



Verbascum oreophilum var. *oreophilum* and *Verbascum cheiranthifolium* var. *asperulum* (Scrophulariaceae) two new records for the flora of Iran

ARASH SOTOODEH¹, L. CIVEYREL¹, F. ATTAR² & A. ZAMANI²

¹ Ecolab, UMR 5245, Université de Toulouse III, Toulouse–France. arash29@gmail.com

² School of Biology, College of Science, University of Tehran, Tehran, Iran

Abstract

Verbascum oreophilum Koch var. *oreophilum* and *Verbascum cheiranthifolium* var. *asperulum* (Boiss.) Murbeck (Scrophulariaceae) are reported and illustrated for the first time from North-West of Iran. The diagnostic morphological characters from closely related taxa are discussed, and a distribution map of these taxa is provided for Iran.

Key words: *Verbascum oreophilum*, *Verbascum cheiranthifolium*, Scrophulariaceae, New record, Iran

Introduction

The genus *Verbascum* Linnaeus [1753: 177] (Scrophulariaceae) includes between 360 (Heywood 1993) and 400 species in the Old World. Iran has 42 species and 4 hybrids (Huber-Morath 1981; Sharifnia 2011), and 19 (45%) of the species are endemic. There is no subgeneric classification for this genus in *Flora Iranica*, however according to inflorescence and indumentum features two categories and two subcategories have been introduced. Category A comprises: Single flowers one per axillary bract, and is subdivided into subcategories A1 & A2. Subcategory A1 comprises: Indumentum lacking stellate or dendroid hairs; and subcategory A2 is: Indumentum composed of stellate hairs. Category B comprises: Groups of flowers arranged in clusters at the axil of each axillary bract. (Huber-Morath 1981). Regarding phytogeography, *Verbascum* is distributed throughout Iran, with the majority of species found in north-west and west parts, especially the Azerbaijan region.

Materials and methods

During revision of newly collected herbarium samples of *Verbascum* in Herbarium of Tehran University (TUH, Holmgren *et al.* 1990), two un-named specimens (collected by: Attar and Zamani, TUH 42965, 7/8/2011 and TUH 42973, 9/8/2011) were encountered.

The first sample (TUH 42965) comprised morphological characters that place it close to *V. oreophilum* var. *joannis* (Bordz.) Huber-Morath [1971, 136], and the second one (TUH 42973) was similar to *V. cheiranthifolium* var. *transcaspicum* Murbeck [1933, 278]. However, after consultation of the *Flora Iranica*, *Flora of Turkey* and other related literature (Murberck 1925; Murbeck 1933; Parsa 1952; Feinbrun-Dothan 1978; Huber-Morath 1978, 1981; Fedtschenko 1997; Karavelioğulları & Aytac 2008; Sharifnia 2011), the specimens were identified as different taxa. The specimens were cross-checked with various *Verbascum* in relevant literature, including *Flora of the USSR* (Fedtschenko 1997), *Flora Iranica* (Huber-Morath 1981), and *Verbascum* Monograph (Murbeck 1933). The specimens have been also compared with *V. oreophilum* and *V. cheiranthifolium* collections in various European (MPU, K, BM) and Iranian (TUH, TEH, HKS, IRAN, TARI) herbaria. The specimens were finally identified as *Verbascum oreophilum* var. *oreophilum* and *V. cheiranthifolium* var. *asperulum* which have not been previously reported for the Flora of Iran.

Key of varieties (Huber-Morath, 1978, 1981)

- a. Calyx up to 2 mm; capsule cylindrical var. *asperulum*
b. Calyx 2–3(–4) mm; capsule oblong-elliptic var. *transcaspicum*

Description:—Habit: biennial, 30–120 cm high; tomentose with fine, short, adpressed or subadpressed, yellowish more rarely greyish or whitish, soft or more frequently somewhat harsh stellate hairs. Stem terete, longitudinally striate, usually many-branched. Basal leaves linear-oblong to oblong, 7–30 × 1.5–8 cm, acute and acuminate, entire or rarely crenate; petiole 2–6 cm long; upper cauline leaves lanceolate to broadly ovate and suborbicular, ± acuminate, rounded or subcordate at base. Inflorescence rarely simple, usually with many slender, erect-spreading branches, forming oblong to ovate panicle, with ± loose clusters of 2–7 flowers. Bracts triangular to linear-lanceolate, acuminate. Pedicels to 12 mm long; bracteoles lanceolate. Calyx up to 2 mm long, lobes linear to triangular-lanceolate, acute or acuminate, densely tomentose and glandular. Corolla yellow, 20–25 mm diam., without pellucid glands, stellate-tomentose outside. Stamens 5, anthers reniform, filaments with whitish-yellow wool up to anthers. Capsule cylindrical, 4–7 × 2–4 mm, densely stellate-tomentose.

Phenology:—Flowering has been recorded from June to August.

Habitats:—Found in steppe, stony places, vineyards, 200–2000 m.

Examined specimens of *V. cheiranthifolium* var. *asperulum*:—**Iran**. Azerbaijan, 1754m, *Attar and Zamani 42973* (TUH!). **Turkey**. Prov. Elazig, 1954, *Davis 22073* (BM!); Paphlagonia, 1892, *Sintenis 4212* (BM!, type); Paphlagonia, 1892, *Sintenis 4212* (K!, type); Cyprus, Mesogis, 1844, *Boissier s.n.* (K!, syntype).

Examined specimens of *V. cheiranthifolium* var. *transcaspicum*:—**Iran**. Muteh, 2500 m, 1971, *Edmondson 815* (K!); Khorasan: W of Bojnurd, 2500 m, 1971, *Edmondson 749* (K!); Kurdestan: between Sanandaj and Mahabad, 1400 m, 1960, *Furse & Syngé 720* (K!); mountain 150 km E Tehran, 2000 m, 1968, *Fishwick 37* (K!); M. Alburz, near Karaj, 1600–2000 m, 1937, *Rechinger s.n.* (K!); Kordestan: Sanandaj, 1200–1400 m, 1963, *Jacobs 6981* (K!); Shahrud, 2000 m, 1948, *Rechinger 6243* (K!); Tabriz, 1927, *Smith 2033* (K!); Damghan, Semnan, 2200–2600 m, 1948, *Behboudi and Aellen 195* (BM!). **Turkey**. Tspili, Yehlah, 1936, *Lindsay 1271* (BM!). **Turkmenistan**. Ashgabad, Suluklu, 1900, *Bornmuller 800* (BM!, type);

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- International Plant Names Index: <http://www.ipni.org/>
- The Plant List: <http://www.theplantlist.org/>
- Verbascum: <http://www.verbascum.org/>