

## THE GENUS *SISYRINCHIUM* IN OKLAHOMA

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Attention to the Oklahoma species of the genus *Sisyrinchium*, commonly known as blue eyed grass, was first called when several classmates in taxonomic botany ran down one specimen to three different species, and, strangely enough, found visible evidence to support their contentions among the mounted specimens. Work was started immediately to remedy the situation and to annotate the specimens in the Herbarium of the University of Oklahoma. On the basis of material already in the herbarium and fresh collections from various parts of the state, including those from the Wichita Mountains, the Ozark Mountains, the north central and southwestern parts of the state, a survey of the Oklahoma species, together with their distribution, was made.

A perusal of the literature was of little help since the work which had been done on the reported species was drawn from the mis-identified specimens. The keys on this genus in current manuals are unusually vague and lacking in definite characteristics for identification. The monograph of Eugene P. Bicknell on *Sisyrinchium* in *Eastern North America* was the most helpful, since it contained the original descriptions for five of the six reported species in this state. The six species in question are: *Sisyrinchium graminoides*, *S. Bushii*, *S. campestre*, *S. furcatum* and *S. angustifolium*. The latter two were not found in this work and are therefore reported to be absent in this state.

The blue-eyed grasses are perennial, scapose, usually tufted, grass-like herbs, with fibrous roots. The leaves are basal; the blades linear; each node bears a leaf-like bract; the flowers in terminal clusters arising from a spathe, which is composed of two heavy outer, and 2-6 soft membranous inner bracts. The sepals and petals are alike, forming six blue, white, or yellow floral leaves. The capsules are round or sub-globose.

*Sisyrinchium angustifolium*. Miller (Gard. and Bot. Dict. VII., 1759) gave a complete description from cultivated specimens grown in England, and is given credit for the naming. It is variously known as *S. Bermudiana*, *S. gramineum*, *S. anceps*, and *S. angustifolium*, but the latter is the only correct *nomen*. The plant has very narrow, winged leaves, with a solitary, unjointed scape, standing erect and slightly longer than the leaves. The bracts are often purplish, and unequal with the outer usually twice as long as the inner bracts. The flowers are the typical bluish-purple color.

This species seems to be one of northeastern North America, common in New England, but it has been reported also from the Rocky Mountains. Its absence in Oklahoma is substantiated by reports from Texas (V. L. Cory, Bull. Agri. Exper. Sta., "Catalogue of the Flora of Texas," 1937) and from Missouri ("An Annotated Catalogue of the Flowering Plants of Missouri," 1935 by Palmer and Steyermark) both of which indicate the absence of *S. angustifolium* in those states.

*Sisyrinchium furcatum*. Bicknell reports that this species was found in Muskogee County in 1891 by M. A. Carleton. The work done failed to substantiate this report, and again was in accord with Palmer and Steyermark's work in Missouri. This plant is found in Louisiana, southern Arkansas, and extreme eastern Texas, thus further indicating the doubtfulness of the report.

A key to the four species found in Oklahoma.

A. Bracts of the spathes equal or nearly so.

B. First node usually above the center of the scape. Plants above 18 cm. high. Leaves approximately  $\frac{1}{2}$  as tall as the scape. Nodes non-geniculate. Habitat variable, usually open glades and meadows over the entire state. . . . . *S. graminoides*

BB. First node, of at least some of the scapes, below the center. Plants less than 18 cm. high. Scapes semi-erect and nodes geniculate. Leaves nearly as tall as the scapes. Also statewide in distribution. Very common in central Oklahoma. Dry meadows . . . . . *S. Bushii*

AA. Bracts of the spathes unequal.

B. Scape simple and terminated by a sessile spathe. Outer bract of spathe with free edges. Not common, found in the eastern part, in the Arbuckles, and in Muskogee County. This is one of the more frall species of blue-eyed grasses. *S. campestre*

BB. Scape branched with 2-3 terminal spathes. Scape 15-30 cm. high. Damp shady ravines in eastern and central Oklahoma. *S. varians*