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SHAHRYAR SAEIDI MEHRVARZ

MUSTAFA ASSADI

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New *Veronica* (Scrophulariaceae) Records for the Flora of Iran

Shahryar SAEIDI-MEHRVARZ
Department of Biology, Faculty of Sciences, University of Guilan, Rasht - IRAN
Mustafa ASSADI
Research Institute of Forests and Rangelands, Tehran - IRAN

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Abstract: Two species of *Veronica* L., i.e. *V. kopetdaghensis* B.Fedtsch. ex Boriss. and *V. filiformis* Sm., are illustrated and recorded as new records for the flora of Iran.

Key Words: New records, *Veronica*, Iran

Introduction

Veronica is one of the most polymorphic genera within the Scrophulariaceae. The genus comprises annual or perennial herbs, with opposite leaves and solitary flowers or flowers arranged in racemes. The corolla consists of four unequal lobes in this genus and is weakly zygomorphic.

Fischer (1981) introduced the genus *Veronica* in "Flora Iranica" with 56 species and arranged these

species in five sections. The total number of species known from Iran has now increased to 59. Recently, *V. davisii* has been recorded from NW Iran (Saeidi et al., 2001). The present study is mainly based on wide collections throughout Iran and comparing these materials with type collections and other authentic materials. The materials recorded here are deposited in TUH and TARI (according to Holmgren et al., 1990). Fig. 1 presents the distribution map of these species in Iran.

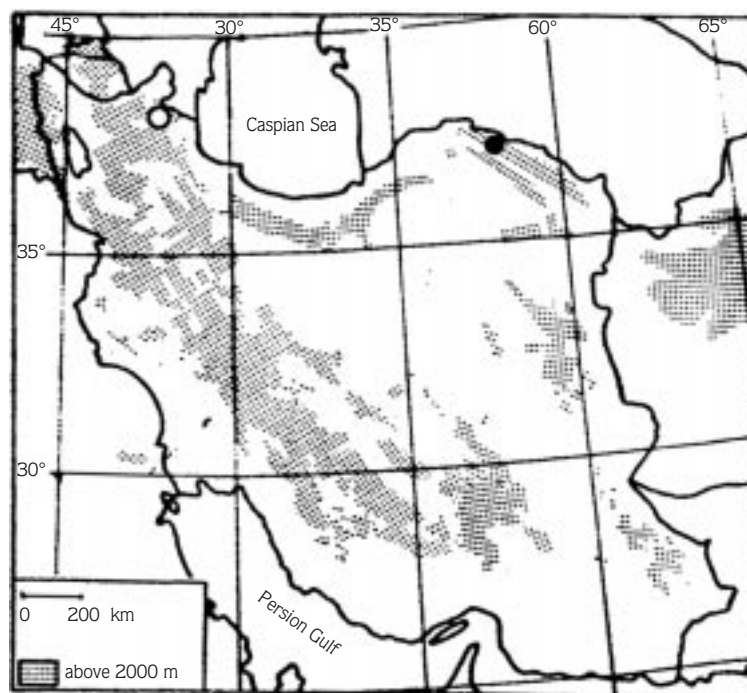


Fig. 1. Distribution map of *V. kopetdaghensis* (●) and *V. filiformis* (○) in Iran.

Results

1. *Veronica kopetdaghensis* B.Fedtsch. ex Boriss., (Fig. 2).

Material examined: Province Khorassan, Shirvan town, Namanlou village, North of Golule-Sarany protected region, 37° 46' N-58° 05' E, 16 vii 2000, 2600 m, leg. Saeidi & Asaadi 24232 (TUH!).

A very interesting new record for the flora of Iran. This species is endemic to the Kopetdagh mountain range. The holotype of the type specimen is deposited in LE and was closely examined by the first author of this paper. The our new collection fits the type specimen in all respects.

This species was found beside rocky cliffs among the vegetation *Euphorbia chierandenia* Boiss.& Hohen.,

