Allium pseudostrictum (*Amaryllidaceae*), a new record from Iran

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Abstract

Among *Allium* plants newly collected in NW Iran, a voucher was identified as *A. pseudostrictum*. This is a new record for Iran. A morphological description and a key for determination are presented and the taxonomic relations and distribution in Iran are also discussed.

Keywords: *Allium*, distribution, morphological description

Introduction

Allium L. is one of the species-rich genera comprising currently about 900 accepted species in the world and more than 120 species have been confirmed as growing in Iran (Memariani *et al.* 2012). However, only about 10% of them own the rhizomatous habit.

Among *Allium* plants newly collected in NW Iran, a voucher was identified as *A. pseudostrictum* Albov. This is a new record for Iran. Fritsch & Maroofi (2010) already mentioned the possible occurrence of this species in Iran when they reported the very similar *A. szovitsii* Regel from West Azerbaijan and Ardabil provinces. These species belong to the type section *Reticulatobulbosa* Kamelin of subg. *Reticulatobulbosa* (Kamelin) N. Friesen. A morphological description and a key for determination are presented to enable recognition of *A. pseudostrictum* and the taxonomic relations and distribution in Iran are also discussed. The distribution map was generated using the computer program DMAP (Morton 2009).

Taxonomy

Allium pseudostrictum Albov, Prodr. Fl. Colchic.: 238 (1895).

Syn.: *Allium adzharicum* Popov, Zametki Sist. Geogr. Rast. 10: 16 (1941).

Type: Georgia: Mingrelia, jug. Askhi, pasc. alp., Aug. 1893, leg. N. Albov 431, 486, 563 (syntypi, partly in LE).

Vouchers from Iran: W Azarbaijan prov., Khoy, Avrin mountain, N 38°33', E 44°32', 2905–3118 m, 19.07.2011, leg. Amini Rad & Torabi (57038 IRAN).

Geographical distribution: Caucasus, Transcaucasia, Turkey and Iran (Fig. 1)

Ecology: Subalpine-alpine meadows and stony slopes.

Bulbs attached to a rhizome, narrowly conical to cylindrical, 10–20 mm in diameter, outer tunics grayish-brown, fibrous-reticulate. Stem 20–40(45) cm long. Leaves 2–5, flat, 2–4.5 mm wide, narrowly linear, obtuse. Spathe almost as long as inflorescence, 2-valved, whithish with a purplish tint, scarious, persistent. Inflorescence almost globose, 2.5–3 cm in diameter, 1.5–2 cm long, many-flowered. Pedicels (3–)5–10(–12) mm long. Flowers ovate-campanulate. Tepals pink or lilac to mauve, glossy, elliptical, 5–7 mm long, with rounded or slightly subacute apex, inner tepals sometimes hooded and slightly longer than outer ones, median vein slightly keeled and purple. Filaments subulate, basally widened and united, in full anthesis 1.5–2 times longer than tepals, the inner (rarely also the outer) filaments bearing two (rarely four) long lateral teeth. Anthers green to lilac. Style 3–5 mm long exserted; stigma undivided. Ovary to 5 mm long, almost 3.5 mm in diameter, tripartite-ovate, green (Fig. 2).

