Stachys yildirimlii (Lamiaceae), a new species from south Anatolia, Turkey

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Stachys yildirimlii M. Dinç sp. nova (Lamiaceae) from Turkey is described and illustrated in line drawings. It belongs in subgen. Stachys sect. Ambleia and resembles S. cydni, from which it differs mainly in its crenate, oblong, obtuse and concolorous leaves, brown nutlets, and greenish indumentum. A distribution map of the new species is given. Nutlet coat surface of S. yildirimlii and S. cydni are displayed in SEM-photographs.

Key words: Labiatae, Stachys, taxonomy, Turkey

Stachys contains about 285 species (Bhattacharjee 1980, Davis et al. 1988, Heywood 1993, Hickey & King 1997, Duman 2000). It is a subcosmopolitan genus centred in the warm temperate regions of the Mediterranean and southwest Asia, with secondary centres in North and South America and southern Africa. There are two main centres of diversity in terms of species number. One is confined to south and east Anatolia, Caucasus, northwest Iran and north Iraq; the other is on the Balkan Peninsula (Bhattacharjee 1980).

Stachys was revised for the Flora of Turkey (Bhattacharjee 1982). Since then, nine new species have been added (Bhattacharjee 1974, Davis et al. 1988, Duman 2000) and S. inflata was removed from the flora of Turkey (Gemici & Leblebici 1998). Eighty-one Stachys species belonging to 12 subsections, 15 sections and two subgenera are at the moment known from Turkey (Bhattacharjee 1982, Davis et al. 1988, Gemici & Leblebici 1998, Duman 2000).

The authors collected some flowering Stachys specimens during an excursion in June 2004. Fruiting specimens of the same species were collected from the same locality in July 2004 to determine the systematic status of the taxon. After examining the specimens carefully, we concluded that they belong to sect. Ambleia. The specimens were compared with data from literature and the morphologically fairly similar species S. cydni, the only taxon of sect. Ambleia in Turkey, and which was collected from the type locality by the authors (Bhattacharjee 1974, 1980, 1982, Knorring 1977, Rechinger 1982, Gemici & Leblebici 1998, Duman 2000). We came to the conclusion that our specimens represented an hitherto undescribed species.

Stachys yildirimlii M. Dinç, sp. nova (Figs. 1, 2, 3C and D)

Affinis Stachys cydni sed planta tomentosa,

Fig. 2. Distribution of *Stachys yildirimlii* (▲) in Turkey.
Suffrutescent saxatile perennial. Flowering stems 10–20 cm, ascending, greenish, sometimes purplish above, densely tomentose with dendroid hairs. Cauline leaves petiolate, oblong to oblong-elliptic, 10–35 × 6–16 mm, crenate, narrowly or widely cuneate at base, obtuse at apex, tomentose above, densely greenish-tomentose below, petiole 4–14 mm. Floral leaves subsessile, lower sometimes similar to the cauline leaves, crenate and longer than verticillasters, upper lanceolate, apex acute, margin entire, shorter than verticillasters. Verticillasters 4–6(8) flowered, lower remote, 1–2.5 cm distant at anthesis, to 3.5 cm at fruiting time, upper approximate, up to 0.5 cm distant. Bracteoles linear, herbaceous, 3–7 mm, tomentose. Pedicels 1.5–3 mm. Calyx ± campanulate, sometimes purplish, 7–13 mm, not inflated, densely tomentose outside, distinctly 10-nerved. Teeth erect, subequal, tomentose outside, narrowly triangular-ovate to triangular-lanceolate, 2.5–5 mm, without or with purplish, and glabrous micro up to 0.6 mm. Corolla anululate, 12–16 mm, rose, tomentose outside, with sparsely dendroid hairs inside, tube subexserted. Stamens included, filaments ciliate from base to middle. Nutlets obovate-triangular, 2.2–2.3 × 1.1–1.2 mm, glabrous and brown. Flowering in June, mature fruits in July.

