

Onobrychis assadii (Fabaceae), a new species from Iran

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Received 1 Oct. 2006, revised version received 17 Oct. 2006, accepted 18 Oct. 2006

Ranjbar, M., Karamian, R., Tolui, Z. & Amirabadizadeh, H. 2007: *Onobrychis assadii* (Fabaceae), a new species from Iran. — *Ann. Bot. Fennici* 44: 481–484.

Onobrychis assadii Ranjbar, Tolui & Amirabadizadeh *sp. nova* (Fabaceae) from Iran is described and illustrated. It is confined to the northeastern part of Iran (Khorassan Province) and known from only single locality. The new species differs from the other Iranian *Onobrychis* species mainly by the glabrous pods.

Key words: new species, *Onobrychis* sect. *Onobrychis*, taxonomy

The genus *Onobrychis* with nearly 130 species is distributed mainly in the north temperate regions, but centers of its diversity are in the eastern Mediterranean area and western Asia. Boissier (1872) subdivided the genus into two sections, *Euonobrychis* and *Sisyrosema*, based on characters of indumentum and corolla. He placed 24 species under these two sections. Rechinger (1984) treated 77 species under nine sections.

Onobrychis includes annual or perennial, mostly caulescent herbs (rarely spiny shrubs), which have an indumentum with simple hairs or rarely are glabrous. A few taxa of the genus are cultivated as fodder or for ornamental value (Lock & Simpson 1991, Yakovlev *et al.* 1996, Mabberley 1997). Recently some new taxa have been described in the genera *Onobrychis* and *Hedysarum* from Iran (Ranjbar *et al.* 2004, Ranjbar *et al.* 2006).

Onobrychis assadii Ranjbar, Tolui & Amirabadizadeh, *sp. nova* (Figs. 1 and 2)

Differt ab O. veris foliola superiora pars pilosa (nec utrinque dense appresse pilosa); bractae 1–1.5 mm (nec 2–3 mm) longae; calyx dense appresse pilosus (nec sparse appresse pilosus); alae 5.5–6 mm (nec 7–8 mm) longae; leguminibus ca. 8 mm (nec 4–5 mm) longis, glabris (nec pilis albis appressis dense).

HOLOTYPE: Iran. Khorassan: Shirvan Amiranlou to Palkanlou, 1500 m, 22.V.1994 *Musvai & Abassi 4680* (holotype Research Center of Natural Resources and Animal Affairs of Mashhad; isotype, only a minute fragment, in Bu-Ali-Sina Univ. Herbarium; photo herb. Ranjbar).

ETYMOLOGY: The specific epithet is in honour of the Iranian botanist, Prof. Dr. Assadi, who is in charge of the planning of the *Flora of Iran* and Chief Editor of the *Iranian Journal of Botany*.

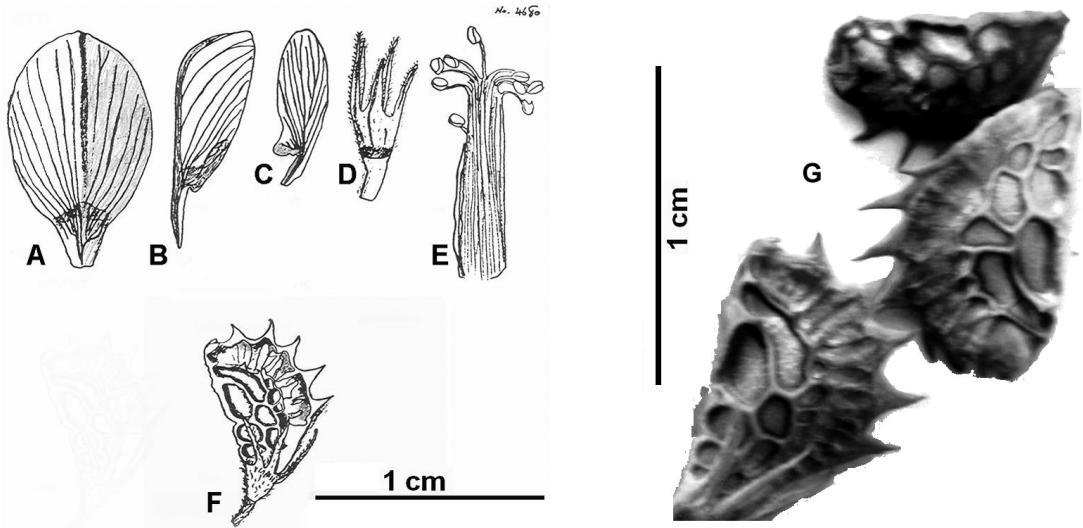


Fig. 1. *Onobrychis assadii* (from holotype). — A: Standard. — B: Keel. — C: Wing. — D: Calyx. — E: Androecium. — F and G: Pods.



Fig. 2. *Onobrychis assadii* (from holotype) flowering and fruiting type. Scale bar = 3 cm.

