**Introduction**

Since *Sideritis* L. was revised by A.Huber-Morath for Flora of Turkey (1), four new species have been described from Turkey, *S. huber-morathii* Greuter et Burdet, *S. athoa* Papanikolau et Kokkini (2), *S. akmanii* Z.Aytaç, M.Ekici et A. Dönmez, *S. gulendamii* H.Duman et F.A. Karavelioğulları (3) and one species (*S. scardica* Griseb. subsp. *scardica*) was added new record for Turkey (4). *S. caesarea* and *S. vuralii* are described as new species in this paper and this increases the number of *Sideritis* species known from Turkey to 45. After *Origanum* L. was revised by J.H. Ietswaart for Flora of Turkey (1), *O. munzurense* Kit Tan et Sorger (2) and *O. husnucan- baserii* H. Duman, Z. Aytaç et A. Duran (3) have been described new to science from Turkey. 23 species are now known from Turkey. 17 hybrids of *Origanum* are known (5), five of which grow in Turkey (1). *O.xadanense* (*O. bargyli* Mouterde x *O. laevigatum* Boiss.) is described as a new hybrid in this paper.

*Sideritis caesarea* Duman, Aytaç et Başer spec. nov. (Sect.*Empedoclia* (Rafin.) Bentham) Fig.1, Map1.

Affinis *S. germanicopolitanae* Bornm. et *S. libanotica* Labill. subsp. *kurdicae* (Bornm.) Hub. Mor. sed ab *S. germanicopolitanae* foliis medianis caulini 3.5-8 x 0.3-1 cm (non 5-12 x 1-2 cm), bracteis medianis 1-1.5 x 0.7-1.3 cm (non 1-6 cm), calycibus 9-10 mm (non 9-13 mm), calycibus pilis longis simplicibus et brevibus glandulosis, corollis 10-12 mm (non 12-14 mm) distincta. Ab *S. libanotica* subsp. *kurdicae* foliis caulini 2-4-5 jugis (non 4-8-5 jugis), bracteis pilis glandulosis et eglandulosis pilosis (haud dense pilosis pilis eglandulosis tantum), calyce 9-10 mm, pilis glandulosis et eglandulosos obtecto (non circa 6 mm et dense albovilloso), calycis dentibus paulo longiore 3-4 mm (non 2.5-3 mm) differt.

Perennial, 30-50 cm, erect, simple or branched from the base. Stems shortly white villous-tomentose to glabrescent below, glabrescent to with short eglandular and glandular hairs above. Lower leaves distinctly petiolate, petioles 1-3 cm, glabrescent to villous-tomentose; lamina oblanceolate, 3-5 x 0.5-1 cm, finely serrate to crenate or entire, glabrescent to villous-tomentose, reticulately nerved. Middle cauline leaves linear to oblanceolate, sessile or shortly petiolate, 3.5-8 x 0.3-1 cm, entire or obscurely crenate-serrate, acute, reticulately nerved. Internodes to 10 cm long.

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**Key Words:** *Sideritis, Origanum, Labiatae, New species, Turkey*
Figure 1. *Sideritis caesarica*: A-habit, B-bract, C-calyx, D-flower, E-corolla.
Inflorescence simple or 2-3-branched, 10-25 cm, glabrescent to shortly glandular and eglandular hairy; verticillasters 4-6 (-10), 6-flowered, 2-6 cm distant. Middle bracts orbicular to cordate, acuminate, 1-1.5 x 0.7-1.3 cm including 3-7 mm acumen, glandular or eglandular, margin ciliate, prominently reticulate nerves. Calyx 9-10 mm, purplish; tube c. 6 mm, long simple and short glandular hairy; teeth triangular-lanceolate, acute, 3-4 mm, with glandular and eglandular hairs. Corolla yellow, 10-12 mm, hairy outside and inside, without brown markings, limb 2-3 mm. Nutlets triangular-ovoid, rounded at apex, glabrous, minutely tuberculate. Fl. and Fr. July-September. High mountain steppe, 1500-2400 m.

Type: Turkey, B6 Kayseri: Sarız, Yalak (Yeşilkent), Binboğa Dağı, Tekkekayasi mevkii, 1800-2200 m, yüksek dağ stebi, 4.viii.1991. Z.Aytaç 4310- H. Duman (holo- GAZI; iso- ESSE, ANK).


This species is similar to S. germanicopolitana and S. libanotica subsp. kurdica. From S. germanicopolitana, it differs middle cauline leaves 3.5-8x0.3-1 cm (not 5-12x1-2 cm); middle bracts 1-1.5 cm (not 1-6 cm); calyx 9-10 mm, long simple and short glandular hairs (not 9-13 mm, eglandular hairs); corolla 10-12 mm (not 12-14 mm). From S. libanotica subsp. kurdica, it differs cauline leaves 2-4-paired (not 4-8-paired); bracts glandular and eglandular hairy (not only with eglandular densely hairs); calyx 9-10 mm, long simple and short glandular hairy (not ca. 6 mm long and densely white-villous), calyx teeths 3-4 mm (not 2.5-3 mm). This new species was doubtfully identified by N. Çelik, R. İlarslan, B. Yıldız and Huber-Morath as S. libanotica subsp. kurdica before.

Sideritis vuralii Duman et Başer spec. nov. (Sect. Empedoclia (Rafin.) Bentham) Fig.2, Map1.

