SALVIA ALI-ASKARYI (LAMIACEAE), A NEW SPECIES FROM KURDISTAN, IRAQ

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Abstract. *Salvia ali-askaryi* (Lamiaceae), a new species from Kurdistan Iraq, is described and illlustrated, and its distinguishing characters are discussed. It is easily separated from *S. microstegia* by having broadly ovate or elliptic-oblong (vs. ovate to oblong), irregularly serrate or dentate (vs. obtusely lobed) leaves, 12–23- (vs. 4–6)-flowered verticillasters, shortly bilobed or emarginate (vs. shortly tridentate, and median tooth much shorter) upper lip, and globose (vs. ovoid) nutlets 3–4 mm in diameter (vs. 3 × 2.5 mm). It differs from *S. argentea* by having usually eglandular lanate (vs. not lanate) lower stems, irregularly serrate or dentate (vs. irregularly erose) leaf margins, and white (vs. white, with a violet tinged) upper corolla lip.

Keywords: Lamiaceae, *Salvia,* Azmar-Goihza Mts., Kurdistan, Iraq

During the past two years, the Kurdistan Botanical Foundation conducted extensive floristic study on the Azmar-Goizha Mountain (Kurdistan, Iraq). This mountain, which is part of the extensive Zagros Mountain Range, overlooking Sulaimani City, occupies an area of about 250 km² between 35°29' to 35°42'N and 45°26' to 46°33'E.

During recent studies in Hawraman region (Ahmad, 2013a), the author discovered four species new to science (Ahmad, 2013b–c, 2014a–b) and 18 new to the flora of Iraq (Ahmad, 2013d). The present botanical survey of the Azmar-Goizha Mountain also yielded several additional novelties and additions to the flora of Iraq, including the following species of *Salvia* L.

Salvia ali-askaryi S.A.Ahmad, *sp. nov*. TYPE: IRAQ. Kurdistan, Sulaimani Province, Azmar Mt., near Harwta forest station, eroded places, sandy soil, pine forest, 25–35% slope with sun exposure SE to NW, 1238 m, 35°35'47"N, 45°28'36"E, 15 May 2015, *S. A. Ahmad, A. Hama & S. Babarasul 14–818* (Holotype: KBFH). Fig. 1.

The new species is easily separated from *S. microstegia* Boiss. & Balansa by having broadly ovate or elliptic-oblong (vs. ovate to oblong), irregularly serrate or dentate (vs. obtusely lobed) leaves, 12–23- (vs. 4–6)-flowered verticillasters, broadly cordate (vs. broadly ovate) bracts 15–21 × 10–15 mm (vs. 9-17 × 8–14), broadly campanulate or campanulate-infundibular (vs. campanulate) calyx, shortly bilobed or emarginate (vs. shortly tridentate, and median tooth much shorter) upper lip, and globose (vs. ovoid) nutlets 3–4 mm in diameter (vs. 3 × 2.5 mm). From *S. argentea* L., the new species differs by having usually eglandular lanate (vs. not lanate) lower stems, irregularly serrate or dentate (vs. irregularly erose) leaf margins, white (vs. white with a violet-tinged) upper corolla lip.

Herb perennial with a woody rootstock. *Stems* erect, 35–50 cm, densely pilose-villous glandular, often eglandular lanate below. *Leaves* mostly basal, broadly ovate, elliptic-oblong, 15–27 × 8–20 cm, adaxial surface densely pilose-villous, abaxial surface scattered pilose, irregularly serrate or dentate; petiole 1–8.5 cm. *Inflorescence* panicle, sometimes widely spreading; verticillasters 12–23-flowered, very dense; bracts broadly cordate, 1.5–2.1 × 1–1.5 cm, sessile, dense short glandular hairy; pedicels 1–2 mm. *Calyx* broadly campanulate or campanulate-infundibular, 8–10 × 5–7 mm, to 12–15 × 9–11 mm in fruit, with widely diverging lips, densely villous, glandular; corolla white, 18–23 mm; tube 7.5–9.5 mm, ventricose, squamulate; upper lip compressed, shortly bilobed or emarginate, falcate, capitate glandular hairy; stamens squamulate; filaments ca. 4 mm; connective 16–18 mm; anthers yellow, 24 × 0.7–0.9 mm; style 23–24 mm, stigma lobes 12 mm. *Nutlets* globose, pale green, 3–4 mm in diameter, villous, glandular.

Eponymy: This novelty is named after Dr. Ali A. Askary in recognition of his extensive field collection and research in the field of medicinal botany of Iraq.

Distribution: Known only form Azmar Mt., where it is restricted to a small area near Harwta forest station, where it grows on sandy soil in eroded places of a pine forest on 25–35% slope with sun exposure SE to NW.

Additional specimens examined: Goizha Mt., 1500 m, 35°34'56"N, 45°29'03"E, 21May 2015, *S. A. Ahmad, A. Hama, R. Ali & S. Babarasul 15-1202* (KBFH); Azmar Mt., 1601 m, 35°34'41"N, 45°29'38"E, 07 June 2014, *S. A. Ahmad, A. Hama, R. Ali & S. Babarasul 14-1725* (KBFH); Azmar Mt., 1652 m, 35°34'55"N, 45°29'43"E, 01 June 2015, *S. A. Ahmad, A. Hama, R. Ali, S. Babarasul & S. R. Fayaq 15-1150* (KBFH).

IUCN Red List Category: *Salvia ali-askaryi* is extremely rare; its IUCN Red List category (IUCN, 2001) remains uncertain and is currently assessed as Data Deficient (DD).

