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A new species and new records of *Allium* (Amaryllidaceae) for Uzbekistan (Central Asia)

KOMIL SH. TOJIBAEV*, ORZIMAT TURGINOV & FARKHOD I. KARIMOV
Institute of Gene Pool of Plants and Animals of the Academy Sciences of Uzbekistan 100125, Durmon yuli str., 32 Tashkent, Uzbekistan; e-mail: ktojibaev@mail.ru
**author for correspondence*

Abstract

Allium decoratum Turginov & Tojibaev is described as new species from Uzbekistan (Central Asia). The distribution area of this species is restricted to Baisuntau moumtains in SW Hissar Range. The new species is close to the type species of subsect. *Ligulifolia* R.M.Fritsch, but differs from all known species of subsect. *Ligulifolia* by morphological characters of bulbs and flowers. Also we report 3 *Allium* species as new records for the territory of Uzbekistan: *A. flavellum* Vvedensky, *A. lutescens* Vvedensky and *A. viridiflorum* Pobedimova.

Key words: *Campanulata*, floristics, *Ligulifolia*, *Melanocrommyum, Reticulatobulbosa,* taxonomy, *Verticillata*

Introduction

Allium Linneaus (1753: 294) is one of the largest genera of monocots comprising more than 900 species distributed mainly in the northern hemisphere. The major center of diversity of the genus is in the eastern Mediterranean, Southwestern and Central Asia (Fritsch & Abbasi 2013). Taxonomic studies in the last 20–25 years greatly advanced taxonomy of the genus (Friesen *et al*. 2006) and especially of subgenus *Melanocrommyum* (Webb & Berthelot 1846: 479) Rouy (1910: 347) (Fritsch *et al*. 2010, Peruzzi *et al.* 2012, Özhatay & Genç 2013). Studies conducted in Central Asia have contributed significantly to this development with description of more than 30 new *Allium* species (Fritsch *et al.* 1998, 2002; Fritsch & Khassanov 2008; Khassanov & Fritsch, 1994; Khassanov & Tojibaev 2010, and others). Currently, mountains of Southwest and Central Asia harbor the greatest diversity of the genus. For example, the monocot geophyte flora of Ferghana valley includes 206 species, 83 of which belong to *Allium* and 34 of them are endemic to the Ferghana valley (Tojibaev & Karimov 2012). Another example is the flora of the Western Tien-Shan. This flora includes 52 species of *Allium* (Tojibaev 2010). Around half of these are local endemics and more than 10 species were described in the last 10–15 years.

Subgenus *Melanocrommyum* is the second largest in *Allium*, and consists of more than 170 species (Fritsch *et al*. 2010, Fritsch & Abbasi 2013), with the highest species diversity in Iran and Central Asia (70 and 81 species, respectively) (Fritsch & Abbasi 2013, Khassanov 2008). Since 2012 the research team of the Central Herbarium of Uzbekistan (TASH) is compiling the digital database of the plant diversity in Uzbekistan with application of GIS software. This work is based on current field surveys and analysis of herbarium materials. The most important source of floristic information is TASH, the largest collection of Central Asian specimens in the world. There are over 1.5 million herbarium specimens collected since 1840 from all regions of Central Asia. During 2012–2013, information from more than 100,000 herbarium specimens including 100 new records for the flora of Uzbekistan were included into the database. These results have a great importance for compiling the new checklist of the flora of Uzbekistan.

Some of the new additions from the genus *Allium* are presented in this paper. A new species of subgenus *Melanocrommyum* was discovered during recent floristic studies in peripheral areas of Western Tien-Shan and Pamir-Alai. It was found during an inventory of the flora of Baysuntau highlands (Khojagurgurata), located on the south-western spurs of the Hissar Range (Pamir-Alai). Basic morphological features of new species showed a close relationship with two species of sect. *Kaloprason* Koch (1849: 234)—*A. alexeianum* Regel (1875: 244) and *A. nevskianum* Vved. ex Wendelbo (1969: 37). Morphological study of living plants and molecular analysis (IPK Gatersleben) showed that these plants from Khojagurgurata belong to a species new to science.

