Onobrychis bakuensis (Fabaceae), a new species from Azerbaijan

Massoud Ranjbar^{1,*}, Roya Karamian¹ & Ernst Vitek²

- ¹⁾ Department of Biology, Herbarium Division, Bu-Ali Sina University, P.O. Box 65175/4161, Hamedan, Iran (*corresponding author's e-mail: ranjbar@basu.ac.ir)
- ²⁾ Department of Botany, Herbarium, Burgring 7, A-1010 Wien, Austria

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Onobrychis bakuensis Ranjbar, Vitek & Karamian sp. nova (Fabaceae), endemic to Azerbaijan, is described and illustrated. It belongs to the subgenus Sisyrosema section Hymenobrychis. It is distributed in northwestern Iran, and west of the Caspian Sea in Azerbaijan. It is morphologically close to O. kachetica, but is easily distinguished by the black indumentum of its rachis, leaflets, peduncle, calyx and standard.

Key words: Fabaceae, new species, Onobrychis, taxonomy

Onobrychis (Fabaceae) comprises about 170 species in 12 sections distributed mainly in SW Asia, the Mediterranean region and temperate Europe and Asia, a few of them being cultivated for fodder or as ornamentals (Lock & Simpson 1991, Yakovlev et al. 1996, Mabberley 1997). In Flora Iranica Rechinger (1984) treated 54 species in the nine sections Dendrobrychis, Lophobrychis, Onobrychis, Laxiflorae, Anthyllium, Afghanicae, Heliobrychis, Hymenobrychis and Insignes, with two species unassigned to any section. Recently some new taxa have been described in Onobrychis from Iran (Ranjbar et al. 2004, Ranjbar et al. 2007).

In the course of checking material of the Iranian *Onobrychis* in the herbarium W in 2007, a specimen from Azerbaijan, Baku, *Holmberg* 594, caught our attention. Otto R. Holmberg had identified it as *O. kachetica* in 1959, but in fact it represented an undescribed species. We describe this new taxon herein to make its name available

for the *Flora of Azerbaijan* and other such works in progress.

Onobrychis bakuensis Ranjbar, Vitek & Karamian, sp. nova (Figs. 1 and 2)

Onobrychi kacheticae affinis sed plantis ad 20 cm (nec ad 40–60 cm) altis, stipulis nigrociliatis (nec albo-ciliatis), foliolis 5–6-jugis (nec ad 9-jugis), bracteis ad 10 mm (nec 3–5 mm) longis, rhachidibus et pedunculis pilis nigris (nec pilis albis), obtectis, alis apice breviter sed distincte rotundatis (nec acutis), vexillo nigripiloso (nec albipiloso)

HOLOTYPE: Azerbaijan. Baku, 1912 *Holmberg 394* (W). ETYMOLOGY: The species is named after the town of Baku in Azerbaijan.

Ascending-erect to zigzag, perennial with thick woody rootstock, with loosely spreading

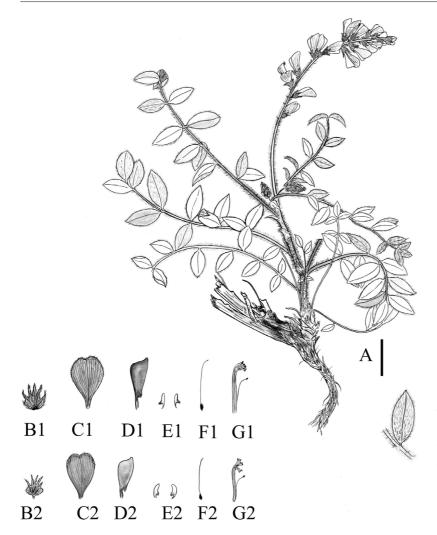


Fig. 1. Onobrychis bakuensis. — A: Habit with details of flower and pod. — B: Calyx. — C: Standard. — D: Keel. — E: Wings. — F: Pistil. — G: Androecium. Scale bar: A = 2 cm, B—G = 1 cm; B1—G1 after Holmberg 394 (W), O. kachetica B2—G2 after Hohenacker (W).

