

FOUR NEW RECORDS AND A RECOLLECTION FOR THE FLORA OF IRAQ S. A. Ahmad

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The following four species are reported for the first time from Iraq: *Buffonia enervis* Boiss (Caryophyllaceae), *Lagochilus aucheri* Boiss. (Lamiaceae), *Sideritis montana* L. and *Linaria micrantha* (Cav.) Hoffmanns. & Link (Plantaginaceae). Furthermore, the *Consolida anthoroidea* (Boiss.) Schrödinger (Ranunculaceae), was recently recollected, after the initial old collection by Haussknecht. Brief notes on the habitats and distribution of the species with their detailed photos are given.

Saman Abdolrahman Ahmad (correspondence <Saman.ahmad@univesul.edu.iq>) College of Agriculture Engineering Sciences, University of Sulaimani, Iraq & Kurdistan Botanical Foundation, Sulaimani, Kirkuk Main Road, The American University in Iraq, Sulaimani, Iraq.

Keywords: New Records; Azmar-Goizha Mountain; Sulaimani; Kurdistan; Iraq

چهار گزارش نو و یک جمع‌آوری مجدد برای فلور عراق

سامان عبدالرحمان احمد: دانشیار، دانشکده علوم و مهندسی کشاورزی، دانشگاه سلیمانیه، بنیاد گیاه‌شناسی کردستان، دانشگاه آمریکایی عراق، سلیمانیه، عراق.

چهار گونه‌ی نو برای فلور عراق شامل: *Buffonia enervis* Boiss. (Caryophyllaceae), *Lagochilus aucheri* Boiss. (Lamiaceae), *Consolida anthoroidea* (Boiss.) Schrödinger (Ranunculaceae), *Sideritis montana* L., *Linaria micrantha* (Cav.) Hoffmanns. & Link (Plantaginaceae), مورد رویشگاه و پراکنش این گیاهان به اضافه تصاویر دقیق از هر گونه ارائه شده است.

INTRODUCTION

The field studies in Kurdistan, Iraq were restricted to Kurdistan areas close to the major roads and villages, prior to 1990. However, the situation has changed dramatically during the past decade due to the stability in the region and the construction of numerous roads connecting even the most remote villages (Ahmad 2013).

During 2014-2015, the Kurdistan Botanical Foundation conducted extensive floristic studies in Azmar-Goizha Mountain (Kurdistan, Iraq). This mountain, is part of the extensive Zagros Mountain Range, overlooking Sulaimani city, and occupies an area of about 250 km² between 35°29' to 35°42'N and 45°26' to 46°33'E.

The botanical survey of the Azmar-Goizha Mountain yielded several novelties, published in

international, peer-reviewed journals (Ahmad, 2016a-c; Ahmad, S. A., Rastegar, A., Attar, 2016). Here new species of the county's flora are reported and explained.

Because detailed descriptions of all five reported species can be found in Davis (1965, 1967, 1978, & 1982) and/or Rechinger (1981, 1982, 1988 & 1992), it is felt unnecessary to repeat them herein, and the interested reader should consult these references.

MATERIALS & METHODS

All specimens were collected from Azmar-Goizha Mountain, Sulaimani Province, Kurdistan, Iraq, so the collection data is not repeated under each record; instead, only the habitat, elevation, coordinates, collection dates, and collection numbers by the Kurdistan botanical foundation teams, as well as distributions in neighboring countries or other areas are

given. All vouchers are deposited at KBFH. The specimens were examined and identified using relevant floras, and compared with the type photos at W, E, K, BM, G, P, HUH, S, and SAV (herbarium acronyms follow Thiers 2019+).

RESULTS AND DISCUSSION

Caryophyllaceae

Buffonia enervis Boiss., Diagn. Pl. Or. Nov. Ser. 1, 1: 44(1843). (Fig. 1)

Habitat: Timberline, mountainside, and Rocky places.

Specimen examined: Above Welayar Village, 1609 m, 35°31'33"N, 45°31'52"E, 18 June 2014, S. A. Ahmad, A. Hama & R. Ali 14-2027 (KBFH).

Distribution: Iran, SE Turkey, Iraq.

Notes: This species was previously known from Iran and SE Turkey; the present collection expands its distribution range to Iraq. It is very rare in Iraq and restricted to a small area in Iraqi Kurdistan.