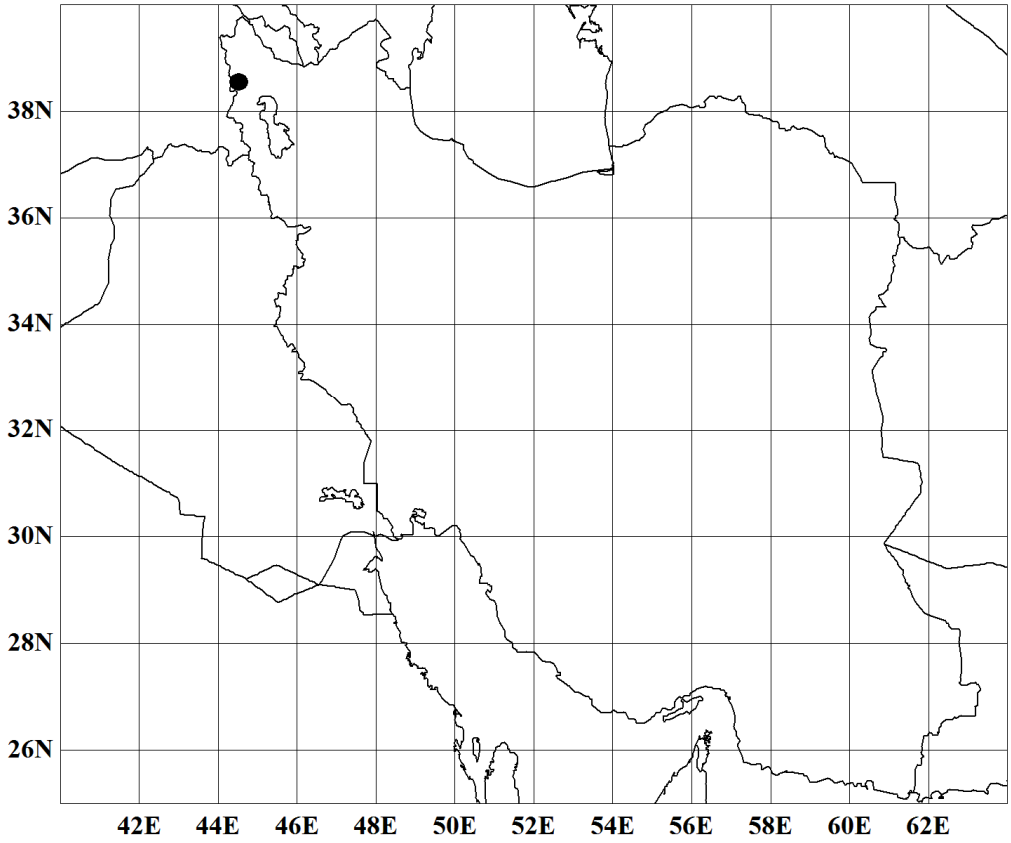

Fig. 1. Distribution map of *Allium pseudostrictum* (black dot) in Iran.

