Allium oriento-iranicum (Alliaceae), a new species from Iran

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Allium oriento-iranicum Neshati, Zarre & R.M. Fritsch (Alliaceae) is described and illustrated as a new species from NE Iran. It belongs in sect. Megaloprason and is compared with other species in that section.

Key words: Alliaceae, Allium, morphology, new species, taxonomy

The genus Allium (Alliaceae) includes about 800 species (Friesen et al. 2006), of which 93 are known from Iran (Fritsch et al. 2006). Several species have been added to this genus during the last years based on new collections deposited in different Iranian herbaria and collections abroad. Northeast Iran (prov. Khorasan) with about 35 species of Allium is one of the most important diversity centers of the genus in the country. This area is adjacent to Middle Asia, which has also been recognized as a center of Allium diversity (Fritsch & Friesen 2002).

During two years of botanical study conducted by the first author, several new collections of Allium were made. We found a species new to science, belonging in subgen. Melanocrommyum and sect. Megaloprason as defined by Friesen et al. (2006).

Allium oriento-iranicum Neshati, Zarre & R.M. Fritsch, sp. nova (Fig. 1)

Species A. stipitati similis, sed differt filamentis quam tepala longioris (nec brevioribus) et tepalum 0.6–1 mm (nec 0.3–0.5 mm) basi adnatis, styli 5.5–7.5 mm longis (nec ad 5 mm longis), scapis ad 70 cm (nec ad 120 cm) longis, differt ab A. sarawschanico filamentis quam tepala longioris (nec brevioribus) et ovariis apicorum non cornutis (cornibus brevibus 6 provisum).

Bulbs 1.3–2.5 cm diam., oblong-ovate; outer tunics grayish brown, covering lower part of scape and leaves about 3 cm. Leaves 2–4, shorter than scape, up to 2 cm wide, covering base of scape, narrowly lanceolate, flat, completely smooth at margins and on surface, in lower parts dark brown to blackish. Scape 30–75 cm, 0.6 cm diam., cylindrical, erect. Spathe brownish with purple veins, splitting into three segments. Inflorescence globose, almost loose. Pedicels slightly unequal, purplish, 2.8–4.3 cm long. Tepals pinkish-purple, more deeply colored at median vein, 5.5–8 × 0.6–1.3 mm, uniform, linear lanceolate, obtuse or subacute at tip, during maturing folded at margins and becoming deflexed. Filaments same color as tepals, 6.5–8.5 mm long, slightly longer than tepals, subulate, inner filaments triangular at base, outer ones sub-square there. Anthers 1.5–1.7 mm long, purplish. Ovary obovate-spheroidal, with 6 indistinct apical outgrowths (hornlets), tuberculate on surface. Style filiform 5.5–7.5 mm. Capsule ca. 3 × 1.5–2 mm, triangular-elliptic. Seeds 3 in each capsule, black, wrinkled on surface, ca. 3 × 1.5–2.5 mm. Flowering and fruiting April to May.

_Allium oriento-iranicum_ resembles _A. stipitatum_, _A. sarawschanicum_ and _A. altissimum_, but can be distinguished from them by several characters (Table 1). Lack of hornlets on ovary is the most important characteristic feature separating _A. oriento-iranicum_ from _A. sarawschanicum_, while the shape of filament base and longer filaments relative to tepals are useful in separating the new species from the other two species.
Habitat and distribution. Like most species of sect. *Megaloprason* with main distribution in northeast Iran and central Asia (Fritsch & Friesen 2002), *A. oriento-iranicum* is growing on gravelly slopes in mountainous steppes. Similar to its relative *A. sarawschanicum* it prefers clayey soils in the shadow of large rocks, providing more humid conditions. The fact that it is known from three localities in Khorasan Province suggests it has a wider distribution in the area.

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References


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Table 1. Comparison of *Allium oriento-iranicum* with similar species in sect. *Megaloprason*.

<table>
<thead>
<tr>
<th>Character</th>
<th><em>A. altissimum</em></th>
<th><em>A. stipitatum</em></th>
<th><em>A. sarawschanicum</em></th>
<th><em>A. oriento-iranicum</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Length of filaments relative to tepals</td>
<td>shorter</td>
<td>shorter</td>
<td>shorter</td>
<td>longer</td>
</tr>
<tr>
<td>Hornlets on ovary</td>
<td>absent</td>
<td>absent</td>
<td>present</td>
<td>absent</td>
</tr>
<tr>
<td>Style length (mm)</td>
<td>5–10</td>
<td>5</td>
<td>5–9</td>
<td>5.5–7.5</td>
</tr>
<tr>
<td>Adnation of filaments to tepals (mm)</td>
<td>0.7–1</td>
<td>1–1.3</td>
<td>0.5–2</td>
<td>0.8–1.5</td>
</tr>
<tr>
<td>Connation of filaments (mm)</td>
<td>≤ 0.5</td>
<td>0.3–0.5</td>
<td>0.5–1</td>
<td>0.6–1</td>
</tr>
<tr>
<td>Shape of filament base</td>
<td>triangular</td>
<td>triangular</td>
<td>quadrate</td>
<td>quadrate</td>
</tr>
</tbody>
</table>

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