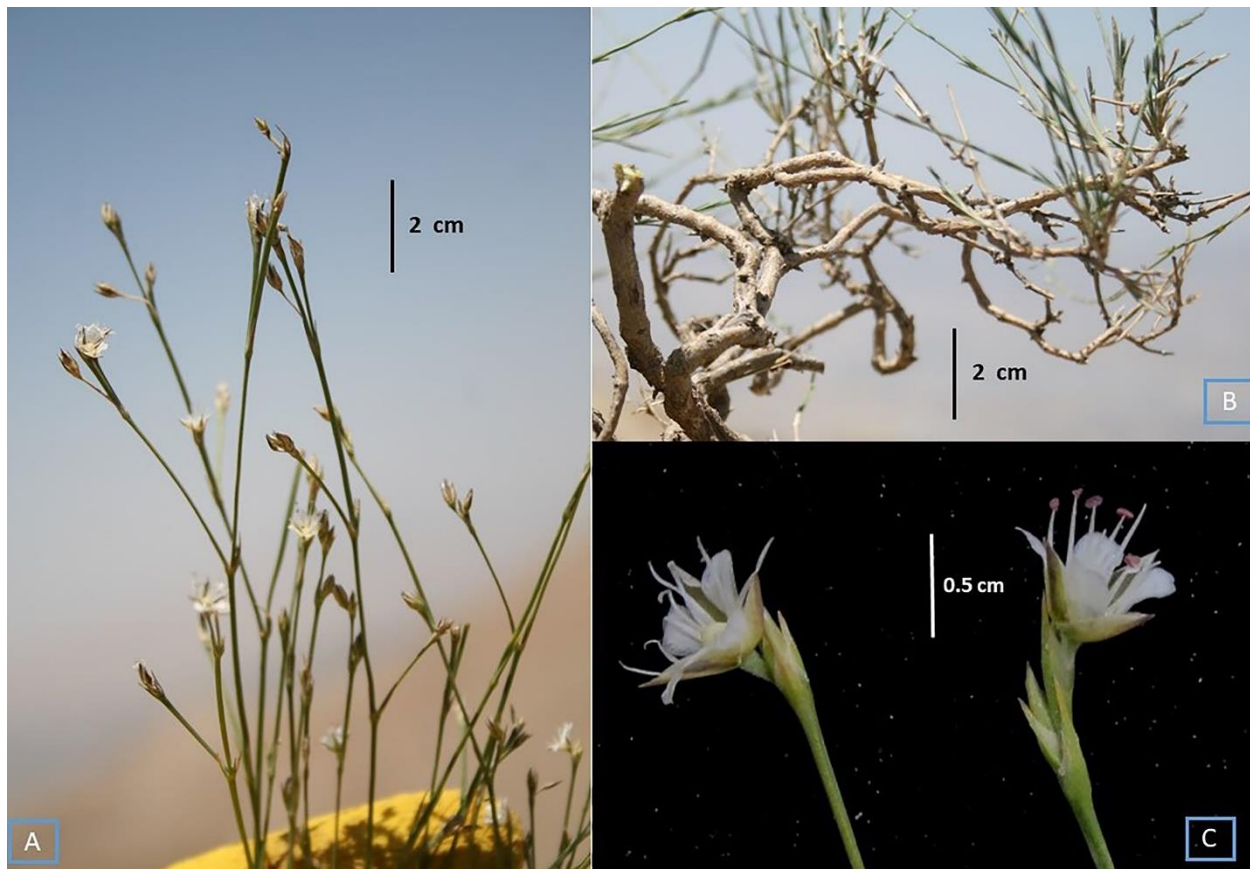


Fig. 1. *Buffonia enervis* Boiss. A, Flowering branches; B, basal parts; C, flowers.

Lamiaceae

Lagochilus aucheri Boiss., Diagn. Pl. Or. Nov. Ser. 1, 5:38 (1844), (Fig. 2).

Habitat: limestone mountain slopes, on the border of timberline, herb land above the pine forest.

Specimens examined: Azmar Mountain, 1642 m, 35°35'16"N, 45°29'36"E, 07 June 2014, S. A. Ahmad, A. Hama, S. Babarasul & R. Ali 14-1765 (KBFH); Above Welayar Village, 1609, 35°31'33"N, 45°31'52"E, 18 June 2014, S. A. Ahmad, A. Hama & R. Ali 14-2027 (KBFH); Top of Goizha Mountain, 1517 m, 35°34'31"N, 45°29'18"E, 23 June 2014, S. A.

Ahmad, A. Hama, S. Babarasul & R. Ali 14-1765 (KBFH).

Distribution: Iran & Iraq

Notes: The species was previously known to be widely distributed, but endemic to Iran. The above three collections expand its distribution range further west, to Iraq. With further explorations in Iran and Iraq, the species may represent a wider distribution pattern than presently known.

Sideritis montana L., Sp. Pl. 575 (1753), (Fig. 3).

Habitat: mountain slopes, roadside, among vineyards.