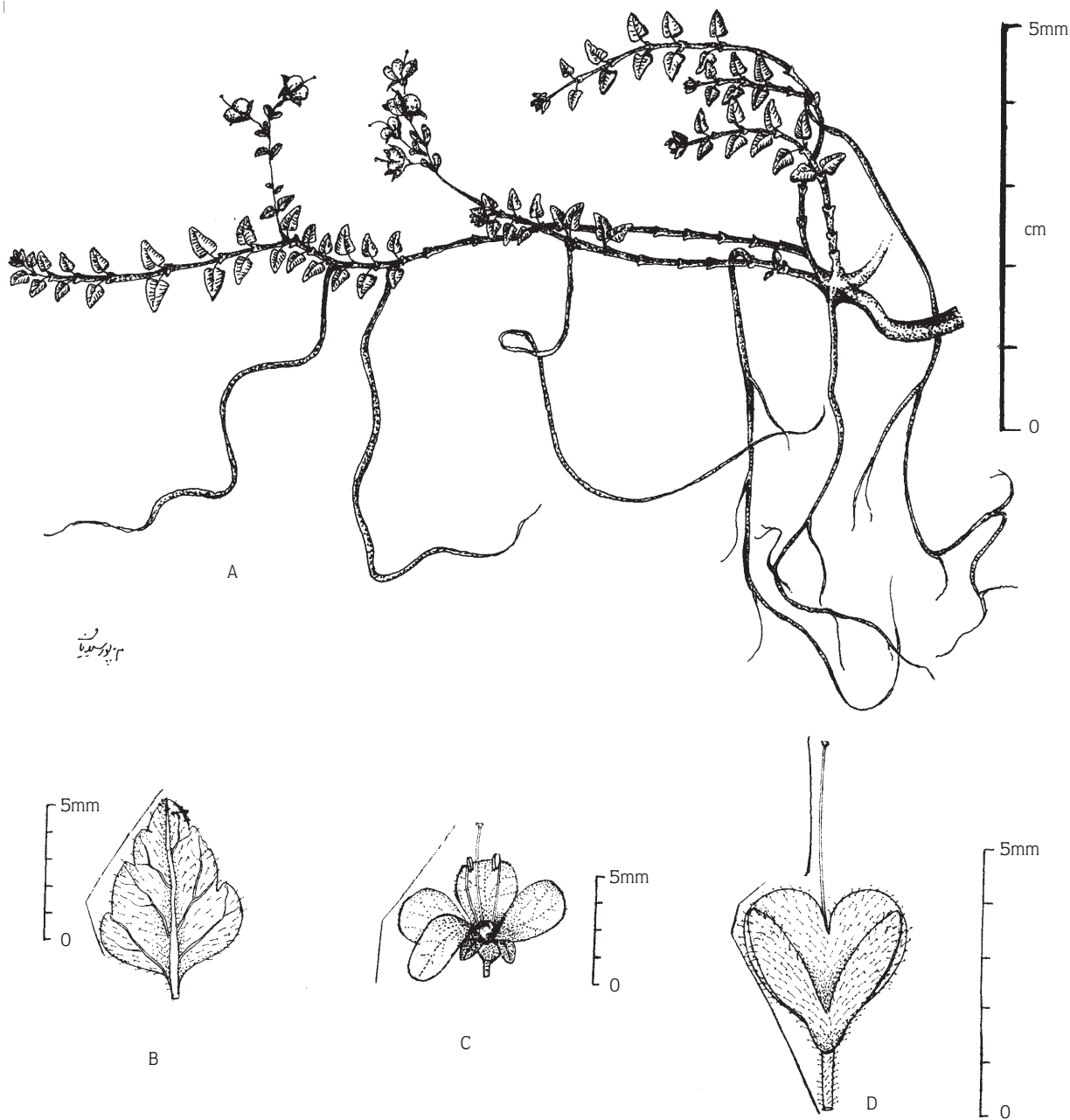


Fig. 2. *V. kopetdaghensis*.-A: Habit, -B: Leaf, -C: Flower, -D: Fruit.

