

A New Record for the Flora of Turkey: *Salvia macrosiphon* Boiss. (Labiatae)

Ahmet KAHRAMAN*, Ferhat CELEP, Musa DOĞAN

Middle East Technical University, Department of Biological Sciences, 06531, Ankara - TURKEY

Received: 03.06.2008

Accepted: 18.12.2008

Abstract: *Salvia macrosiphon* Boiss. is reported for the first time from Turkey. This new record is confined to Çınar in Diyarbakır. The diagnostic morphological characters of *S. spinosa* L. are discussed. Notes are presented on its ecology and phenology. A distribution map of this new record is also given.

Key Words: Labiatae, *Salvia macrosiphon*, New Record, Turkey

Türkiye Florası İçin Yeni Bir Tür: *Salvia macrosiphon* Boiss. (Labiatae)

Özet: *Salvia macrosiphon* Boiss. türü Türkiye florası için ilk defa Diyarbakır-Çınar'dan rapor edilmiştir. Bu yeni kayıt'ın *S. spinosa* L.'dan olan ayırıcı morfolojik karakterleri tartışılmıştır. Türün ekolojisi ve fenolojisi üzerine notlar sunulmuştur. Ayrıca türün Türkiye'deki dağılım haritası verilmiştir.

Anahtar Sözcükler: Labiatae, *Salvia macrosiphon*, Yeni Kayıt, Türkiye

Introduction

The first revision of *Salvia* L. in Turkey was made by Hedge (1982a) in *Flora of Turkey and the East Aegean Islands, volume 7*, in which he recognized 86 species, and 1 hybrid and 1 doubtful species. Since the publication of the flora, 1 new record and 6 more new species have been described from Turkey (Huber-Morath, 1982; Vural & Adıgüzel, 1996; Dönmez, 2001; Hamzaoğlu et al., 2005; İlçim et al., 2009; Celep and Doğan, 2009; Celep et al., 2009).

Since 2005, as part of a revisional study of the genus *Salvia* in Turkey, the authors have carried out extensive field studies and collected a large number of specimens. In addition, population size, and phenological and ecological properties were observed in the field (Davis & Heywood, 1973). In 2007, during a field trip to southeast Anatolia

(C8 Diyarbakır, C8 sensu Davis, 1965), specimens from 2 unusual populations of *Salvia* were collected from the same locality by Mr. A. Kahraman. Upon closer examination and consultation with the *Flora of Turkey* (Hedge, 1982a) and other relevant floras, such as *Flora Orientalis* (Boissier, 1879), *Flora of Syria, Palestine and Sinai* (Post, 1933), *Flora Iranica* (Hedge, 1982b), *Flora of the USSR* (Pobedimova, 1954), and *Flora Europaea* (Hedge, 1972), they were identified as *S. spinosa* L. and *S. macrosiphon* Boiss. The latter species, known from Iraq, Iran, Pakistan, Afghanistan, and Transcaucasia, has not been previously recorded from Turkey. The specimens of this new record were compared to material housed at various European (E, BM, and K) and Turkish herbaria (ANK, AEF, GAZI, ISTE, ISTF, and HUB). All the plant name authors are given according to Brummit and Powell (1992).

* E-mail: ahmetk@metu.edu.tr

Results and Discussion

Salvia macrosiphon Boiss. Diagn. Pl. Or. Nov. Ser. 1, 5: 11 (1844) (Figure 1).

Syn.: *S. kotschyi* Boiss., l.c.: 46 (1846).

S. macrosiphon var. *cabulica* Benth. in D.C., Prodr. 12: 282 (1848).

S. macrosiphon var. *kotschyi* (Boiss) Boiss. Fl. Or. 4: 615 (1879).

S. cuspidatissima Pau, Trab. Mus. Nac. Cienc. Nat. Ser. Bot. Madrid 14: 33 (1918).

S. albifrons Nab., Publ. Fac. Sci. Univ. Masaryk (Brno) 70:49, tab. 5 (1926).

S. macrosiphon var. *glandulosissima* Bornm., Bot. Jahrb. 62: 238 (1934).



Figure 1. View of *Salvia macrosiphon*.

S. macrosiphon var. *brachycalycina* Bornm., l.c.

S. nachiczevanica Pobed., Fl. URSS. 21: 657 (1954).
Icon.: Tab. 479, 480, 586 in Flora Iranica.

Type: Persia australi inter Fasa et Schiraz (*Aucher-Elloy* 5197, holotype G)

Perennial herbs with a woody rootstock at the base. Stems erect, 15-45 (-90) cm, branched above, scarcely eglandular pilose to tomentose below, densely glandular pilose above. Leaves simple, ± thin-textured, elliptical to ovate-oblong, 4-16 (-22) × 1.5-9.5 (-11) cm, eglandular tomentose, margins irregular, serrate to erose. Petiole 2-10 cm. Inflorescence panicle, densely glandular pilose. Verticillasters 2-6-flowered, clearly distant, internodes 2-2.5 cm. Bracts broadly ovate, 10-27 × 7-20 mm, acuminate, eglandular pilose; bracteoles absent. Pedicels 1-3 mm, glandular hairy, rigid, erecto-patent. Calyx tubular, 12-17 mm, up to 22 mm in fruit, 4-5 mm diameter, scarcely expanding in fruit, glandular hirsute with some sessile glands, teeth spiny; upper lip tridentate, less spiny in fruit. Corolla white, 18-35 mm; tube straight below, slightly widening above, 13-25 mm; upper lip falcate, non-squamulate. Stamens 2, staminal connectives clearly longer than filaments; filaments 2-3 mm, fertile anthers hairless, 2-3 mm, upper thecae 10-15 mm. Style glabrous 20-37 mm long, exerted from corolla lips and divided in 2 parts at apex. Nutlets c. 2.8 × 2.3 mm, ovate.

