

## A NEW SPECIES OF *PANICUM* (GRAMINEAE) FROM ARIZONA

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### ABSTRACT

*Panicum mohavense* is described as new from Mohave Co., Arizona, U.S.A. It appears to be most closely allied to the *Capillaria* group of the genus, but differs in being less than 10 cm tall, having panicles which are overtopped by the leaves, and upper glume and sterile lemma which scarcely cover the upper floret rather than being pointed beyond it.

KEY WORDS: Gramineae, *Panicum*, Arizona

In 1986, Ralph K. Gierisch sent collections of a tiny unnamed *Panicum* to the University of Arizona Herbarium. Because of the small size and congested growth habit of these plants, we considered them to be depauperate forms of some known species, and were reluctant to suggest a name until more material was available. Subsequent collections by Gierisch in 1988 and 1989, from the same general area, were essentially identical to those first received in 1986.

Before deciding whether the tiny plants represented a known species or were new to science, we were anxious to see them in the field. To this end, Gierisch kindly supplied us with detailed instructions on how to reach his collection site, and in September and October of 1990 we were able to see this little *Panicum* in its native habitat. Fortunately, we were able to find it in good condition in several localities, all within a somewhat restricted area. Along with herbarium specimens, small plants were preserved in the standard 3:1 absolute alcohol:acetic acid fixative for cytological examination. Acetocarmine squashes of anthers revealed that the plants are diploid with  $2n = 18$  chromosomes. After seeing the plants in the field and studying our collections, along with those of Gierisch, in detail, we have concluded that they represent a species new to science; it is described below.

*Panicum mohavense* J. Reeder, *sp. nov.* TYPE: UNITED STATES. Arizona: Mohave Co., Arizona Strip: Main Street Valley, ca. 1.5 km S of



the jct. of the Colorado City road with the Main Street Valley road. Low hills with limestone terraces, ca. 1525 m, 11 Oct 1990, J.R. & C.G. Reeder 8630 (HOLOTYPE: ARIZ; Isotypes: US,K,MO).

Gramen annuum ad 10 cm altum; panícula confertiflora foliis superata; spiculae circiter 2 mm longae, gluma inferior  $\frac{1}{3}$  spiculae aequans; apex lemmatis superioris apicem glumae superioris et lemmatis inferioris aequans vel vix brevior.

Annual, much branched at base, 2-6(-8) cm tall. Culms 1 noded, papillose-pilose, mostly obscured by the leaves. Leaves: sheaths prominently veined, papillose-pilose; ligule 0.2 mm long, membranous, with short cilia; blades 1-4 cm x (1-)2-3 mm, flat, tapering from about the middle to an acuminate apex, glabrous on both surfaces, or sometimes papillose-pilose abaxially, the margins with long papilla based cilia. Inflorescences short congested panicles, partially included in the sheaths, never exceeding the tips of the longest leaves. Spikelets ca. 2 mm long, plump; lower glume uninerved, ca.  $\frac{1}{3}$  as long as the spikelet, clasping, the apex rounded, obtuse, or acute; upper glume and lemma of the lower floret equal, 7 nerved, covering, but scarcely exceeding the apex of the upper floret, the lemma lacking a palea; upper floret ca. 1.5 mm long, smooth and shining, yellow or brownish when mature; stigmas and anthers purple, the latter ca. 1 mm long. The species appears to be endemic to limestone terraces in Mohave County, Arizona.

Additional collections of *Panicum mohavense*, all from the Main Street Valley area, Mohave Co., Arizona: Rocky loam from limestone, slope  $\pm$  20% SW, 5000 ft. (1525 m) T38N R11W S15, 6 Oct 1986, R.K. Gierisch 4923 (ARIZ,ASU); Rocky gravelly loam-limestone, slope  $\pm$  10% NW, late season - leaves dry, 22 Oct 1988, R.K. Gierisch 5108 (ARIZ,ASU); Rocky gravelly loam-limestone, slope  $\pm$  10% W to NW 5000 ft. (1525 m), 24 Oct 1989, R.K. Gierisch & J. Rappleye 5114 (ARIZ). Along the St. George to Mt. Trumbull road, ca. 1 km N of its jct. with the Colorado City road, on limestone terraces of a gentle WSW facing slope with scattered sagebrush, 1525 m, 19 Sep 1990, J.R. & C.G. Reeder 8607 (ARIZ); 10 Oct 1990, 8620 (ARIZ). Along the Colorado City road, 6 km E of its jct. with the St. George to Mt. Trumbull road, on limestone terraces of a moderate NW facing slope with scattered sagebrush, 1450 m, 19 Sep 1990, J.R. & C.G. Reeder 8610, chromosome voucher (ARIZ); 10 Oct 1990, 8625 (ARIZ). Along the Colorado City road, ca. 5 km E of its jct. with the Main Street Valley road; scattered plants on terraces on both sides of canyon, 1450 m, 10 Oct 1990, 8623 (ARIZ). Along the Colorado City road, ca. 7 km E of its jct. with the Main Street Valley road. The most easterly of the limestone hills and slopes between Main Street Valley and the open grassy flats, 1370 m, 11 Oct 1990, J.R. & C.G. Reeder 8634 (ARIZ).