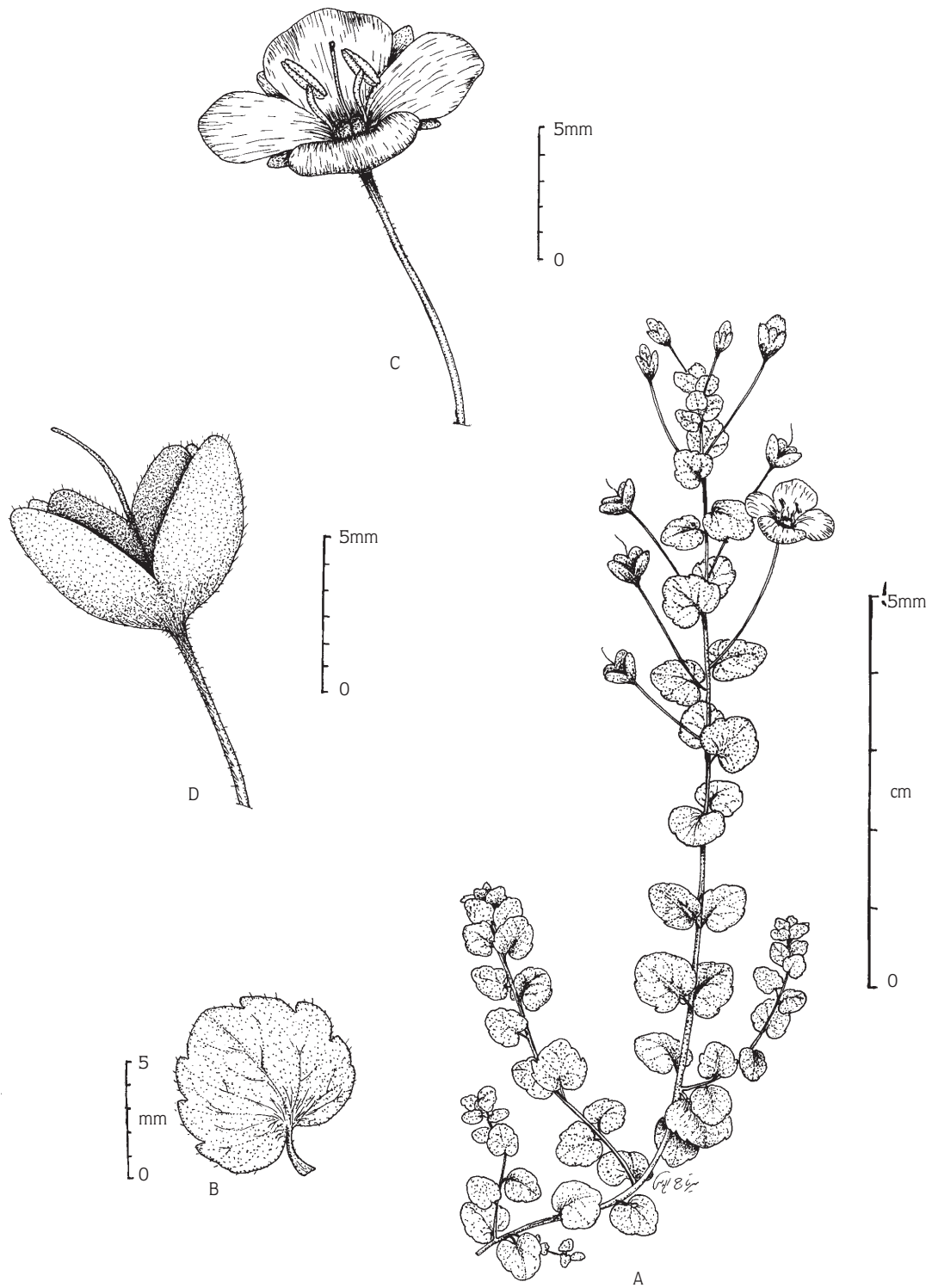


Fig. 3. *V. filiformis*. -A: Habit, -B: Leaf, -C: Flower, -D: Fruit.

Acantholimon bromifolium Boiss. and *Cousinia multiloba* DC.. The most characteristic feature of this species is the presence of terminal inflorescence and its caespitose vegetation form. Moreover, this species is characterised by possessing runners and triangular-ovate leaves. The capsule and seed features have not so far been described for this species. The capsule is 2.5-3 x 3-3.2 mm and covered with glandular hairs. The style is 2.5-4 mm long. Seeds number 4-6 per capsule and are 0.8-1 x 0.5-0.7 mm in size, obovate to elliptic, flat, brownish. The flowering and fruiting-time of this species is June-July.

2. *V. filiformis* Sm., (Fig. 3).

Material examined: Province Azarbaijan, Ardabil town, Razi district, Alikaran village, 38° 40'N-48°15'E, 24 vi 2000, 1700 m, leg. Saeidi & Asaadi 24220 (TUH!).

This species has its origin in the Pontic-Caucasian-Armenian mountains, although today it has been naturalised in many parts of Europe and N America (Norbert & Sukopp, 1993). *V. filiformis* has been reported from N & NE Turkey (Fischer, 1978) and the Caucasus (Fischer, 1981).

This species grows in humid regions dominated by *Trifolium pratense* L., *Taraxacum officinale* L., *Dactylis glomerata* L. and *Salvia hydrangea* DC. ex Benth.

V. filiformis differs from its closest relatives, i.e. *V. persica* Poir. and *V. polita* Fries., by having slightly orbicular leaves with cordate base, seeds numbering 6-8 per capsule (against 10-30 in *V. polita* and 10-18 in *V. persica*) and being brownish-yellow (against yellowish in both other species). Moreover, the surface of the seed-coat in *V. filiformis* (Fig. 4) is cristate-papillate, similar to the seed-coats of *V. persica* and *V. polita*.

The flowering and fruiting-time of this species is May-June.

Acknowledgement

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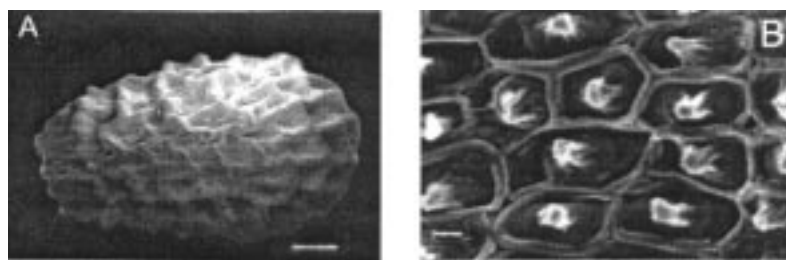


Fig. 4. Scanning electron micrographs of *V. filiformis* seed-coat. Figs. A. Whole seed, dorsal face (Scale bar: 500 μm), B. Seed surface ornamentation (Scale bar : 20 μm).

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