows us to conclude that there are still new crocus species in the flora of Iran, which have not been studied at all or have been insufficiently studied hitherto.



Map 4: Crocus series *Adamii* localities in Zagros and W of Iran. For pin colour cipher see below Map 1, page 3.

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In 2017, a small group of botanical enthusiasts travelled along the Avroman Mountain range, which stretches along the Iran-Iraq border. In the depression of the eastern slope of the ridge were found some crocus specimens that had already finished flowering (17IRS-058). When they bloomed in cultivation two years later, they drew attention with their large flowers and strongly contrasting streaking along the backs of the outer segments. However, the small number of observed individuals did not allow the collected plants to be sufficiently characterized. Another very similar population was found some 10 km further (17IRS-055), to the north, but this sample was also very small and in the unfavourable spring of 2023 died prior to being thoroughly studied. During the 2022 expedition, our group revisited these localities, but failed to find a single crocus there. In 2023, a morphologically very similar population (practically identical by the essential distinguishing features) was found at a distance of only 5 km (midway between the two already mentioned populations) by the

Iranian researcher Mahfouz Advay, a PhD student of plant systematics at the Tehran University, who conducted a detailed study of the morphological features of this crocus *in situ*, which enabled the undoubted confirmation that it was a new, previously unknown species, which we decided to name *Crocus avromanicus*, after the mountain range where it occurs.

Map 5: The disclosed *Crocus avromanicus* localities within western Iran.



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Field studies of *Crocus avromanicus* were undertaken in April 2017 and March 2023 in western Iran (Kurdistan Province: the Avroman mountainous region within the central section of the Zagros Mountains), and the living material in cultivation (Latvia) was examined by us.

Samples observed: 17IRS-055 – Iran, Kurdistan prov., N of vil. Dezli, 35°23' N, 46°13' E, 1280 m a.s.l.; 17IRS -058 - Iran, Kurdistan prov., S of vil. Damiv, 35°18' N, 46°12' E, 1850 m a.s.l. - both 19th April, 2017 (in leaves); TUH 60020 - Iran, Kurdistan, Daraky vil. Maydan Gollanga, 35°21' N, 46°10' E, 1810 m a.s.l., blooming 23rd March, 2023.



C. avromanicus 17IRS-058.

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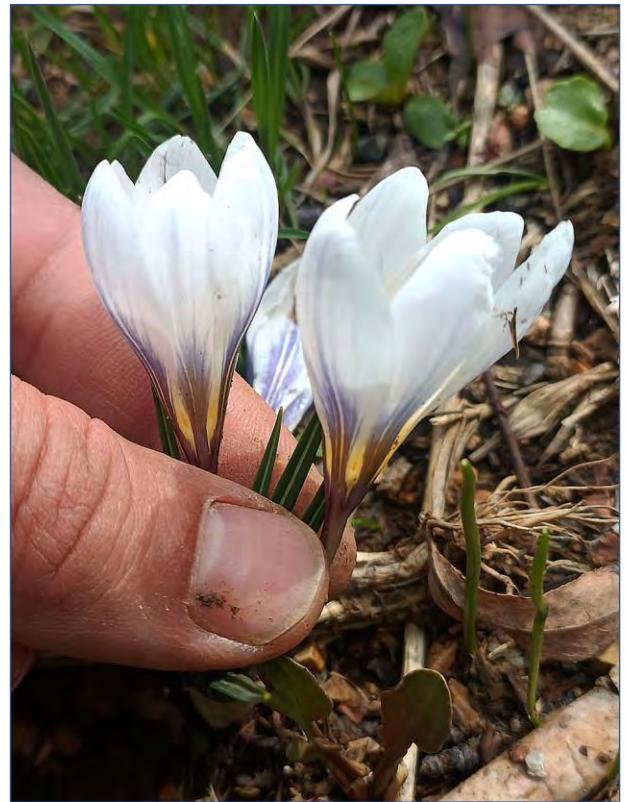
C. avromanicus at locus classicus.



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C. avromanicus at locus classicus.



Light coloured *C. avromanicus* at locus classicus.



Crocus avromanicus 17IRS-055.



Crocus avromanicus 17IRS-055.

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***Crocus avromanicus* Advay & Rukšāns**

Type: Iran, Kurdistan, Avroman ridge, Daraky vil. Maydan Gollanga, 35°21' N, 46°10' E, 1810 m a.s.l., on a steep slope with sparse shrubs. Holotypus: TUH! (Her. No. 60020), leg. M. Advay, 23-03-2023.

