

Crocus jablanicensis (Iridaceae), a new species from the Republic of Macedonia, Balkan Peninsula

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Crocus jablanicensis N. Randj. & V. Randj. *sp. nova* (Iridaceae) 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 morphologically similar *C. cvijicii* and *C. veluchensis*. In contrast to these species, *C. jablanicensis* has white styles and stigmas and a glabrous, white perianth throat.

According to Maw (1886) and Mathew (1982, 1983) the largest number of species from the genus *Crocus* occur on the Balkan Peninsula. Of the 31 species of *Crocus* now known from the peninsula (Mathew 1982, Randelović *et al.* 1990), 18 occur within the territory of the Republic of Macedonia. Seven of them are Balkan endemics, including four species in the Scardopindian mountains: *C. pelistericus*, *C. scardicus*, *C. cvijicii* and *C. sublimi*. The populations of *C. pelistericus* and *C. scardicus* (ser. *Scardici*) and *C. cvijicii* and *C. veluchensis* (ser. *Reticulati*) are found in the alpine and subalpine regions at altitudes above 1800 m (Randelović *et al.* 2007).

On the Krstač, Strižak and Čuma peaks of the Jablanica mountain (Fig. 1), large populations of an unknown species of *Crocus* with white flowers were found in 2007. On the basis of comparative analysis with the congeners, these populations are here described as a new species in the section *Nudiscapus* and the series *Reticulati*.

***Crocus jablanicensis* N. Randj. & V. Randj., *sp. nova* (Fig. 1 and 2)**

Cormus subrotundatus, insignis complanatus, 0.7–1.0 cm diametro; tunica tenuissime reticulato-fibrosa. Folia vaginata 2–3(4), alba. Folia 2–3(4), synantha, 1–2.2(2.5) mm lata, glabra. Spatha deficio; scapus 2–2.8 cm longus. Perianthii tubus 3–5 cm longus, albidus, fauce ad insertionem filamentorum glabrae, albae. Perianthii segmenta elliptica, 2.2–3 cm longa, 0.7–0.9 cm lata, alba. Filamentae albae, glabrae, 7–9 mm longae; antherae luteae, 6–8 mm longae, pollen flavum. Stigma antheras superantia; stylus albus, rami stigmatici 3, albi, rugosi. Capsula 1–1.7 cm longa; semina atrofusca usque obscure brunnea.

TYPE: The Republic of Macedonia. Mt. Jablanica: Strižak peak, 41°17'03"N, 20°31'44"E, 2200 m, alpine grassland, 17 June 2010 N. Randelović (holotype BEOU 16438; isotypes BEO, HMN).

ETYMOLOGY: This species is named after the mountain Jablanica where it was found.



Fig. 1. Distribution map of *Crocus jablanicensis* (●), *C. cvijicii* (■) and *C. veluchensis* (▲).

Corm about 0.7–1.0 cm in diameter, flattened-subglobose; tunics papyraceous with thin fibres, indistinctly reticulated. Cataphylls 2–3(4), white, papery. Leaves 2–3(4), synanthous, shorter than flower at anthesis, 1–2.2(2.5) mm wide, glabrous. Flowers vernal, solitary (rarely two), unscented, white. Throat white, glabrous. Prophyll (basal spathe) absent. Bract and bracteole present, subequal. Perianth tube 3–5 cm long, white; segments equal or subequal, oblanceolate, obtuse or subacute, 2.2–4 cm long, 0.7–0.9 cm wide. Filaments 0.7–0.9 cm long, white, glabrous; anthers 0.6–0.8 cm long, yellow. Style white, usually much longer than anthers, obscurely divided into 3 white branches, each expanded and frilled at their tips. Capsule 1–1.7 cm long, ellipsoid; seeds subglobose with a distinct raphe, reddish brown to dark brown.

Crocus jablanicensis is known only from the type locality and few locations nearby (the