**ETYMOLOGY:** This species is named in honour of the eminent Turkish botanist Prof. Dr. Şinasi Yıldırımli (Biology Department, Hacettepe University) who is an expert on the flora of Turkey and has a private herbarium (Yıldırımli Herbarium) including about 30 000 specimens belonging to 5000 taxa from Turkey and Europe.
Table 1. Morphological comparison of *Stachys yildirimlii*, *S. cydni*, *S. inflata* and *S. kotschy*.

<table>
<thead>
<tr>
<th>Character</th>
<th><em>S. yildirimlii</em></th>
<th><em>S. cydni</em></th>
<th><em>S. inflata</em></th>
<th><em>S. kotschy</em></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cauline leaves</td>
<td>petiolate, oblong to oblong–elliptic, margin crenate, apex obtuse, 10–35 × 6–16 mm</td>
<td>subsessile, elliptic to lanceolate, margin entire, apex ± acute, 17–44 × 5–10 mm</td>
<td>sessile, lanceolate to narrowly elliptic, margin entire, apex ± acute, 8–40 × 3.5–12 mm</td>
<td>petiolate, ovate–elliptic, margin entire, apex obtuse, 15–20 × 10–20 mm</td>
</tr>
<tr>
<td>General indumentum</td>
<td>greenish–tomentose</td>
<td>densely felted white–tomentose strongly discolorous, white tomentose below, greenish above</td>
<td>densely felted white–tomentose discolorous, white tomentose below, greenish above</td>
<td>densely felted white–tomentose discolorous, white tomentose below, greenish above</td>
</tr>
<tr>
<td>Leaves indumentum</td>
<td>± concolorous, greenish</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Floral leaves</td>
<td>shorter than verticillasters</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Verticillasters</td>
<td>4–6(8) flowered, upper approximate, lower remote</td>
<td>2–6 flowered, remote</td>
<td>4–8 flowered, remote</td>
<td>4–6 flowered approximate, rarely remote</td>
</tr>
<tr>
<td>Calyx</td>
<td>7–13 mm, campanulate</td>
<td>8–16 mm, campanulate</td>
<td>8–17 mm, tubular, inflated</td>
<td>8–9 mm, campanulate setaceous</td>
</tr>
<tr>
<td>Bracteoles</td>
<td>linear</td>
<td>linear</td>
<td>linear–lanceolate pubescent</td>
<td></td>
</tr>
<tr>
<td>Filaments</td>
<td>ciliate not with papillae, and glandular hairs</td>
<td>ciliate with papillae, and glandular hairs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nutlets</td>
<td>obovate–triangular</td>
<td>oblong–triangular</td>
<td>obovoid</td>
<td>?</td>
</tr>
</tbody>
</table>
displays a minor disjunction in these regions (Bhattacharjee 1980, 1982). Many Stachys taxa grow here and some of them are endemic. Taxa such as *S. antalyensis* and *S. chasmosericea* from Antalya-Beşkonak, *S. anamurensis* from Mersin-Kızılalan, *S. cydni* from Mersin-Aslanköy to Çamlıyayla, *S. sericantha* and *S. aleurites* from Antalya vicinity, *S. longiflora* from Mersin-Güzel Dere, *S. euadennia* from Ermenek to Gülnar, *S. buttleri* from Antalya-Düden, *S. pseudopinardii* from Mersin vicinity, and *S. distans* var. *cili-cica* from Mersin-Silifke are local endemics and grow in restricted areas in the central part of the Taurus range (Davis *et al.* 1988, Gemici & Leblebici 1998, Duman 2000). *Stachys yildirimlii* also is a highly local endemic in this range.

*Stachys cydni*, which resembles *S. yildirimlii*, was described from Çamlıyayla and Aslanköy districts of Mersin province (Gemici & Leblebici 1998). According to our observations, this species grows in the range about 20 km from Cocakdere valley (Aslanköy) to Çehennemdere valley (Çamlıyayla) continuously. *Stachys yildirimlii* is restricted to only one locality along that range. The latter species is readily distinguished from *S. cydni*, which has a densely felted white-tomentose indumentum, as well as strongly discolorous and entire leaves. The morphological differences between *S. yildirimlii*, *S. cydni* and two other fairly similar species are given in Table 1.

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**References**