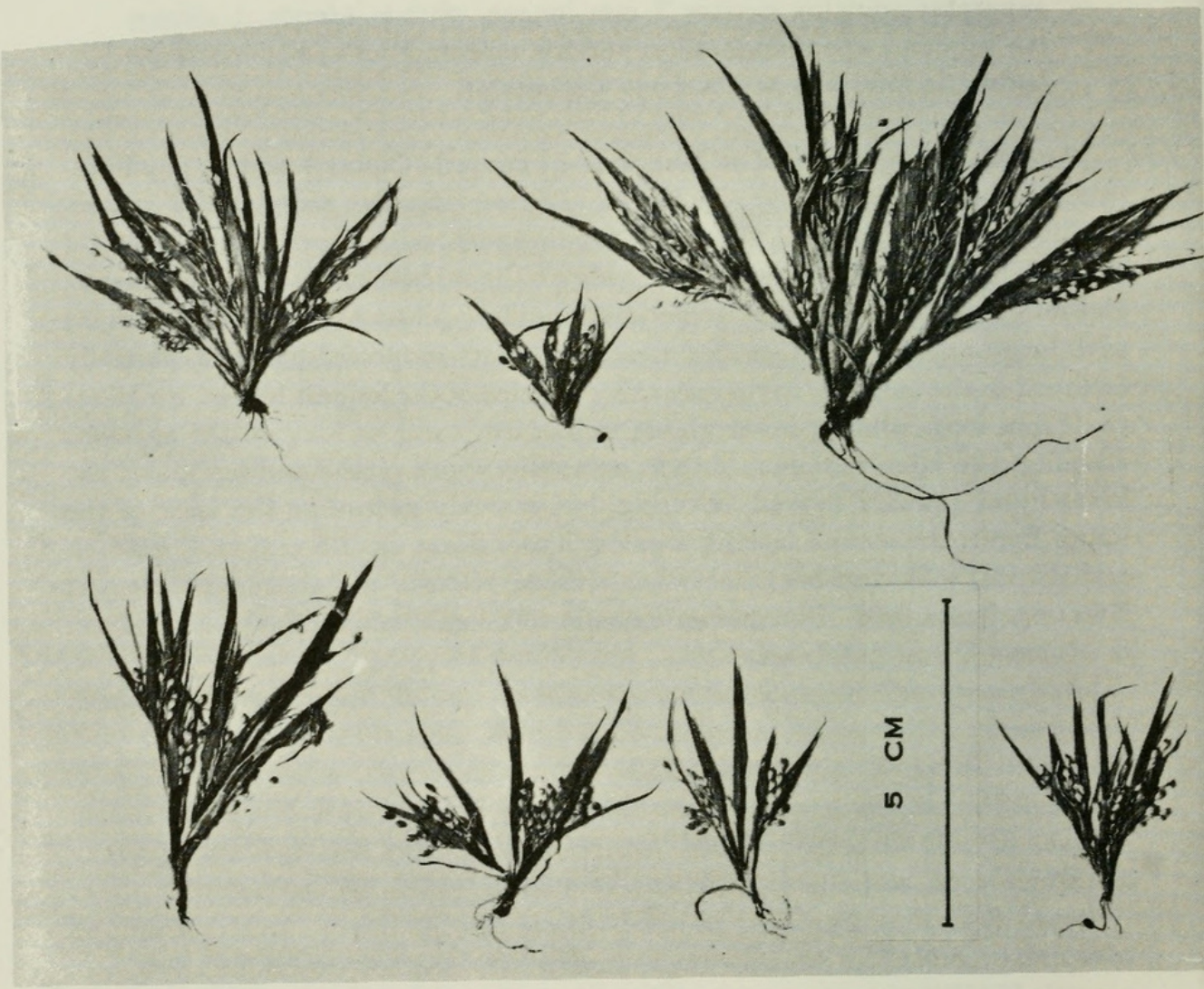


Figure 1. Plants of the type collection of *Panicum mohavense* (J.R. & C.G. Reeder 8630).

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