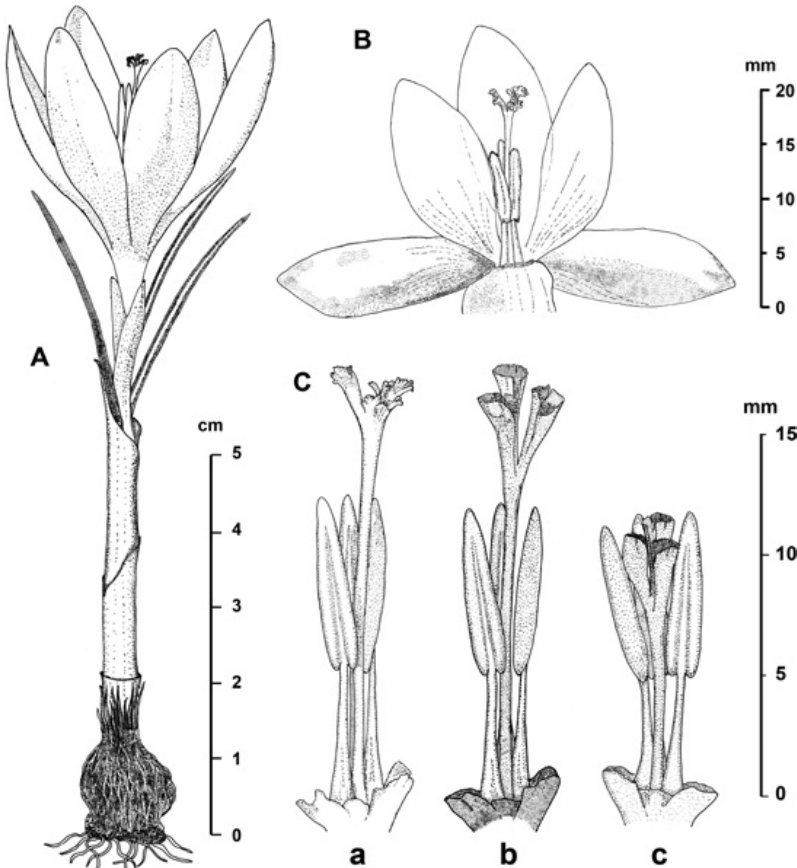


Fig. 2. A–C: *Crocus jablanicensis* (from the holotype): — A: Habit. — B: Flower. — C: (a) Style, (b) style of *C. veluchensis*, (c) style of *C. cvijicii*.

Table 1. Comparison of *Crocus jablanicensis* with *C. cvijicii* and *C. veluchensis*.

Species	<i>C. jablanicensis</i>	<i>C. cvijicii</i>	<i>C. veluchensis</i>
Plant height	5–10(12) cm	4–10 cm	6.5–18 cm
Tuber shape	flattened-subglobose	flattened-subglobose	depressed-globose
Tunic	papyraceous, with thin fibres, indistinctly reticulated	with thin fibres, finely reticulated	finely fibrous-reticulated
Number of cataphylls	2–3(4)	2–4	3–4
Number of leaves	2–3(4)	2–4	2–4(5)
Prophyll	absent	absent	absent
Bract	3.0–3.5 cm	2.0–3.5(4)	(3.5)5–7 cm
Bracteole	3.2–3.7 cm	2.0–3.5(4)	(3.5)5–7 cm
Flower colour	white	pale to deep yellow, cream or white	pale lavenderblue to deep violet, rarely white
Number of flowers	1(2)	1	1(2)
Perianth tube	3–5 cm, white	1.5–3.5 cm, yellowish, rarely white or purplish	2–6(10) cm, lilac or white
Perianth throat	white, glabrous	white to yellowish, pubescent	white or pale lilac, pubescent
Perianth segments	2.2–4 × 0.7–0.9 cm	1.5–4 × 0.5–0.9 cm	1.5–5 × 0.6–1.5 cm
Filaments	0.7–0.9 cm, white	0.7–1.2 cm, cream or yellow	0.5–1.2 cm, white
Anthers	0.7–0.9 cm, yellow	0.7–1.2, orange yellow	0.6–1.6, yellow
Style colour	white	yellow to cream	yellow to orange
Style/stamen length ratio	> 1	≤ 1, rarely > 1	> 1
Stigma colour	white	yellow	yellow to orange
Seeds colour	reddish brown to dark brown	reddish brown	reddish to dark brown

Krstač and Čuma peaks) on the Jablanica mountain in west Macedonia. According to our field investigations, its population size is large. It grows in alpine grasslands around snowmelts at altitudes from 1800 to 2100 m. These alpine grasslands, in the sense of Horvat *et al.* (1974), belong to the alliances *Seslerion comosae* Horvat 1935 (on schist on the Strižak peak) and *Onobrychi–Festucion* Horvat 1960 (on limestone on the Krstač and Čuma peaks). Characteristic species are *Gentiana verna*, *Dianthus petraeus*, *Acinos alpinus*, *Nigritella nigra*, *Trifolium noricum*, *Pedicularis hoermaniana*, *Daphne oleoides* (on limestone), *Festuca paniculata*, *Thlaspi praecox*, *Pedicularis verticillata*, *Fritillaria macedonica*, *Crocus scardicus*, *Lilium albanicum*, *Geum montanum*, *Botrychium lunaria* (on schist), *Pimpinella saxifraga*, *Ranunculus montanus*, *Geranium subcaulescens*, *Primula veris* (on both), etc.

Crocus jablanicensis is morphologically close to *C. cvijicii* and *C. veluchensis*

of the section *Reticulati*, but there are numerous differences (Table 1). *Crocus veluchensis* is widespread in the mountains of Bulgaria (Uzundžaliev 2005), Serbia (Randelović *et al.* 1990a, Tomović, 2007), Macedonia (Pulević 1976, Randelović *et al.* 2007), Albania and Greece (Mathew 1982, 1991), while *C. cvijicii* is found in Galičica in Macedonia (Košanin 1926, 1928, Pulević 1976, Randelović *et al.* 2007) and some mountains in the northern Greece and eastern Albania (Mathew 1982, 1983, 1991).

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