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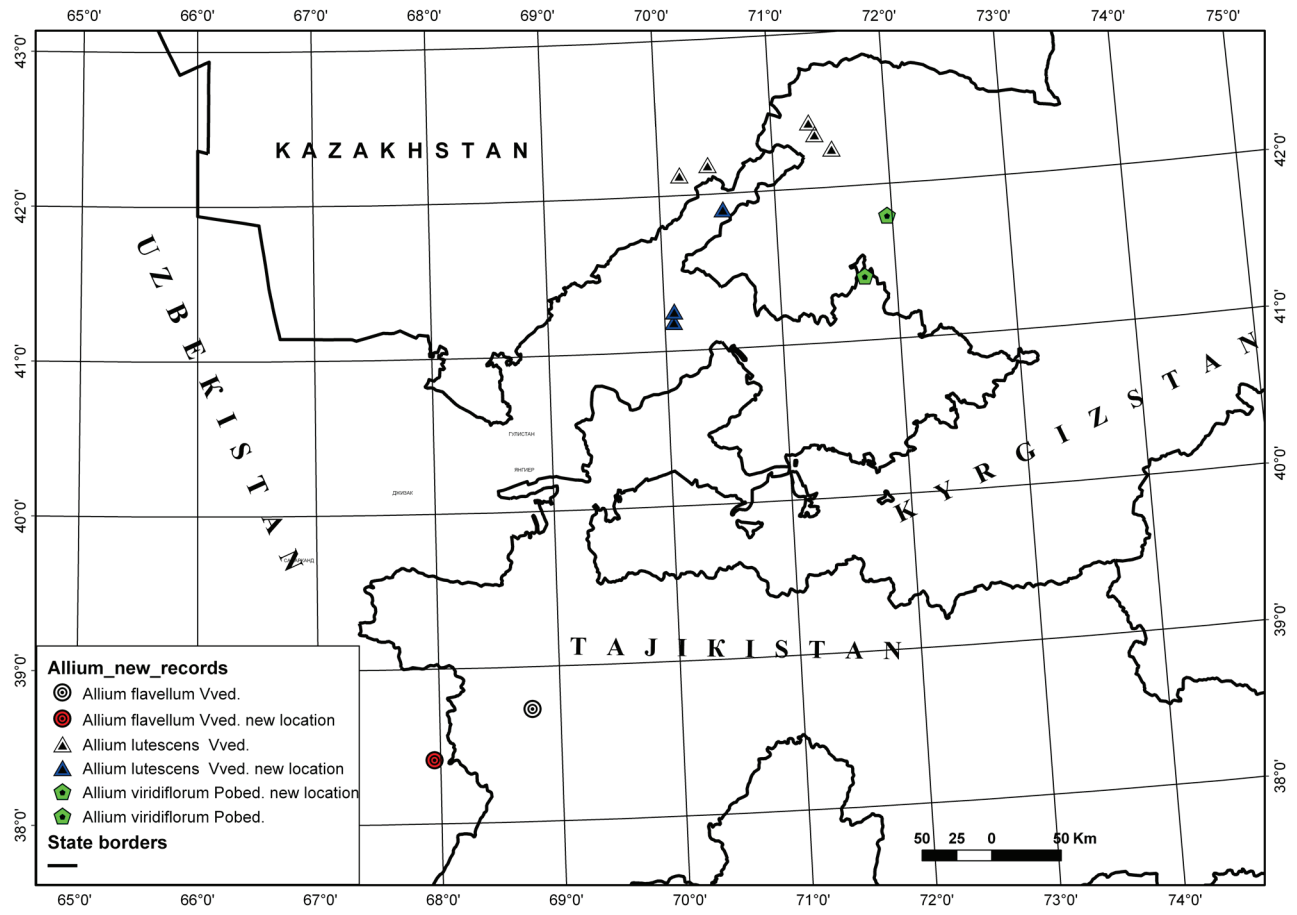

FIGURE 4. Distribution map of new *Allium* species for Uzbekistan

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