Affinis S. syriaca L. subsp. nusairiensis (Post) Hub.-Mor. et S. hololeucae Boiss. & Heldr. sed ab S. syriaca subsp. nusairiensis bracteis medianis calycum brevioribus, 0.4-0.6 x 0.4-0.7 cm (non 0.6-1 cm), calyxibus 6-7 mm (non 7.5-9 mm) longis et calyci dentibus 1-2 mm (non 2-2.5 mm) longis differt. Ab S. hololeucae foliis cauliniis medianis inferioribusque oblan-
Two New Species and A New Hybrid from Anatolia

Figure 2. *Sideritis vuralii*: A-habit, B-bract, C-calyx, D-corolla
ceolatis usque obovitis, lamina 3-5 cm (non orbicularibus usque suborbicularibus, lamina 1-2.5 cm longa), verticillastis 4-12 (non (1-) 2-5) differt.

Perennial, 30-70 cm, erect, branched, densely adpressed white-pannose, eglandular. Basal leaves numerous, forming a rosette, distinctly petiolate, petioles 2-4 cm; lamina ob lanceolate-spathulate or obovate, 1.5-5 x 0.5-2 cm, entire to finely crenulate-serrate. Middle cauline leaves ob lanceolate to obovate, lamina 3-5x0.8-1.5 cm, entire to minutely crenate, obtuse, abruptly constricted into petiole to 1.5 cm. Internodes to 12 cm. Inflorescence simple or 2-6-branched, 5-20 cm; verticillasters 4-12, (5-) 6-flowered, lowermost (0.5-) 2-5 (-6) cm distant, upper sometimes crowded. Middle bracts ovate-orniculate to cordate, appearing connate because of interlocking indumentum, densely white-pannose, eglandular, always shorter than calyx, 0.4-0.6x0.4-0.7 cm, mucronate, mucro 1-3 mm. Calyx 6-7 mm, densely eglandular arachnoid pilose; teeth triangular-lanceolate, obtuse to slightly acute, 1-2 mm long. Corolla yellow, c. 10 mm, hairy outside and inside, with brown striations inside; limb c. 3 mm. Nutlets triangular-ovoid, brown, glabrous, c. 2 mm. Fl. July-August. Calcareous rocky place, 1200-1900 m.


South Anatolia. Endemic. Mediterranean element.

This species is named in honour of Prof. Dr Mecit Vural a well-known phytosociologist and taxonomist at Gazi University, Ankara.

Origanum x adanense Başer & Duman hybr. nov.

(O.bargyli Mouterde x O.laevigatum Boiss.) Fig. 3, Map1.

Affinis O. laevigato Boiss. sed spiculis 10-20 x 7-12 mm (non 5-20 x 3-6 mm), bracteis 5-8 x 2-5 mm (non 3-6 x 0.5-2 mm), calycie 2-chilo. Ab O.bargyli Mouterde bracteis brevioribus 5-8 x 2-5 mm (non 5-17 x 3-13) et calycibus 5-6 mm, (non 5-8 mm) differt.

Subshrub. Young shoots hirtellous. Stems 30-50 cm, ascending erect, light or purplish brown, something hirtellous at the base (hairs to 1 mm long), otherwise glabrous. Branches of first order present in the upper 1/2-1/3 of the stems, up to 5 pairs per stem, (1-)3-5(-15) cm long. Leaves up to 15 pairs per stem, shortly petiolate or sessile, ovate to cordate, obtuse or acute, 8-25 x 5-15 mm, glaucous, green or purplish, glabrous or sparsely hirtellous or scabrous at least at the margins, sessile glands up to 300 per square cm. Spikes ovate to cylindrical in outline, 10-20 x 7-12 mm, erect or sometimes nodding. Bracts 4-8 pairs per spike, ovate to lanceolate or rhomboid, acute, 5-8 x 2-5 mm, glabrous or scabrous at the margins, partly purple. Flowers subsessile, pedicels 0.5-1 mm. Calyx 5-6 mm, outside glabrous, throats pilose; upper lips triangular, teeth c. 1 mm, lower lips approximately as long as upper lips, triangular-lanceolate, teeth c.2 mm. Corolla 2-lipped for c. 1/6 , 11-13 mm long, pink, not saccate, outside pilose. Stamens; the upper 2 included, the lower 2 shortly protruding; filaments c. 0.8-1 mm and 2-3 mm long. Fl. July. Pinus nigra clearings, 1100-1200m.


This new hybrid has become O. laevigatum Boiss. and O. bargyli. We found that the same locality with O. bargyli. O. x adanense similar to O. laevigatum as appearance which is distributed Amanos mountain and Cyprus. But, O. x adanense differs in its spicules 10-
Figure 3. *Origanum x adanense*: A-habit, B-bract, C-dissected calyx, D-dissected corolla; *O. bargyli*: E-bract, F-dissected calyx; *O. laevigatum*: G-bract, H-dissected calyx
20 x 7-12 mm (not 5-20 x 3-6 mm), bracts 5-8 x 2-5 mm (not 3-6 x 0.5-2 mm) and Calyx 2-lipped (not 1-lipped). From O. bargyli Mouterde, it differs bracts smaller (not 5-17 x 3-13 mm) and calyx 5-6 mm (not 5-8 mm).

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References