Salvia ali-askaryi, is somewhat related to the Irano-turanian *S. microstegia*. and to *S. argentea* of S. Europe, N.W. Africa, and Mediterranean Region. From the former, it differs by having broadly ovate or elliptic-oblong (vs. ovate to oblong), irregularly serrate or dentate (vs. obtusely lobed) leaves, 12–23- (vs. 4–6)-flowered verticillasters, broadly

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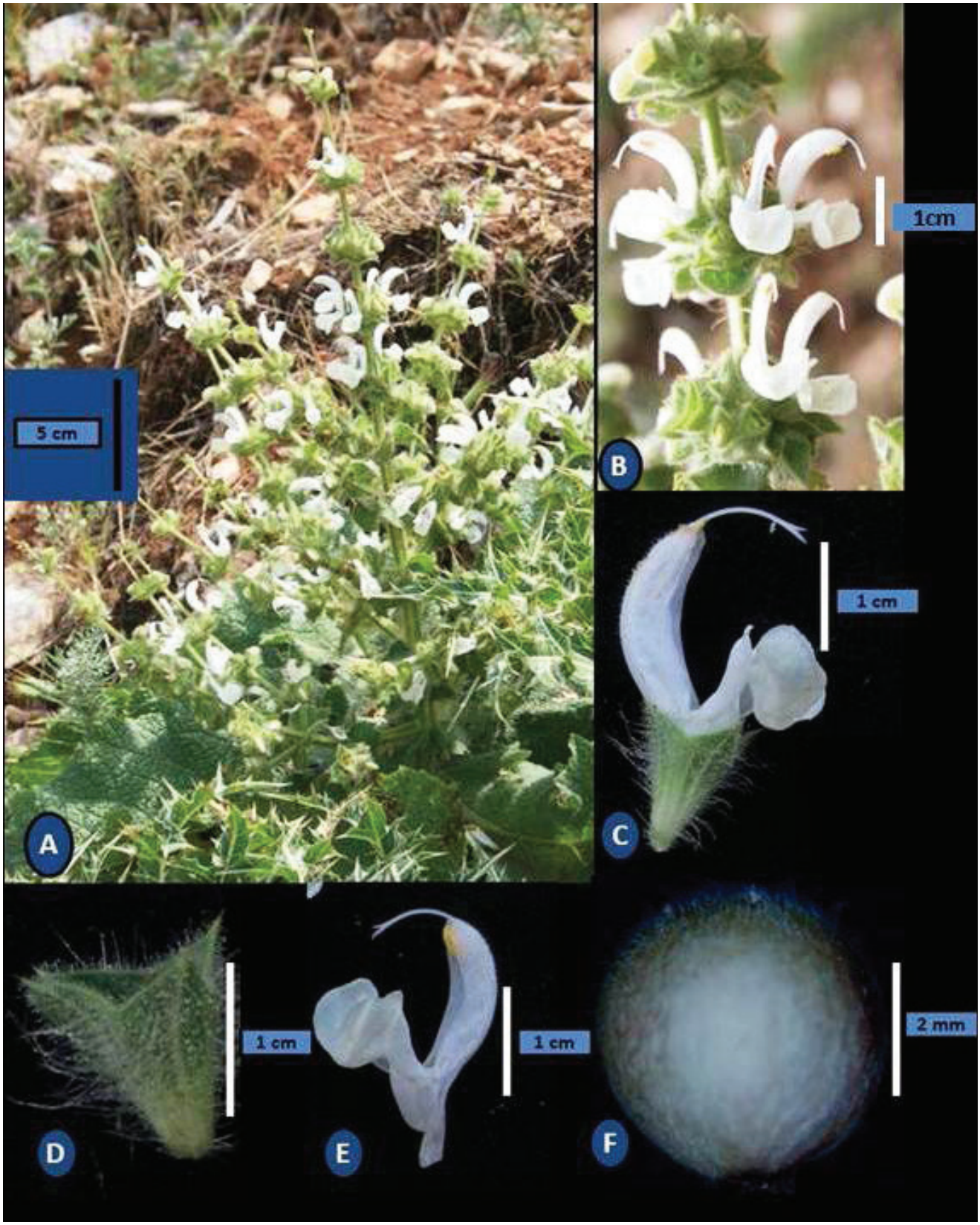

FIGURE 1. *Salvia ali-askaryi* S.A.Ahmad. **A**, plant; **B**, part of inflorescence; **C**, flower; **D**, calyx; **E**, corolla; **F**, nutlet. Scales: A = 5 cm; B–E= 1 cm; F= 2 mm. Photographs by Saman A. Ahmad, based on the collection: Azmar Mt., 1238 m, 35°35'47"N, 45°28'36"E, 15 May 2015, *S. A. A hmad, A. Hama & S. Babarasul 14–818* (KBFH).

cordate (vs. broadly ovate) bracts 15–21 × 10–15 mm (vs. 9-17 × 8–14), broadly campanulate or campanulate-infundibular (vs. campanulate) calyx, shortly bilobed or emarginate (vs. shortly tridentate, and median tooth much shorter) upper lip, and globose (vs. ovoid) nutlets 3–4 mm in diameter (vs. 3 × 2.5 mm). From *S. argentea*, the new species differs by having usually eglandular lanate (vs. not lanate) lower stems, irregularly serrate or dentate (vs. irregularly erose) leaf margins, white (vs. white with a violet tinged) upper corolla lip.

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