0.1–3 mm long predominantly black hairs, up to 20 cm tall. Stipules free, chartaceous, $10-15 \times$ 4-6 mm, triangular, acuminate, with sparse villous hairs. Leaves 8-16 cm long; rachides slender to thickened, straight or curved-ascending, with loosely spreading 0.1-3 mm long black hairs, petiole 2.5–3 cm long, leaflets in 5 or 6 pairs, ovate to elliptic or lanceolate, round at base, acute to obtuse at apex, $15-30 \times 7-15$ mm, with an acute to obtuse tip, upper side glabrous, underside with loosely appressed to ascending hairs, all black-ciliate at the margins. Inflorescence ca. 10 cm long, narrow, oblong before anthesis, composed of ca. 20 flowers, elongating in fruit. Peduncle ca. 6.5 cm long, with loosely to densely spreading, 0.1–3 mm long, black hairs.

Pedicels ca. 1.2 mm long, with densely spreading 0.1-1 mm long hairs. Bracts herbaceous to papery, greenish, $6-10 \times 2-2.5$ mm, oblong-lanceolate, acuminate. Bracteoles narrowly linear, ca. 1.5 mm long. Calyx 7-9 mm long, green, ± densely spreading hairy, with hairs 0.1–1 mm long, teeth 3–5 mm long, linear to subulate. Corolla bluish, without darker venation. Standard $14-17 \times 9-11$ mm. Wings 4-5 mm long; limb ca. $2 \times$ ca. 1 mm, short oblong, round to obtuse at tip, claw filiform, 1-1.2 mm long. Keel 14–16 mm long; limb 9–11 \times 4–6 mm; claw ca. 4 mm long. Stamens 14-16 mm long, free portion ca. 3 mm long. Pods unknown. Flowering in May and June; fruit ripening from June to August.



Fig. 2. Holotype of *Ono-brychis bakuensis* (*Holmberg 394*, W).

The isotype material of *O. kachetica* was available at W and the detailed original description was compared with that of *O. bakuensis*. Our new species is found in Azerbaijan, and is morphologically closest to *O. kachetica*, especially because of its few leaves, and the similar shape and size of leaflets in both species. Because of the shape and structure of the flowers, both species are assigned to *O. sect. Hymenobrychis*. However, *O. bakuensis* differs from *O. kachetica* by several characters (Table 1).

Onobrychis bakuensis is a narrowly distributed endemic of Azerbaijan known only from its type locality on the southeastern slope of the Caucasus mountains in Azerbaijan.

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Species	O. kachetica	O. bakuensis
Height	40–60 cm	up to 20 cm
Plant indumentums	spreading-white hairy	spreading-predominantly black hairy
Leaflet pair number	up to 9 pairs	5–6 pairs
Bract length	3–5 mm	up to 10 mm
Wing apex	acute	round
Wing auricle length	ca. 1 mm	ca. 1.5 mm
Standard indumentum	white hairy	black hairy

Table 1. Diagnostic morphological characters of Onobrychis bakuensis and O. kachetica.

References

- Lock, J. M. & Simpson, K. 1991: Legumes of West Asia, a check-list. Royal Bot. Gardens, Kew.
- Mabberley, D. J. 1997: The plant book. A portable dictionary of the vascular plants, 2nd ed. Cambridge Univ. Press, Cambridge.
- Ranjbar, M., Amirabadizadeh, H., Karamian, R. & Ghahremani, M. A. 2004: Notes on *Onobrychis* sect. *Heliobrychis*

- (Fabaceae) in Iran. Willdenowia 34: 187–190.
- Ranjbar, M., Karamian, R., Tolui, Z. & Amirabadizadeh, H. 2007: Onobrychis assadii (Fabaceae), a new species from Iran. — Ann. Bot. Fennici 44: 481–484.
- Rechinger, K. H. 1984: Onobrychis. In: Rechinger, K. H. (ed.), Flora Iranica 157: 389–459. Akad. Druck- u. Verlags-Anst., Graz & Wien.
- Yakovlev, G. P., Sytin, A. K. & Roskov, Yu. R. 1996: Legumes of northern Eurasia, a check-list. — Royal Bot. Gardens, Kew.