Habitat and distribution – on open slopes and between low phrygana shrubs together with *Iris aucheri* (Baker) Sealy, *Puschkinia avromanica* Rukšāns & Zubov, *Eranthis kurdica* Rukšāns, *Ficaria kochii* (Ledeb.) Iranshah & R. Rech.f. observed at three localities at altitudes 1300 – 1900 m a.s.l.

Flowering time – March-April.

Corm – flattened, in cultivation up to 30 mm wide and 20 mm high, in nature not exceeding 20 mm in width.

Tunics – very hard, coriaceous, basal splits few, very sparse, subsplits absent.

Tunic neck – bristly, up to 10 mm long, formed by widely based (2-3 mm) triangular splits of the apex of the main tunic.

Basal tunic – 2(1), hard and prominent, wide (up to 10 mm), with a distinctly toothed upper edge with distant splits.

Basal rings – 3(4) hard, the bottom ring up to 4 mm wide, with a distinctly pronged upper edge, interspaced with sparse, up to < 1 mm long teeth, higher rings gradually become narrower and less toothed, the upper one merely pronged.

Prophyll – absent.

Cataphylls – 3, white, turning slightly shaded greenish at the top, with darker light greenish veins.

Leaves – 6-10, greyish green, up to 4 mm wide, lateral channels with 5-7 ribs in each, the white stripe narrow, less than 1/5 of the lamina width, lamina almost flat, slightly v-shaped, with minutely down turned edges, distinctly papillose or minutely hairy along the ridges, sparsely on surface; keel narrow, slightly widening at the very bottom, flat (planar) or with a minor central extension, sparsely hairy along the edges; usually reach the tips of the flowers or even overtop them during blooming, rarely shorter.

Perianth tube – blackish lilac or striped purple on a white ground to uniformly light purplish brown in lighter coloured specimens.

Bract and bracteole – silvery, transparent, subequal in length, usually ending below the base of the flower.

Throat – distinctly hairy, yellow or shaded blackish over yellow, with a starry, triangular upper edge.

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Filaments – 7-9 mm long, distinctly hairy, creamy.

Anthers – 10-12 mm long, yellow, arrow-shaped, pointed at the tips, with 1 mm long basal lobes.

Connective – white to shaded creamy.

Style – at the base creamy, gradually becoming yellow towards the 3 stigmatic branches; branches 10-15 mm long, more or less diverged only at the top, distinctly papillose; stigma widened, with a somewhat horn-like upper edge, invariably more or less over-topping anthers.

Flower segments – light bluish, less often almost white, with more or less prominent dark stripes on the segment outside.

Outer segments – 42-44 mm long and 16-18 mm wide, broadly oblanceolate to obovate, pointed at the tip; the outside mostly with prominent dark purplish striping from the base to almost the segment edges; the inside whitish with a distinctly translucent outer striping over the dark shaded yellow throat; in less often seen plants the segment colour is almost white with short light bluish stripes on the basal third of the outer segments, with a purplish brown basal blotch edged lilac that higher up transforms into short lilac stripes.

Inner segments – 40-43 mm long and 16-17 mm wide, obovate, with less pointed tips; the outside very variable – in darker specimens prominently striped similarly to the outer segments, in lighter individuals practically white, the inside variable, depending on the outside colour – from translucent outer stripes to pure whitish with a more or less darkish shaded yellow basal blotch.

Capsule and seeds – not observed.

2n = unknown.

Etymology – named after Avroman ridge where it was found growing in the wild.

C. avromanicus corms: at locus classicus.



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C. avromanicus corms: left – 17IRS-055;
below – 17IRS-058.



C. avromanicus basal tunic.

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C. avromanicus corm tunics 17IRS-058..

C. avromanicus basal rings and corm tunics 17IRS-058.



Crocus avromanicus upper basal ring's edge.