Ascending-erect, perennial with a thick woody rootstock, up to 30 cm tall, branched at base. White hairs on vegetative parts. Stipules of lower leaves connate, ovate-triangular, acute-acuminate, upper connate to free, membranous with brownish stripes, 2–7 mm long and 1.5–2.5 mm wide, densely covered with appressed hairs 0.2–0.3 mm long. Leaves 4–12.5 cm long; rachides slender to thickened, straight or curved-ascending, densely covered with appressed hairs 0.2–0.4 mm long, upper petiole up to 1 cm long, lower up to 4.5 cm long. Leaflets in 5–7 pairs, linear to oblong, sometimes narrowly elliptic, rounded to cuneate at base, acute to obtuse or slightly mucronate at apex, 8–20 × 1.5–2.5 mm, upper surface sparsely covered with appressed hairs 0.2–0.3 mm long, lower surface densely covered with appressed hairs 0.2–0.4 mm long. Inflorescence 2.5–3 cm long, oblong before anthesis, 15-flowered, elongating in fruit. Bracts membranaceous-papery, 1–1.5 mm long and 0.5–0.7 mm wide, ovate-subulate, acuminate, sparsely appressed hairy or ciliate. Pedicel 1.5–2 mm long. Bracteoles narrowly linear to subulate, minutely hairy. Calyx greyish, rupturing along a single longitudinal line at fruiting time, 4.8–5 mm long, densely pubescent or appressed

hairy, teeth 2.8–3 mm long, narrowly linear or subulate. Corolla violet to purple or brownish to yellowish when dry. Standard 7.5–7.7 mm long; blade 6–7 mm wide, ovate-orbicular, rounded at apex, abruptly cuneately narrowed at base. Wings 5.5–6 mm long; blades narrowly oblong, rounded at apex, 4–4.3 × 1.8–2 mm, auricle ca. 0.5 mm, claw ca. 1.2 mm long. Keel ca. 7.7 mm long; blades obliquely obovate, curved lower edge and nearly straight upper edge, obtuse to subacute at apex, ca. 5.2 × ca. 2.8 mm; auricle indistinct, claw 2–2.5 mm long. Staminal tube truncate at mouth. Ovary sessile, semiorbicular. Pods (unripe) sessile, semiorbicular, erect to ascending, ca. 8 mm long and ca. 4 mm wide, glabrous, without or with very short prickles on disc, crest 6–9 toothed, serrate; teeth 1.8–2 mm long and ca. 0.6 mm wide.

Onobrychis assadii is known only from the dry-steppe zone of the mountainous regions near south Kopetdagh in Khorassan Province (Fig. 3). It shows a remarkable similarity to *O. verae* in the size, shape and sculpturing of pods. In *O. assadii* the surface of the pod is covered marginally with nearly oblong cells as regular angled depressions besides central area. *Onobrychis verae* resembles the other species of sect. *Onobrychis*, in which these depressions are present only on central area of pods. This is an excep-

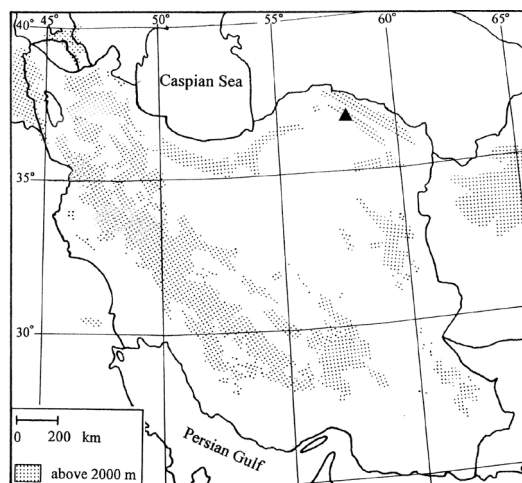


Fig. 3. Locality of *Onobrychis assadii*.

tional feature in sect. *Onobrychis* and resembles sect. *Hymenobrychis*. Since *O. verae* is widely distributed and can also be found in northeastern parts of Iran, it can be confused with *O. assadii*. In fact some specimens determined as *O. verae* by Rechinger (1984) belong to *O. assadii* (e.g. *Rechinger 1682* in W).

Onobrychis assadii with glabrous pods should also be compared with *O. nemecii*, a rare species from north Armenia. The comparison among the three species is presented in Table 1.

Table 1. A morphological comparison of *O. assadii*, *O. verae* and *O. nemecii*.

Taxon	<i>O. verae</i>	<i>O. assadii</i>	<i>O. nemecii</i>
Height (cm)	up to 65	30–35	90
Indumentum of stipules	ciliate	sparse to dense	ciliate
Number of leaflet pairs	5–6	5–7	8–13
Leaflet width (mm)	1.5–4.5	1.5–2.5	2.5–5
Indumentum of leaflets	finely grey appressed hairs	upper surface with sparsely and lower surface with densely appressed hairs	?
Bract length (mm)	2–3	ca. 1	3
Peduncle length	many times as long as leaves	as long as leaves	twice as long as leaves
Indumentum of calyx	sparse short appressed hairs	dense short appressed hairs	ciliate only at margin
Standard length (mm)	11.6	7.5–7.7	9–10
Wing length (mm)	7–8	5.5–6	?
Indumentum of pod	finely appressed hairs	glabrous	glabrous
Pod length (mm)	4–5	ca. 8	ca. 4.5
Number of pod teeth	3–5	6–9	toothless

Acknowledgments

The authors thank Mrs. Mohebbi for preparing the illustration.

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