New Locality: C8 Diyarbakır: Mardin to Diyarbakır, 14 km before Çınar, 759 m, field edges, lat 37°39'16"N, long 40°28'21"E, 24.05.2007, A. Kahraman 1382 (Figure 2).

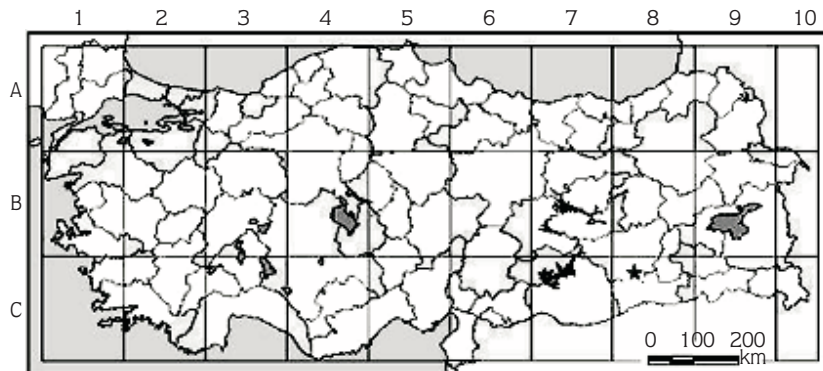


Figure 2. Distribution map of *Salvia macrosiphon* (*) in Turkey.

Ecology and Phenology

S. macrosiphon grows at the edges of fields at an altitude of 759 m in Turkey. The vegetation in this area is formed by herbaceous plants. Flowering occurs in May and fruiting from June. According to the analysis of soil collected from suitable habitats for *S. macrosiphon*, this species generally prefers clayish soils that are slightly alkali (pH 7.86) with low organic content (0.41%). The level of P and K present in the soil was 3.13 and 135.23 ppm, respectively. CaCO₃ in the soil was 34.35%.

S. macrosiphon is closely related to *S. spinosa*, but it seems to be quite different from it. *S. macrosiphon*

differs from *S. spinosa* in that it has less indumentum, is eglandular pilose to tomentose hairy at the lower part of its stem; it has narrower leaves and calyces, less indurate and less spiny fruiting calyces, and a longer corolla tube.

Acknowledgements

We wish to thank the curators of following herbaria: ANK, AEF, GAZI, HUB, ISTE, ISTF, E, K, BM, G, and W for allowing us to study their *Salvia* collections, and the Scientific and Technical Research Council of Turkey (TUBİTAK-TBAG-104 T 450) for their financial assistance.

References

- Boissier E (1879). *Salvia* L. In: *Flora Orientalis* 4: 590-761, Basel.
- Brummitt RK & Powell CE (eds.) (1992). *Authors of plant names*, Royal Botanic Gardens, Kew, London.
- Celep F & Doğan M (2009). *Salvia ekimiana* (Lamiaceae), a new species from Turkey. *Ann Bot Fennici* (in press).
- Celep F, Doğan M & Duran A (2009). A new Record for the Flora of Turkey: *Salvia viscosa* Jacq. (Labiatae). *Turk J Bot* 33: 57-60.
- Davis PH (eds.) (1965). *Flora of Turkey and the East Aegean Islands* 1. Edinburgh Univ. Press.
- Davis PH & Heywood VH (1973). *Principles of angiosperm taxonomy*. Huntington, New York: Robert E. Kieger Publishing Co.
- Dönmez A (2001). A New Turkish species of *Salvia* L. (Lamiaceae). *Bot J Linn Soc* 137: 413-416.
- Hamzaoğlu E, Duran A & Pinar NM (2005). *Salvia anatolica* (Lamiaceae), a new species from East Anatolia, Turkey. *Ann Bot Fennici* 42: 215-220.
- Hedge IC (1972). *Salvia* L. In: Tutin TG, Heywood VH, Burges NA, Valentine DH, Walters SM & Webb DA (ed.), *Flora Europaea* 3: 188-192. Cambridge Univ. Press.
- Hedge IC (1982a). *Salvia* L. In: Davis PH (ed.) *Flora of Turkey and the East Aegean Islands* 7: 400-461. Edinburgh Univ. Press.
- Hedge IC (1982b). *Salvia* L. In: Rechinger KH (ed.), *Flora Iranica* 150: 403-476, Akademische Druck und Verlagsanstalt, Graz.
- Huber-Morath A (1982). *Salvia nydeggeri* Hub.-Mor. nova species Sectio *Eusphace* Benth., *Bauhinia* 7(3): 181.
- İlçim A, Celep F & Doğan M (2009). *Salvia marashica* (Lamiaceae), a new pinnatisect-leaved species from Turkey. *Ann Bot Fennici* (in press).
- Pobedimova EG (1954). *Salvia* L. In: Schischkin BK (ed.), *Flora of the USSR* 21: 178-260. [translated from Russian] Israel Prog. Sci. Transl., Jerusalem.
- Post GE (1933). *Flora of Syria, Palestine and Sinai*. Beirut: American Press.
- Vural M & Adigüzel N (1996). A new species from Central Anatolia: *Salvia aytachii* M. Vural et N. Adigüzel (Labiatae). *Turk J Bot* 20: 531-534.