Specimens examined: Dukanian Road, 1177 m, 35°30'40"N, 45°33'33"E, 29 May 2014, A. Hama, S. Babarasul & R. Ali 14-1465 (KBFH); Above Welayar Village, 1542 m, 35°31'40"N, 45°31'55"E, 18 June 2014, S. A. Ahmad, A. Hama, & R. Ali 14-2053 (KBFH); Near Sulaimani Botanic Garden, 898m, 35°36'12"N, 45°25'29"E, 19 Aug. 2014, S.A.Ahmad, A. Hama, S. Babarasul, Tara A. Arif & R. Ali 14-2347

(KBFH); Khamza Village, 1490 m, 35°39'41"N, 45°27'18"E, 09 June 2015, S. A. Ahmad, S. Salih, A. Hama, S. Babarasul & S. R. Fayaq 15-1319 (KBFH).

Distribution: Mediterranean area, Turkey, Turkmenistan, Afghanistan, Armenia, Azerbaijan, Iran, Iraq, Georgia, Russia Europe, Australia.

Notes: A widespread species in the world. The present collections expand its distribution to Iraq.



Fig. 2. *Lagochilus aucheri* Boiss. A, Habit; B, flowers.

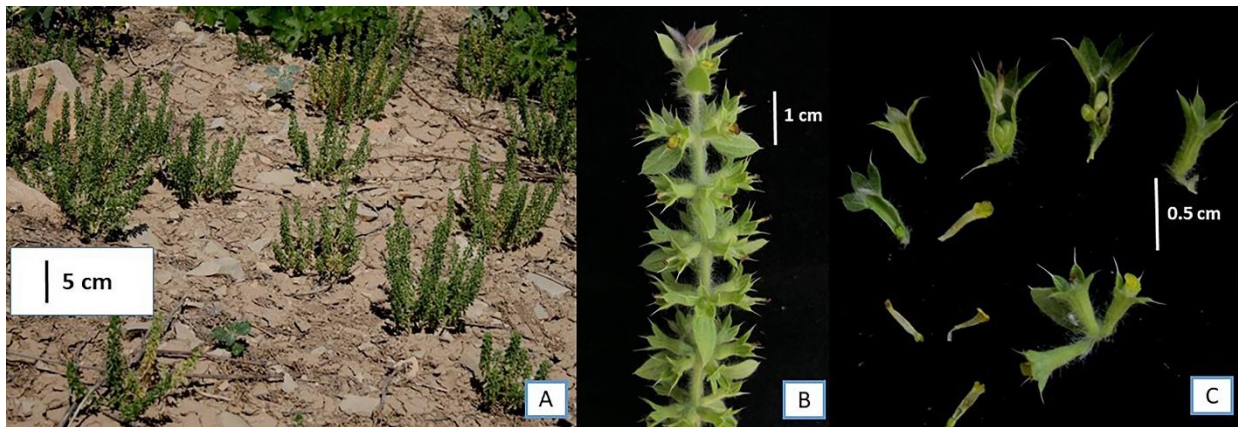


Fig. 3. *Sideritis montana* L. A, Habit; B, inflorescence; C, dissected flowers.

Plantaginaceae

Linaria micrantha (Cav.) Hoffmanns. & Link, (Fig. 4).

Habitat: hillside, grassland.

Specimen examined: Near Sulaimani Botanic Garden, 925 m, 35°37'42"N, 45°25'22"E, 07 Apr. 2015, S. A. Ahmad, A. Hama, & R. Ali 15-299 (KBFH).

Distribution: Mediterranean region, Cyprus, Iran, Israel, Syria, Turkey, Iraq.

Notes: The species is widespread, and very variable, the above collection from Kurdistan Iraq represents a distribution range extension of the species.

