



Allium kuhrangense (Amaryllidaceae) a new species of *Allium* sect. *Acanthoprason* from Iran

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Abstract

Allium kuhrangense, an endemic to Chaharmahal Bakhtiari province (Iran) is described here as a new species. This species grows on gravelly and rocky slopes of a mountainous region. It is morphologically most similar to *A. austroiranicum* and can be recognized as a member of the *A. austroiranicum* alliance. *Allium kuhrangense* is a diploid species with chromosome number of $2n = 2x = 16$. Diagnostic characters, description, taxonomic comments, photographs and a distribution map of the new species as well as an identification key for the related taxa are provided. According to IUCN Red List Categories and Criteria, *A. kuhrangense* is assessed here as a “Critically Endangered” species.

Key words: *Allium* subgenus *Melanocrommyum*, cytology, endemic species, taxonomy

Introduction

The genus *Allium* Linnaeus (1753: 294) is one of the largest monocotyledonous genera with about 900 species in the World (Govaerts *et al.* 2013). Taxonomically, *Allium* forms a difficult group, which is distributed over the northern hemisphere. Within the genus, subgenus *Melanocrommyum* Rouy in Rouy & Foucaud (1910: 378) is the second largest subgenus with ca. 170 species (Fritsch 2012). Members of the subgenus are characterized by mostly broad and flat leaves, rigid and most often strictly upright scapes of varying length and large fasciculate to globular inflorescences composed of many moderately small to large and often star-like flowers (Fritsch *et al.* 2010).

The *Allium* species known to occur in Iran belong to seven subgenera and 30 sections accepted by Friesen *et al.* (2006) and Fritsch (2012). Southwest Asia, especially Iran, is known as an important centre of diversity of the genus. *Allium* section *Acanthoprason* Wendelbo (1969: 27) was described by Wendelbo (1969) with *A. akaka* S.G.Gmel. ex Schultes & Schultes (1830: 1132) as type species. The species belonging to this section are characterized by relatively short peduncles and tepals forming a rigid spine-like median vein after anthesis (Fritsch & Abbasi 2008). Karyological analyses showed that all members of the section are diploid with chromosome number of $2n = 2x = 16$ and relatively uniform karyotype composed of metacentric and sub-metacentric chromosomes (Akhavan *et al.* 2014).

According to “Flora Iranica” (Wendelbo 1971), *A.* sect. *Acanthoprason* comprised 13 species in Iran, from which, four species *A. monophyllum* Vvedensky (1934: 128), *A. cristophii* Trautvetter (1884: 268), *A. ellisii* Hooker (1903: t.7875) and *A. elburzense* Wendelbo (1969: 36) were recently transferred to the new section *Asteroprason* Fritsch (2010: 184). After “Flora Iranica” and during the last years, several species were newly reported or described from Iran increasing the number of species in the section *Acanthoprason* to 21 (Fritsch 2012).

In the framework of a biosystematic study on *A.* sect. *Acanthoprason* we collected some samples from a small region in Chaharmahal Bakhtiari province (SW Iran). Due to considerable differences with other known species we describe this taxon as a new species.

(Fritsch and Abbasi 2013). Species of this section are mostly distributed in the Alborz and Zagros mountain ranges at the higher elevations. Probably there are poorly explored regions in this area and further exploring may result in discovering of new taxa of the section. Many species such as *A. breviscapum* Stapf (1885: 14) (Alvand Mountains near Hamedan), *A. chlorotepalum* Fritsch & Jaeger (2010: 18) (mountains at northwestern edge of Isfahan province), *A. hamedanense* Fritsch (2008: 39) (stony dry limestone slopes in Hamedan province) and *A. kurdistanicum* Maroofi & Fritsch (2011: 353) (Kurdistan province) are rare and known from few localities.

Vernacular names and ethnobotanic use:—Most of the species from the section *Acanthoprason* are known as “*valak*” in Iran and are among the fresh vegetables that people use mostly for preparing special soups or a spice for rice. These plants are not cultivated and wild populations are the only source of “*valak*”.

Identification key to the species closely related to *A. kuhrangense*

1. Median veins of spathe black, merged towards the tip of the valve.....*Allium kuhrangense*
- Median veins of spathe green to brown, parallel up to the tip of the valve.....2
2. Leaf laminae lanceolate with white margins, steeply ascending; tepals triangular to narrowly lanceolate, very acute, 8–12 mm long, 1–2.5 mm wide near the base, whitish with green median vein and whitish filaments and yellow anthers, or pinkish with purple median vein and filaments with pink to purplish apex and purplish anthers *Allium austroiranicum*
- Leaf laminae oblong to broadly elliptic or ovate with purple margins, ± procumbent, tepals ± lanceolate, mostly subacute, pink to purplish, anthers always yellow3
3. Leaf laminae curved but not undulate; inflorescences narrowly fasciculate with pedicels of unequal length, in the fruiting stage very loose and subglobose; tepals 7–8 mm long; upper half of filaments darker pink..... *Allium shelkovnikovi*
- Leaf laminae narrowly to broadly lanceolate, recurved; inflorescence mostly broadly fasciculate with pedicels of subequal length; tepals 7–12 mm long, filaments all pink *Allium ubipetrense*

Acknowledgments

This research was supported by the University of Isfahan. The authors gratefully acknowledge anonymous reviewers for their very helpful comments, which improved the manuscript. We also thank Mr. Mohammad Mahmoodi for preparing the distribution map.

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