

Salvia ekimiana (Lamiaceae), a new species from Turkey

Ferhat Celep & Musa Doğan

Department of Biological Sciences, Middle East Technical University, 06531 Ankara, Turkey

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Salvia ekimiana F. Celep & Doğan *sp. nova* (Lamiaceae) is described and illustrated from Turkey. It is confined to Yozgat in central Anatolia where it grows in open *Pinus sylvestris* forest and alpine steppe. The diagnostic morphological characters from closely similar species are discussed.

Key words: new species, *Salvia*, taxonomy

The first revision of *Salvia* in Turkey was made by Hedge (1982a), who recognized 86 species, one hybrid and one doubtful species. Since then, five more species, *S. nydeggeri* (Huber-Morath 1982), *S. aytachii* (Vural & Adıgüzel 1996), *S. hedgeana* (Dönmez 2001), *S. anatolica* (Hamzaoğlu & Duran 2005) and *S. marashica* (İlçim *et al.* 2009) have been described as new to science from Turkey.

The species described in this report was first collected in Akdağmadeni-Yozgat, (B5, *sensu* Davis 1965) by Prof. Dr. Tuna Ekim in 1980. In 2007, while conducting field work in the area, the author Celep found another population in Aktaş region above Akdağmadeni (Yozgat). At first glance, it resembled *S. aethiopsis* and *S. yosgadensis*. The specimens were cross-checked with the keys provided by Hedge (1982a) and the *Salvia* accounts given in the relevant literature, including *Flora Orientalis* (Boissier 1879), *Flora Iranica* (Hedge 1982b), *Flora of the USSR* (Pobedimova 1954), *Flora of Syria, Palestine and Sinai* (Post 1933) and *Flora Europaea* (Hedge 1972). The specimens of the new species were cross-checked with the material housed

at various herbaria (ANK, GAZI, HUB, ISTE, ISTF, E, K, and BM).

Salvia ekimiana* F. Celep & Doğan, *sp. nova (Figs. 1 and 2)

S. ekimiana affinis S. aethiopsis sed differt: foliis basalibus 2.5–7.5 × 1–2.5 cm (nec 10–21(–32) × 5–9 cm), oblongis (nec ovatis), crenulatis ad serratis (nec erosis), calycis brevioribus 7–11 mm (nec ca. 12 mm), corollis brevioribus 7–11 mm (nec ca. 15 mm), labiis superioribus lilacinis vix falcatis (nec labiis superioribus pallidis crocinus videlicet falcatis), 3.5–4.2 mm longis et dense lanatis (nec 7–8 mm longis et pilosis).

TYPE: Turkey. Central Anatolia, B5 Yozgat: Above Akdağmadeni, Aktaş region, 39°35'157"N, 35°50'014"E, 1793 m, open *Pinus sylvestris* forest and alpine steppe, 16.VI.2007 F. Celep 1214 (holotype ANK; isotypes E, K, GAZI). — PARATYPE: Turkey. B5 Kayseri: Felahiye, Büyük Toraman Kasabası, Akdağ, 2000 m, 9.VI.2005 A. Duran 7019 (GAZI).

ETYMOLOGY: This species is named in honour of the Turkish botanist, professor Tuna Ekim.



Fig. 1. Habit of *Salvia ekimiana* (holotype).

Perennial herbs with a woody rootstock. Stems ascending to erect, 10–30(–40) cm, branched or not, densely eglandular lanate. Leaves mostly basal, mainly oblong (ovate to oblong or oblanceolate) ca. 2.5–7 × 1–2.5 cm, greyish-green, densely eglandular lanate, rugose, margins crenulate to serrate, petiole up to (10–)15–30(–45) mm. Inflorescence widely branched, candelabriform or not, densely eglandular lanate. Verticillasters 4–12, each verticillaster with 4–10 flowers, internodes 0.5–2 cm. Bracts broadly ovate, 0.3–1.5 × 0.2–1.2 cm, densely lanate. Pedicels 2–3 mm. Calyx greyish with violet stripe, tubular to campanulate, 7–11 mm, up to 13 mm in fruit, scarcely expanding in fruit, densely eglandular lanate hairy, teeth 0.7–0.8 mm, shortly spinulose. Corolla white with lilac hood, 7–11 mm, tube 4–7 mm, upper lip ca. 3.5–4.2 mm, scarcely falcate. Stamens 2, type B; staminal connectives clearly longer than filaments. Style glabrous, 8–12 mm, long exerted from corolla lips and divided in two parts at apex. Nutlets rounded-trigonous, 2.7–2.9 × 2.2–2.5 mm, greenish to brown and slightly tuberculate surface. Flowering in June, fruiting from July to August.