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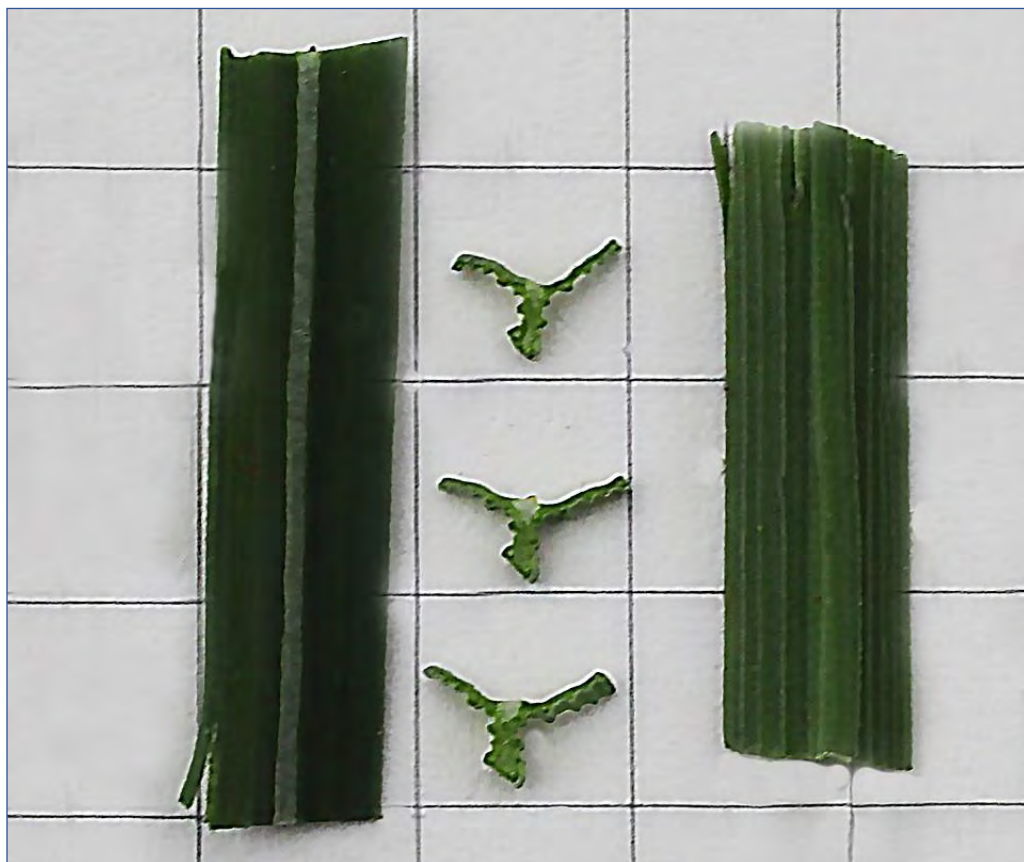
C. avromanicus corm tunics and basal rings 17IRS-055.



Crocus avromanicus cataphylls.

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Crocus avromanicus
leaves (17IRS-058).



Crocus avromanicus flower details (17IRS-058).



Far left and left: *Crocus avromanicus* stigmatic branches.

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Herbarium sheets of
Crocus avromanicus



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Central Herbarium of Tehran University (TUH)
Flora of Iran

No: 60020

Family: Iridaceae

Crocus avromanicus Advay & Ruksans

Loc.: Iran, Kurdistan, Avroman, Daraky village, Maydan
Gollanga

Alt.: 1810 m
March 2023

Date: 23.

Note:

Leg.: Mahfouz Advay

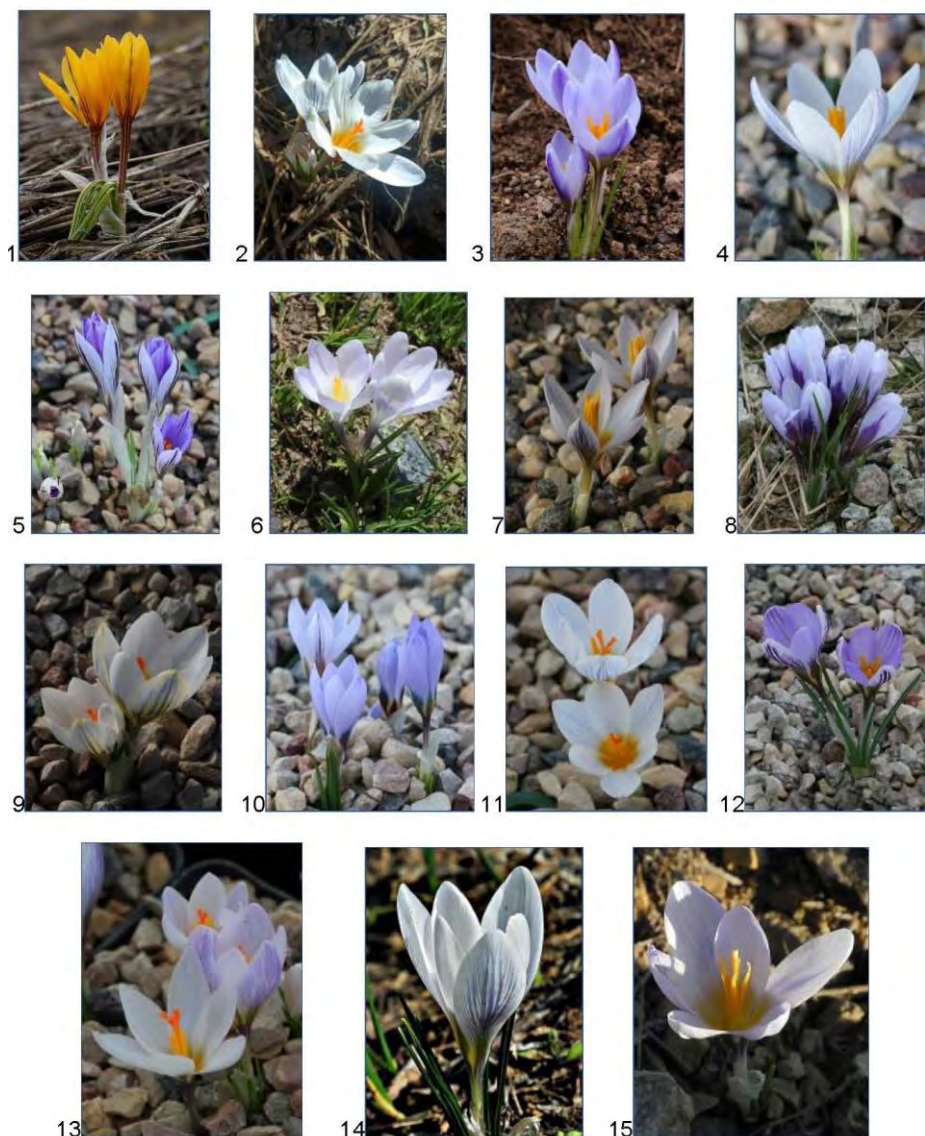
Herbarium sheet of *C. avromanicus* (holotype).

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Recognition – So far in Iran have been identified 15 species from Series *Adamii*. One of them has yellow flowers (*Crocus almehensis*), the predominant flower colour in five other species is blue (as in almost all crocus species there are also rare albino forms). The ground colour in the remaining nine species is white or pale bluish with darker blue-purple stripes on the outside of the petals and a lighter or darker yellow throat in eight of them. The exception is *C. dolatyarii*, whose flowers are unstriped and the throat is white. Of the other eight species the authors have not seen two – *C. zagrosensis* and *C. zanjanensis* Kernd. & Pasche, which have not been found again, so the original descriptions of these species were used to separate them (Kerndorff & al., 2017).

Iranian crocuses of series *Adamii* - from left to right from top line down, in alphabetic order:

1 *C. almehensis* photo J. Ingham, 2 *C. avromanicus* type locality, 3 *C. azerbaijanicus*
4 *C. chiaicus*, 5 *C. chionophilus*. 6 *C. dolatyarii* photo A. Dolatyari, 7 *C. gunae* 8 *C. inghamii*
photo D. Zubov, 9 *C. iranicus*, 10 *C. marandicus*, 11 *C. pseudoiranicus*, 12 *C. reinhardii*, 13
C. sanandajensis, 14 *C. zagrosensis* and 15 *C. zanjanensis*. Last two photos E. Pasche.



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They can be divided into two groups – species with a nude (glabrous) flower throat (*C. chionophilus* Dolatyari & Rukšāns, *C. gunae*, *C. pseudoiranicus* Dolatyari & Rukšāns, *C. zagrosensis*, *C. zanjanensis*) and species with a papillose or hairy flower throat and filaments – *C. chiaicus* Dolatyari & Rukšāns, *C. iranicus* Rukšāns and the *C. avromanicus* described here. *C. iranicus* basal rings are distinctly toothed vs. *C. avromanicus*, whose basal rings have merely pronged upper edges without distinct teeth, only the lowest ring has sparsely spaced short teeth. The throat of *C. pseudoiranicus* is glabrous and its filaments are papillose, it has 4-5 leaves whose lateral channels have 3-4 ribs vs. *C. avromanicus* with 6-10 leaves and 5-7 ribs in each lateral channel. Among the Iranian species from Series *Adamii* the most similar to *C. avromanicus* by the complex of morphological features is *C. chiaicus*. The two species are easily distinguishable by the colour of the filaments, which in *C. avromanicus* are light, cream throughout, while in *C. chiaicus* they are dark yellow and gradually become orange towards the anthers. The stigmatic branches and their position in the flower also differ – in *C. chiaicus* the stigma usually reaches the middle of the anthers or, more rarely, their tips, and only very rarely surpasses them, whereas in *C. avromanicus* it always extends above the anthers.

