Notes on Onobrychis sect. Heliobrychis (Fabaceae) in Iran

Abstract

Onobrychis aurea, confined to W Iran (Prov. Azarbayjan) and known from only two localities, is described as a species new to science and illustrated. O. heterophylla is reported for the first time from Iran.


Investigations on species in the field and on herbarium specimens of Onobrychis in Iran revealed two novelties of O. sect. Heliobrychis from the province of Azarbayjan. One is a species new to science, the other is the first record of O. heterophylla for Iran.

Specimens have been examined of the Herbarium of the Ferdousi University in Mashhad (FUMH), the Herbarium of the Research Institute of Forests and Rangelands in Tehran (TARI) and the Herbarium of the Bu-Ali Sina University in Hamadan (BASUH).

(1) Onobrychis aurea Ranjbar, Amirabadizadeh & Ghahremani, sp. nova – Fig. 1
Holotype: Iran, Prov. Azarbayjan, 31 km from Tabriz to Ahar, 7 km NE of Khajeh, 1530 m, 12.7.1998, Amirabadizadeh, Ghahremani & Imani 6082 (TARI; isotype: BASUH).
Differt ab Onobrychide heterophylla C. A. Mey. foliolis (10-)30-55 × (10-)20-34 mm (ne 12-18 × 6-11 mm), ovario saepius uniovulato (nec nervatione saepius biovulato), leguminibus suborbicularibus (ne subreniformibus), corolla nervatione concolore (nec nervatione purpureo-nervosa) et ab O. szovitsii Boiss. caulibus et foliis pilis albis appressis dense obtectis (nec glabris), vexillo 12-14 mm (ne 18-23 mm) longo, foliis vulgo unifoliolatis vel rarius 3-5-foliolatis (nec trifoliatis, foliolis (10-)30-55 × (10-)20-34 mm (ne 15-30 × 10-20 mm), nervatura pinnata (nec indistincta).
Fig. 1. *Onobrychis aurea* – a: habit; b: leaf (abaxial and adaxial views); c: flower; d: standard; e: keel; f: wings; g: androecium; h: pistil; i: bracts; j: fruit. – Scale bar for a = 2 cm, b-i = 0.5 cm, j = 0.3 cm.
Ascending-erect perennial, 25-35 cm tall, with thick woody rootstock, branched at the base; stems and leaves densely silvery appressed-pilose. **Stipules** free, chartaceous, 4-8 × 2-3 mm, triangular, acuminate. **Leaves**, including the petiole of 1/3-1/5 (3-9 cm) their length, 8-15 cm long, straight or curved-ascending, with a single, terminal leaflet of 30-55 × 20-30 mm, broadly ovate to rhombic-ovate or nearly orbicular, rarely elliptic, rounded at base, rarely truncate, acute to obtuse at apex, on both sides densely hairy, greyish green; rarely some leaves additionally with 1-2 pairs of leaflets, 10-38 × 10-34 mm, otherwise similar to the terminal leaflet. **Inflorescence** narrow, oblong before anthesis, many-flowered, elongating in fruit. **Pedicel** c. 2 mm long. **Bract** papery, yellowish, 2-3 × 1-1.5 mm, oblong-lanceolate, acute to acuminate. **Bracteoles** narrowly linear, 1-1.5 mm long. **Calyx** 5-9 mm long, densely appressed-pilose, greyish, rupturing along a single longitudinal line at fruiting time, teeth 3-5 mm long, linear or subulate. **Corolla** yellow, brownish on drying; **standard** 12-14 × 11-12.5 mm, suborbicular, distally somewhat emarginate, appressed-pilose; **wings** with the limb 5-6 × 1-5.2 mm, oblong, acuminate and the filiform claw c. 2 mm long; **keel** longer than wings, 11-13 mm long, limb 7-8 × 5-7 mm, claw 3-4 mm long. **Filaments** 15-17 mm long, the free portion 2-4 mm long. **Pod** with a narrowly triangular stipe up to 3 mm long, semi-ribicular, pendent, 10-12 × 6-9 × 2.5-3 mm, hirtulous and foveolate on the disc, with setose crest along the margin, setae 1-1.5 mm long.

**Further material seen.** – **IRAN**: Prov. **AZARBAIJAN**: 47 km along road from Ahar to Tabriz, 1550 m, 24.6.1986, Maassoumi & Abouhamzeh (TARI 56969).

**Distribution.** – *Onobrychis aurea* is known only from the dry submontane steppe NE of Tabriz in the province of Azarbayjan (Fig. 2).

**Relationships.** – The new species is closely related to *Onobrychis szovitsii* and is also compared with *O. heterophylla* (Table 1).

(2) *Onobrychis heterophylla* C. A. Mey.

*Onobrychis heterophylla* has been described from Talyshshiye Gory (Talysh Mts) in the border area between Iran and the Republic of Azerbaijan. Our records are the first of this narrow endemic from the Iranian territory (Fig. 2).

**Specimens examined.** – **IRAN**: Prov. **AZARBAIJAN**: Meskhnshar toward Ardebil, 10 km after Meskhneshar [38°24'N, 47°40'E], 1120 m, 14.7.2003, Ranjbar & Karamian 5533 (BASUH); 20 km from Razi to Germi [39°01’N, 48°03’E], Histi-kuh, E of Seydlar village, 1600-2000 m, 21.6.1980, Mozaffarian & Nowrozi (TARI 34695); 14 km from Namim to Chulandarreh Sofla to Germi after Anbaran [38°29’N, 48°27’E], 1600 m, 20.6.1980, Mozaffarian & Nowrozi (TARI 34515).

### Table 1. Diagnostic characters of *Onobrychis heterophylla*, *O. szovitsii* and *O. aurea*.

<table>
<thead>
<tr>
<th>Character</th>
<th><em>O. heterophylla</em></th>
<th><em>O. aurea</em></th>
<th><em>O. szovitsii</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Indumentum</td>
<td>densely appressed-pilose predominantly compound</td>
<td>densely appressed-pilose predominantly simple (10-)30-55 × (10-)20-34</td>
<td>completely glabrous predominantly compound (15-)30 × 10-20</td>
</tr>
<tr>
<td>Leaves</td>
<td>12-18 × 6-11</td>
<td>12-14</td>
<td>18-23</td>
</tr>
<tr>
<td>Leaflets [mm]</td>
<td>purple</td>
<td>yellow as corolla</td>
<td>yellow as corolla</td>
</tr>
<tr>
<td>Corolla veins</td>
<td>13-15</td>
<td>12-14</td>
<td>12-14</td>
</tr>
<tr>
<td>Standard [length mm]</td>
<td>c. 4</td>
<td>2-2.5</td>
<td>2-2.5</td>
</tr>
<tr>
<td>Stipe of pod [length mm]</td>
<td>linear-lanceolate</td>
<td>narrowly triangular</td>
<td>narrowly triangular</td>
</tr>
<tr>
<td>Shape of stipe</td>
<td>villose and disc surface with scattered long</td>
<td>appressed-villose</td>
<td>glabrous</td>
</tr>
<tr>
<td>Pod indumentum</td>
<td>bristles</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shape of pod</td>
<td>subreniform</td>
<td>suborbicular</td>
<td>suborbicular</td>
</tr>
<tr>
<td>Marginal setae of pod</td>
<td>2.5-3</td>
<td>1-1.5</td>
<td>2.5-3</td>
</tr>
<tr>
<td>[length mm]</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Fig. 2. Distribution of *Onobrychis aurea* (★) and *O. heterophylla* (■) in Iran.

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References


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