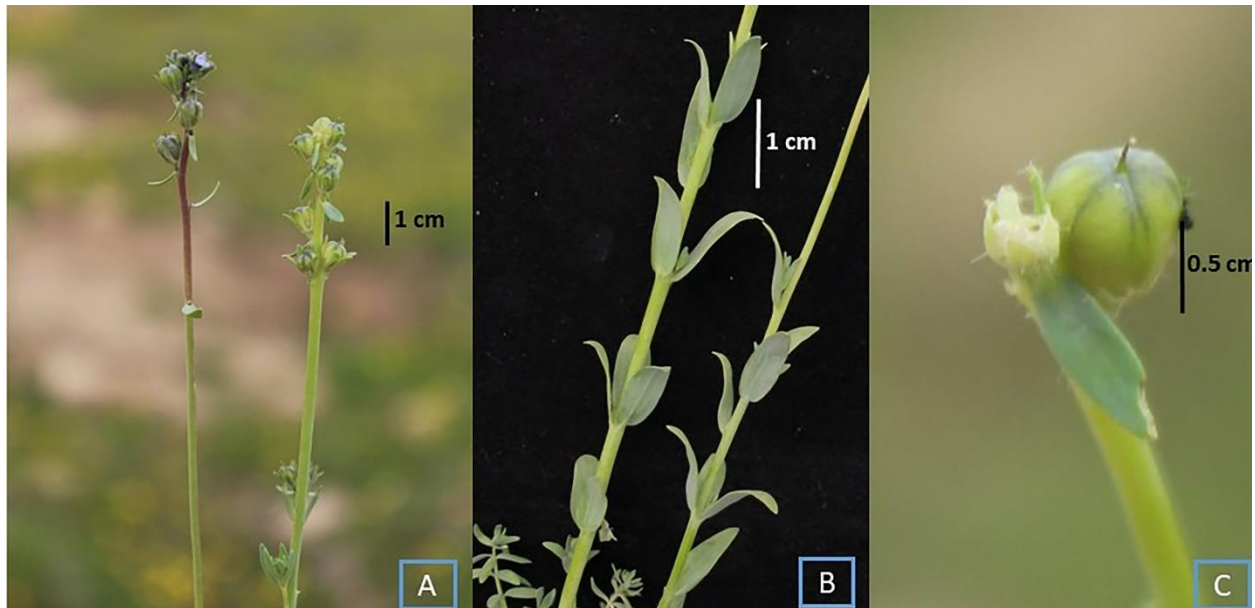


Fig. 4. *Linaria micrantha* (Cav.) Hoffmanns. & Link. A, Flowering and fruiting branches; B, leaves; C, fruit.

Ranunculaceae

Consolida anthoroidea (Boiss.) Schrödinger (Fig. 5).

Syn: *Delphinium anthoroideum* Boiss.

Habitat: Top of Goizha Mountain, grassland above the pine forest.

Specimens examined: Top of Goizha Mountain, 1468m, 35°35'21"N, 45°28'40"E, 21 June 2014, S. A. Ahmad, A. Hama, S. Babarasul, & R. Ali 14-2201 (KBFH); Goizha mountain, 1500m, 35°35'09"N, 45°28'49"E, 19 Aug. 2014, S.A.Ahmad, A. Hama, S. Babarasul, Tara A. Arif & R. Ali 14-2401 (KBFH).

Distribution: E. Turkey, Iraq, NW, and W. Iran.

Notes: There was only one report of this species in

Flora Iranica from Kirkuk, based on an old collection by Haussknecht. Therefore, the present two new collections from Azmar-Goizha are interesting reports after the initial collection and represent a wider distribution of this species in Iraq.

The material collected by Haussknecht was first described as *Delphinium anthoroideum* by Boisseir (1841) but later renamed by Schrödinger as *Consolida anthoroidea* (Boiss.) Schrödinger (Fig. 5), because of having solitary follicle (vs. follicles 3-5 in *Delphinium*), inner segments-perianth united (vs. inner perianth-segments free in *Delphinium*).

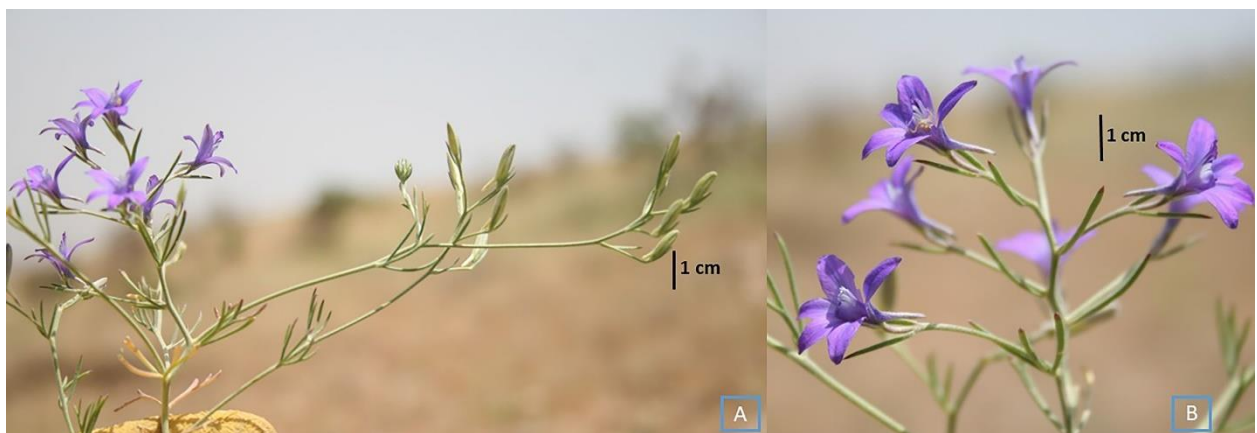


Fig.5. *Consolida anthoroidea* (Boiss.) Schrödinger. A, Flowering branches; B, flowers.

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