Key for *Crocus* species from Series *Adamii* growing in Iran

- 1 Flowers pure bright yellow or with bronze-purple veining or suffusion on the outside base, leaves up to 5 mm wide, with (3)4 ribs in lateral channels ***C. almehensis***
- 1 Flowers in white-blue shades
 - 2 Throat white ***C. dolatyarii***
 - 2 Throat lighter or darker yellow
 - 3 Basal rings of corms with toothed edges
 - 4 Lateral channels with 5-6 ribs ***C. iranicus***
 - 4 Lateral channels with up to 3 ridges
 - 5 Flowers distinctly blue, plants of dry slopes ***C. reinhardii***
 - 5 Flowers whitish, plants of wet bottoms of gullies ***C. gunae***
 - 3 Basal rings with a smooth or pronged upper edge, without distinct teeth
 - 6 Throat yellow with a distinct although diffused white edge
 - 7 Cataphylls with dark stripes ***C. chionophilus***
 - 7 Cataphylls without stripes

(continued next page)

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- 8 Throat widely edged white, often shaded greyish, tunic neck formed by narrowly based splits, flowers have a strong scent ***C. azerbaijanicus***
- 8 Throat narrowly edged white, tunic neck formed by widely based splits, flowers weakly scented ***C. marandicus***
- 6 Throat yellow without a distinct white edge
 - 9 Outer corm tunics thin papery ***C. inghamii***
 - 9 Outer corm tunics hard, coriaceous
 - 10 Filaments colourless to light yellow ***C. zanjanensis***
 - 10 Filaments yellow to orange-yellow
 - 11 Throat and filaments papillose or even distinctly hairy
 - 12 Filaments shaded orange at top, stigma positioned between or at the tips of anthers, leaves 3-4(5) ***C. chiaicus***
 - 12 Filaments creamy, stigma usually overtops the anthers leaves 6-10 ***C. avromanicus***
 - 11 Throat nude (glabrous)
 - 13 Leaves up to 2 mm wide, with 5, rarely 4 ribs in lateral channels ***C. zagrosensis***
 - 13 Leaves up to 4 mm wide, with 3-4 ribs in lateral channels
 - 14 Leaves 4-5, stigmatic branches less than 4 mm long, cataphylls greenish at the tips, filaments papillose
C. pseudoiranicus
 - 14 Leaves up to 7, stigmatic branches 4-6.5-12 mm long, cataphylls brownish at the tips, filaments glabrous
C. sanandajensis

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The authors express their thanks to Dr Alireza Dolatyari (Iran), John Ingham (UK), Erich Pasche (Germany) and Dimitri Zubov (Ukraine) for sharing their pictures to illustrate this article. Kind thanks to Dr Alireza Dolatyari (Iran), who helped us to take part in the 2022 Iranian expedition that greatly expanded the knowledge about the geophytic flora of Iran, and, of course, to all the other partners of our team over the years, especially to Vaclav Jošt (Czech Republic), Dimitri Zubov (Ukraine) and others for their support in the search of new plants and the preparation of herbaria.

We are particularly thankful to our families for doing all the chores at home during our absence, while we were out in the field studying *in situ*. As always, a thank you goes to Mārtiņš Erminass, the language corrector, who did his best to get this publication in line with English grammar.

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Illustrated key for *Crocus* species from Series *Adamii* growing in Iran
- prepared by Jānis Rukšāns.



