

STEM PUBESCENCE IN THE SALVIA AZUREA VAR. AZUREA AND
VAR. GRANDIFLORA COMPLEX

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Bentham (1848), while describing Labiatae in DeCandolle's Prodomus, distinguished Salvia azurea Lam. with glabrous stems from S. pitcheri Torr. ex Benth. with tomentose, pubescent stems. Further, under S. azurea he described a var. grandiflora. S. longifolia Nutt. was cited as a synonym under var. grandiflora by Bentham. He remarked that although Nuttall described the stem as small, specimens cultivated from Nuttallian seeds attained a height of five feet.

Carl Epling (1939), in his revision of Salvia, subdivided the S. azurea complex into four subspecies: media, mexicana, pitcheri, and typica. He attributed appressed, retrorse pubescence to the stems of subsp. pitcheri (Benth.) Epl. (mostly western) and appressed, ascending pubescence (sometimes nearly absent) to the stems of subsp. media Epl. and subsp. typica Epl. (both mostly eastern in distribution). The subsp. media is characterized with elliptic, pubescent leaves and the subsp. typica is characterized with linear to lanceolate, glabrous leaves. He cited Louisiana as one of the areas for the distribution of these two subspecies.

In his description of S. azurea, Epling remarked that although the single characteristic which was most reliable for the segregation of eastern and western forms was the pubescence on the stem (whether retrorse or ascending), yet even here, there were exceptional specimens of subsp. pitcheri from one collection that had pubescence of both types.

The treatment of this complex by others has varied. Fernald (1952) treated S. pitcheri as a synonym under S. azurea var. grandiflora which he characterized as having short, recurving pubescence on the stem. Gleason (1963) did the reverse of Fernald and made S. azurea var. grandiflora a synonym under S. pitcheri. Correll and Johnston (1970) cited two varieties of S. azurea: var. azurea with ascending or spreading hairs on the stem and var. grandiflora Benth. (including S. pitcheri Torr. ex Benth.) with reflexed hairs on the stem. They also wrongly attributed the epithet S. pitcheri to Nuttall.

The authors made a study of the occurrence and nature of the pubescence on more than 70 specimens of this complex that are on deposit in the Northeast Louisiana University Herbarium. The degree of pubescence was variable from almost none to dense. The pubescence, when present, was found to occur in the following pattern: the

pubescence on the leaf, pedicel, and calyx was always ascending. In 16 specimens the pubescence on the stem and rachis was mostly ascending, rarely spreading. In 40 specimens, the hairs on the rachis were ascending but reflexed on the stem. In 5 specimens the hairs both on the stem and on the rachis were reflexed. In 11 specimens the hairs on the stem were found to be in a mixed condition such as ascending, reflexed, and spreading. All such variations were found at one internode or on adjacent internodes. In these 11 specimens the hairs on the rachis were ascending or reflexed. Basically following the interpretation of Correll and Johnston, we have included all such specimens that are nearly glabrous or bearing ascending and/or spreading hairs under the variety azurea and the specimens bearing reflexed hairs on the stem under the var. grandiflora. The mixed condition of hairs on the stem is probably due to the hybridization between the type var. azurea and the var. grandiflora and such specimens are included under the var. grandiflora. This mixed condition could point to a phenomenon called 'character displacement' (Luria et. al. 1981). As thus delimited, the var. azurea includes forms with elliptic and pubescent or glabrescent leaves and forms with linear to lanceolate and pubescent or glabrescent leaves. Hence, we could not follow Epling who classified these forms as subsp. media and subsp. typica.

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