Arabis carduchorum (Brassicaceae) – lectotypification and comments on the distribution area

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Abstract: A lectotype is designated for Arabis carduchorum, and the distribution area is discussed.

Keywords: Flora of Armenia, Azerbaijan, Iran and Turkey; Cruciferae, Arabis, A. carduchorum, lectotype.

Introduction

During field work in Iran specimens of the genus Arabis had been collected, which could not be assigned to any species listed in Flora Iranica (Hedge 1968) or Ghahreman A. & al. (attended 2017). In Flora of Turkey (Cullen 1965) and Flora of Armenia (Avetisian 1966) the names Arabis carduchorum (Flora of Turkey) and A. armena (Flora of Armenia) have been found, fitting to the characters of the collected sample with creeping rhizomes and lanceolate leaves (Fig. 1). The two names are synonyms, and A. carduchorum is the earlier-published valid name. During the further investigation it was realized that A. carduchorum is reported for Iran in Barker (attended 2017), based on the publication of Sajedi & Amini Rad (2012) and that the name needs typification.

Material and Methods

The collected material has been compared with specimens in ERE and W. The abbreviations for Herbaria follow Index Herbariorum (Thiers, attended 2017)


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**Results and Discussion**

*Arabis carduchorum* Boiss, Fl. Orient. 1: 173 (1867). Described from: “Hab. in summon jugo Agerowdagh Armeniae Kurdicae inter Van et Müküs alt. 12000′ (Ky!).”


The labels on both specimens in W and G are identical except the original naming of the plant as “Drabo gigas Stur msc.” in W. At the end of the protologue, Boissier (1867: 173) wrote “Drabo gigas Stur mss. in herb. Imp. Vindob!”. Therefore the sheet in W is designated as the lectotype. The sheet is a mixed collection involving a tiny fruiting plant of *Erysimum* sp., a sterile portion of cushion and much larger one with...
fruits that clearly confirms the generic identity. Boissier did not annotate the W sheet though based on the mentioned phrase he examined it and took fragments for his collection. There is one more possible fragment in the herbarium in Jena [JE 3185, http://herbarium.univie.ac.at/database/detail.php?ID=118477] – the assumption (MÜLLER in Virtual Herbaria) is supported by the fact that Kotschy collected the species only once, but cannot be confirmed as there is no information on the sheet.

“Agerow Dagh” could not be identified. Between Van and Bahçesaray is no mountain with an altitude over 3600 m. Following the narration of KOTSCHY (1860) the mountain should be within some kilometers

Fig. 1: Arabis carduchorum, locality, habitus and detail.
distance of “Müküsch” [= Bahçesaray] (“.... we went down 3000 feet to Chana Putkie ... here resides no priest, but every Sunday one comes up from Müküs. ... ”). High mountains with 3400–3500 m altitude are c. 7.5 km ENE or 10.3 km N of Bahçesaray. It is supposed that *Arabis carduchorum* was collected there.

Two other specimens in W show cultivated material, following the annotations originating from seeds of the type collection.

= Draba gigas STUR ex BOISS., Fl. Orient. 1: 173 (1867), nom. nud. in syn..


Type: Transcaucasia, distr. Nachitshevani, in monte Sojuch supra Ordubad, 7000’–8000’, 23. 5. 1923, A. Grossheim [LE n.v.].

Three specimens in ERE are from the type locality, have been determined by Grossheim and annotated as topotypes by Avetisian (in sched.).

Although DOROFEYEV (2012: 425) maintained both *Arabis armena* and *A. carduchorum* and gave the exact distribution pattern for both of them in the Caucasus, we strongly believe that the two species are conspecific, and the former name is synonymized under the earlier-published *A. carduchorum*, as was done by CZEREPANOV (1995) and on the Brassicaceae database (BRASSIBASE, attended 2017).

Ecology: the species grows in the alpine and subalpine vegetation belt, in meadows, scree, and on rocks (Fig. 1).

General Distribution (Fig. 2): The species is endemic in Nakhichevan and surrounding areas. In Iran in West-Azerbaijan, on the mountains between Urmia lake and the Turkish border; in Turkey in the provinces Bitlis and Van, in Armenia in the provinces Ararat, Vayots’ Dzor and Syunik’.

The species had not been collected in Armenia for at least 35 years. The published chromosome count (2n = 16, GUKASIAN & SAFARIAN 1990) is based on material cultivated in
the Botanic Garden of Yerevan. The material was replanted by Achverdov & Mirzoeva, 1960, from Saray Bulag, probably corresponding with the specimens ERE 0005779, 0005780; seeds collected by Arevshatian, 1988, number of preparation is 1810.

References


BOISSIER E., 1867: Flora Orientalis sive enumeratio plantarum in Oriente a Graecia et Aegypto ad Indiae fines hucusque observatarum. – Basilea: Georg.


Attended websites


BRASSIBASE (attended 2017): Brassicaceae database – https://brassibase.cos.uni-heidelberg.de/


OpenStreeMap: © OpenStreetMap-Mitwirkende – https://www.openstreetmap.org/


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