Notes on Onobrychis sect. Heliobrychis (Fabaceae) in Iran

Authors: Massoud Ranjbar, Hassan Amirabadizadeh, Roya Karamian, and Mohammad Ali Ghahremani

Source: Willdenowia, 34(1) : 187-190

Published By: Botanic Garden and Botanical Museum Berlin (BGBM)

URL: https://doi.org/10.3372/wi.34.34116

BioOne Complete (complete.BioOne.org) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.
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* C. A. Mey. 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 (nec 12-18 × 6-11 mm), ovario saepius uniovulato (nec nervatione saepius biovulato), leguminibus suborbicularibus (nec subreniformibus), corolla nervatio concolor (nec nervatione purpureo-nervosa) et ab *O. szovitsii* Boiss. caulibus et foliis pilis albis appressis dense obtectis (nec glabris), vexillo 12-14 mm (nec 18-23 mm) longo, foliis vulgo unifoliolatis vel rarius 3-5-foliolatis (nec trilobuis), foliolis (10-)30-55 × (10-)20-34 mm (nec 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. Bracts papery, yellowish, 2-3 × 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-elliptic, 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. Azarbayjan: 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 Talyshshyiye 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. Azarbayjan: Meshkinshar toward Ardebil, 10 km after Meshkinshar [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 Seyd达尔 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>O. heterophylla</th>
<th>O. aurea</th>
<th>O. szovitsii</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indumentum</td>
<td>densely appressed-pilose</td>
<td>densely appressed-pilose</td>
<td>completely glabrous</td>
</tr>
<tr>
<td>Leaves</td>
<td>predominantly compound</td>
<td>predominantly simple</td>
<td>predominantly compound</td>
</tr>
<tr>
<td>Leaflets [mm]</td>
<td>12-18 × 6-11</td>
<td>(10-)30-55 × (10-)20-34</td>
<td>15-30 × 10-20</td>
</tr>
<tr>
<td>Corolla veins</td>
<td>purple</td>
<td>yellow as corolla</td>
<td>yellow as corolla</td>
</tr>
<tr>
<td>Standard [length mm]</td>
<td>13-15</td>
<td>12-14</td>
<td>18-23</td>
</tr>
<tr>
<td>Stipe of pod [length mm]</td>
<td>c. 4</td>
<td>2-2.5</td>
<td>2-2.5</td>
</tr>
<tr>
<td>Shape of stipe</td>
<td>linear-lanceolate</td>
<td>narrowly triangular</td>
<td>narrowly triangular</td>
</tr>
<tr>
<td>Pod indumentum</td>
<td>villose and disc surface with scattered long bristles</td>
<td>appressed-villose</td>
<td>glabrous</td>
</tr>
<tr>
<td>Shape of pod</td>
<td>subreniform</td>
<td>suborbicular</td>
<td>suborbicular</td>
</tr>
<tr>
<td>Marginal setae of pod [length mm]</td>
<td>2.5-3</td>
<td>1-1.5</td>
<td>2.5-3</td>
</tr>
</tbody>
</table>

Downloaded From: https://bioone.org/journals/Willdenowia on 03 Jan 2020
Terms of Use: https://bioone.org/terms-of-use
Acknowledgements

We wish to thank the Director of the National Botanic Garden Tehran, Iran (TARI), for making herbarium facilities available to us. We also wish to express special thanks to Prof. Dr M. Assadi for his encouragement, advice and help.

References


Addresses of the authors:
Massoud Ranjbar & Roya Karamian, Department of Biology, Herbarium Division, University of Bu-Ali Sina, P.O. Box 65175/4111, Hamadan, Iran; e-mail: ranjbar@basu.ac.ir
Hassan Amirabadizadeh, Herbarium Research Center of Natural Resources and Animal Affair, Mashhad, Iran.
Mohammad Ali Ghahremani, Herbarium, Research Centre of Nature Resources and Animal Affairs, Tabriz, Iran.