1A Flowers pure bright yellow or with bronze-purple veining or suffusion on the outside base, leaves up to 5 mm wide, with (3)4 ribs in lateral channels

C. almehensis

1B Flowers in white-blue shades

2



2A Throat white

C. dolatyarii

2B Throat lighter or darker yellow

3

3A Basal rings of corms with toothed edge

4

3B Basal rings with a smooth or pronged upper edge, without distinct teeth

6



4A Lateral channels with 5-6 ribs

C. iranicus

4B Lateral channels with up to 3 ridges

5

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5A Flowers distinctly blue, plants of dry slopes

C. reinhardii



5B Flowers whitish, plants of wet bottoms of gullies

C. gunae

6A (3B) Throat yellow with a distinct although diffused
white edge

7

6B Throat yellow without a distinct white edge

9



7A Cataphylls with dark stripes

C. chionophilus

7B Cataphylls without stripes

8



8A Throat widely edged white, often shaded greyish, tunic
neck formed by narrowly based splits, flowers have a
strong scent

C. azerbaijanicus

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8B Throat narrowly edged white, tunic neck formed by widely based splits, flowers weakly scented

C. marandicus



9A (6B) Outer corm tunics thin, papery

C. inghamii

9B Outer corm tunics hard, coriaceous

10



10A Filaments colourless to light yellow

C. zanjanensis

10B Filaments yellow to orange-yellow

11

11A Throat and filaments papillose or even distinctly hairy

12

11B Throat nude (glabrous)

13



12A (11A) Filaments shaded orange at top, stigma positioned between or at the tips of anthers, leaves 3-4(5)

C. chiaicus

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12B Filaments creamy, stigma usually overtops the
anthers, leaves 6-10 ***C. avromanicus***



13A (11B) Leaves up to 2 mm wide, with 5, rarely 4 ribs in
lateral channels ***C. zagrosensis***

13B Leaves up to 4 mm wide, with 3-4 ribs in lateral
channels **14**



14A Leaves 4-5, stigmatic branches less than 4 mm long,
cataphylls greenish at the tips, filaments papillose
C. pseudoiranicus



14B Leaves up to 7, stigmatic branches 4-6.5-12 mm
long, cataphylls brownish at the tips, filaments
glabrous ***C. sanandajensis***

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--- Plant Portrait ---

PYRROCOMA UNIFLORA: Zdeněk Řeháček text and photos.

I don't think that the name *Pyrracoma uniflora* means anything to anyone, at least it didn't to me, not until recently. She's a pretty plant in the Asteraceae from the American West, which I've been growing since 2008, but under the name *Haplopappus uniflorus*. This name is already certainly more familiar, at least by genus. But, as has happened to me many times, when I began to prepare this article, I discovered it's been called something else for a long time.

Pyrracoma uniflora is widespread throughout most of the American West, from California and Colorado to central Canada. It grows on mountain meadows and sparse forests, at high elevations of 1400-2600 m. With such a large range is not it is surprising that it is quite variable in its characteristics. It forms a cluster of narrow to narrowly hooped stalked leaves that are sharply toothed around the edges, or only indistinctly toothed or fully margined, up to 12 cm long and 5-20 mm wide. Erect or ascending stems are 7-40 cm long, with a few smaller leaves



that do not have a petiole, but the lower part encircles the stem. The stems bear large, daisy flowers at the apex, usually one at a time, but sometimes two to four, although the name *uniflora* means single-flowered. The flowers, more properly the trusses, are 3-4 cm across and bright yellow in colour. The whole plant is sometimes covered with fine hairs, sometimes completely bald.

Pyrracoma uniflora syn.

Haplopappus uniflorus – one of two forms grown by Zdeněk Řeháček.

I grew it from seeds I got from Canada in 2007, but from a garden, not from the wild.

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We planted three plants in the garden then, outside the rock garden or on the edge of the rock garden, both in a sunny spot and in normal garden soil. We still have two and I have attached pictures of both, because they beautifully demonstrate its variability. I have only just realised that for two or three years now they haven't flowered. They have been there too long and need to be taken out, divided and replanted. They tolerate our wet winters without cover. The seeds, as often with other asters, do not germinate here.



Pyrocoma uniflora syn. *Haplopappus uniflorus*, second form grown by Zdeněk Řeháček.

This plant was first described in 1834 by an English botanist and traveller Hooker as *Donia uniflora*. Then, apparently, a bunch of botanists got "into it" because I counted 18 synonyms for this species and only one of them is *Haplopappus uniflorus*. It seems the currently recognised name of ***Pyrocoma uniflora*** was published by the American botanist Greene in 1894. But when this name became recognised and why the invalid name is still in use today, I don't know!