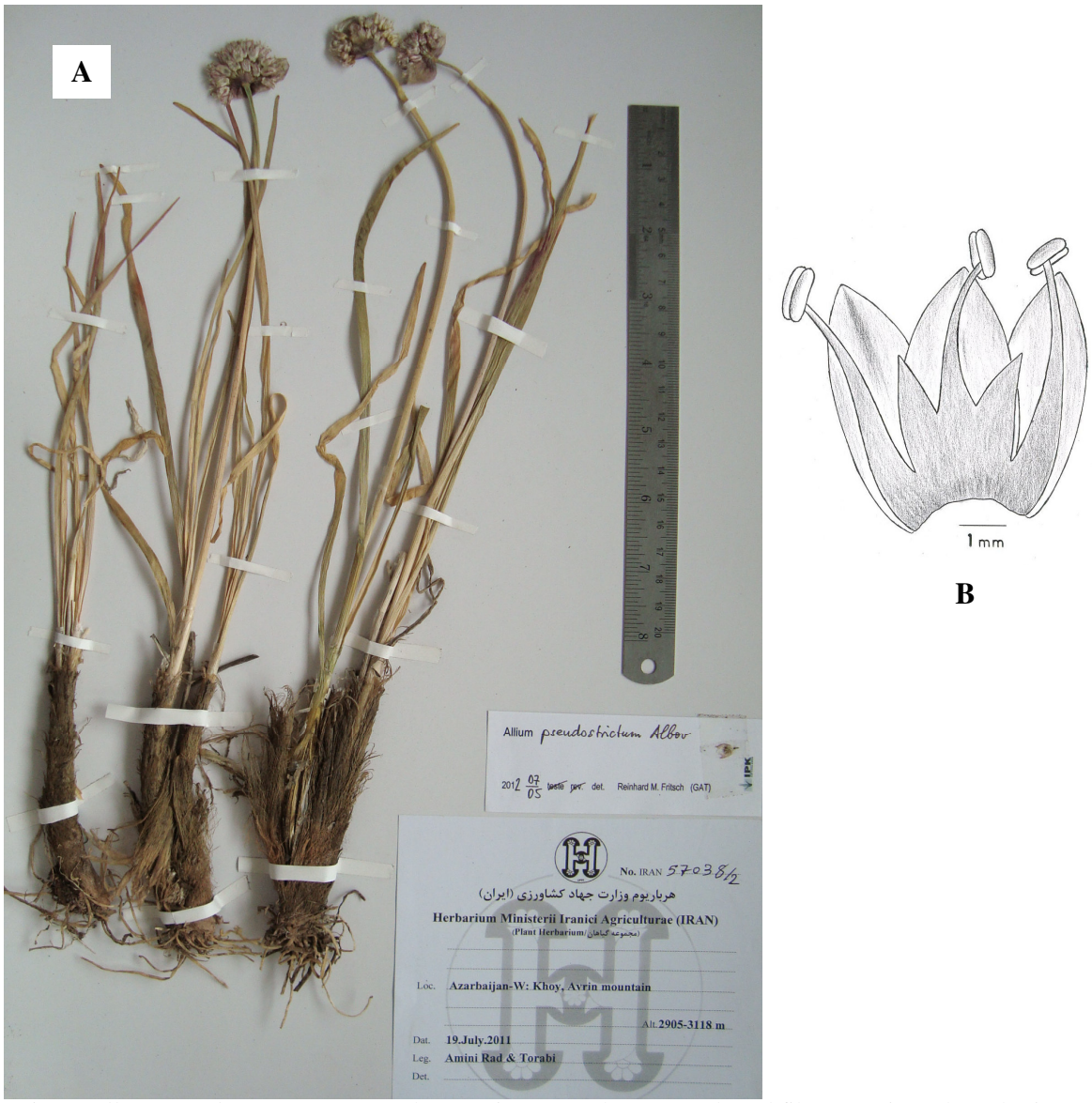

Fig. 2. *Allium pseudostrictum*: A. Voucher specimen, B. Flower (tepals and filaments) in early anthesis.

Key for determination

The key for subg. *Rhizirideum* in Flora Iranica 76: 6–7 (Wendelbo 1971) can be supplemented as below:

13a. Filaments remarkably longer than tepals, often with teeth near base 14

13b. Filaments as long as tepals or shorter, always without teeth 15

14a. Leaves 1.2–2.5 mm wide. Scape 10–20 cm high ..... 2. *A. brachyodon* Boiss.

14b. Leaves (2–)5–7 mm broad. Scape (25–)35–70 cm long 14.1

14.1a. Plants of E and NE Afghanistan; tepals 4.5–5.5 mm long with plane median vein ..... 1. *A. afghanicum* Wendelbo

14.1b. Plants of NW Iran and adjacent countries; tepals 5–7 mm long with slightly keeled median vein 14.2

14.2a. Tepals oblong to elliptic, acute or subacute; filaments subulate throughout, base without basal teeth and not united ..... *A. szovitsii* Regel

14.2b. Tepals broadly oblong, ± obtuse; filaments basally widened and 1.5–2 mm long united, with up to 4 small acute teeth per filament ..... *A. pseudostrictum* Albov

Discussion

Although *A. pseudostrictum* sometimes has been considered as synonym of *A. szovitsii* (for example in Vvedensky 1935 and Kollmann 1984), these species have been confirmed as independent species in more recent floras and publications (Friesen & Özhatay 1998, Oganesian & Agababian 2001). The main differences are given in the key above although both species are rather variable; Oganesian & Agababian (2001) reported even a scape length of 15–50 cm for both species and underlined the variable number, shape and size of the filament teeth of *A. pseudostrictum*. Unfortunately, a good picture presented by Assadi (1984: 84) and named *A. szovitsii* shows undivided bulb tunics and probably represents the cited voucher from Semnan province (Assadi 1984: 84) which was re-determined as *A. hymenorrhizum* Ledeb. s.l. (subg. *Polyprason* Radic sect. *Falcatifolia* N. Friesen).

It is expected to find more localities of *A. pseudostrictum*, in elevations higher than about 2500 m in the mountain massifs of northwestern parts of Iran. The plants are inconspicuous and begin to flower in late July and August only.

Morphologically, this taxon is similar and possibly closely related to *A. brachyodon* Boiss., a rare endemic of Fars province, characterized by c. 5 mm long tepals of similar color and indistinctly reticulate bulb tunics. Less similar and less related is the yellow-flowering *A. scabriscapum* Boiss. & Kotschy, a member of sect. *Scabriscapa* (Tscholok.) N. Friesen, widely distributed in Iran and adjacent countries.

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