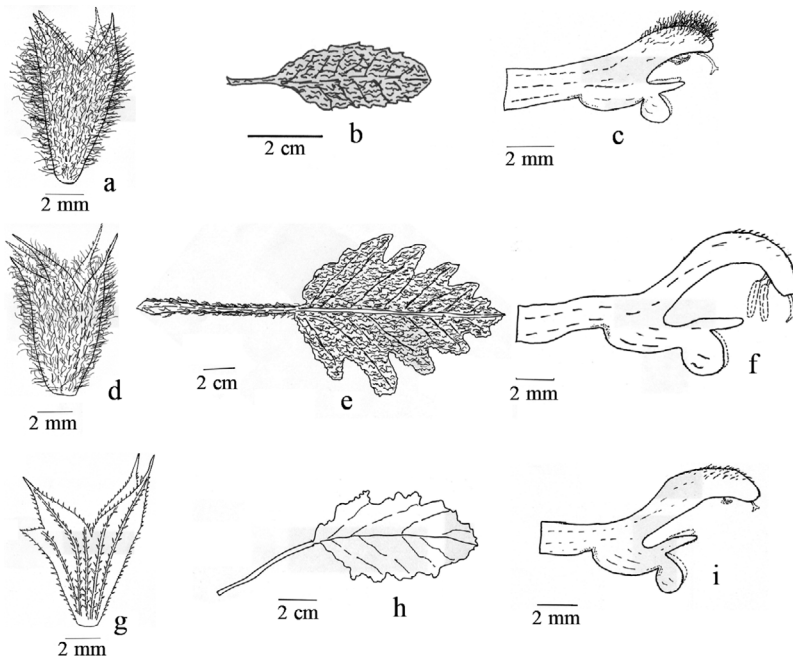


Fig. 2. — a–c: *Salvia ekimiana* (from the holotype). — a: Calyx. — b: Basal leaf. — c: Corolla. — d–f: *S. aethiopis* (Celep 1430, GAZI). — d: Calyx. — e: Basal leaf. — f: Corolla. — g–i: *S. yosgadensis* (Bagherpour 265, GAZI). — g: Calyx. — h: Basal leaf. — i: Corolla.

Table 1. Comparison of *Salvia ekimiana* with *S. aethiopsis* and *S. yosgadensis*.

	<i>S. ekimiana</i>	<i>S. aethiopsis</i>	<i>S. yosgadensis</i>
Indumentum of stem	densely eglandular lanate	densely eglandular lanate	eglandular pubescent to pilose
Leaf shape	mainly oblong (rarely ovate to oblong or oblanceolate)	ovate-elliptic to oblong	ovate to oblong
Leaf measurements (cm)	2.5–7.5 × 1–2.5	10–21(–32) × 5–9	4–12 × 3–6
Leaf margin	crenulate to serrate	erose	irregular serrate to erose
Indumentum of leaves	densely eglandular lanate	lanate	eglandular pubescent to pilose
Inflorescence	widely branched, candelabiform or not	widely branched, candelabiform	widely paniculate
Calyx length (incl. mucros) (mm)	7–11	ca. 12	7–12
Indumentum of calyx (outside of tube)	densely eglandular lanate	densely eglandular lanate	short eglandular pubescent to setulose
Calyx (inside of tube)	sparsely lanate	densely lanate	glabrous
Corolla colour	white with lilac hood	white with often pale yellow lip	white or tinged lilac
Corolla length (mm)	7–11	ca. 15	11–14
Upper lip of corolla	scarcely falcate	clearly falcate	scarcely falcate
Upper lip of corolla length (mm)	ca. 3.5–4.2	7–8	6–7
Upper lip of corolla indumentum	densely lanate	sparsely pilose	sparsely pilose

DISTRIBUTION: *Salvia ekimiana* is an endemic species known only from the type locality and a few locations nearby. According to our field observations, its population size seems to be small.

HABITAT ECOLOGY: *Salvia ekimiana* grows in open *Pinus sylvestris* forest and alpine steppe at an altitude of 1700–2000 m. The vegetation in this place is mainly formed by herbaceous and woody plants including *Pinus sylvestris*, *Astragalus* spp., *Verbascum* spp., *Nepeta* spp., *Marrubium* spp., *Hordeum* spp., *Poa* spp. and *Alyssum* spp.

The section *Aethiopsis* comprises 29 species in Turkey, 12 of which are endemic (Hedge 1982a). According to Bentham's (1833) and Hedge's (1974) sectional delimitation, *S. ekimiana* should be placed in the section *Aethiopsis* due to its calyx being tubular to campanulate, not or little expanding in fruit, upper lip 3-toothed, the median tooth shorter, upper lip of corolla more or less falcate, corolla tube inside without a ring of hairs, and staminal connective longer than filament (Hedge 1972, 1974).

Salvia ekimiana is similar to *S. aethiopsis* and

S. yosgadensis, but differs from both in several characters (Table 1). *Salvia ekimiana* is found only in the northern parts of central Anatolia where it grows at an altitude of 1700–2000 m, *S. yosgadensis* is restricted to central Anatolia at altitudes of 800–1400 m, while *S. aethiopsis* is widely distributed in Turkey, central and southern Europe, Caucasia, Crimea and Iran and thrives from sea level to 2100 m altitude.

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