



Status: State threatened

Global and state rank: G5/S2

Other common names: Leiberg's rosette grass, panic-grass or panic grass

Synonyms: *Panicum leibergii* (Vasey) Scribner, *Panicum scoparium* Lam. var. *leibergii* Vasey, *Panicum scribnerianum* Nash var. *leibergii* (Vasey) Scribn.

Family: Poaceae (also known as Gramineae; grass family)

Taxonomy: This taxon has long been known in the genus *Panicum*, which has been thoroughly revised, with several species now referred to the genus *Dicantherium* (*Panicum* subgenus *Dicantherium* Hitchc. & Chase), a treatment reflected in the Flora of North America series (FNA 2003). Dore and McNeill (1980) recognized two varieties of *P. leibergii*, var. *baldwinii* Lepage and var. *leibergii* Scribner, with Michigan plants referred to the latter.

Total range: This panic grass is primarily a Great Plains species, distributed from Alberta to Kansas and ranging east to Ontario, New York, and Pennsylvania. It is considered rare in Alberta, Illinois, Indiana, Kansas,

New York, Ohio, Ontario, and Saskatchewan, and is classified as extirpated in Pennsylvania (NatureServe 2003).

State distribution: This prairie species ranges mostly across the southern two tiers of counties in the Lower Peninsula, where it is limited to fewer than twenty-five prairie remnants with sparse and often quite localized colonies. It was noted as abundant on Harsen's Island by C. K. Dodge in 1899, but has not been documented there since 1961, when it was reported as rare.

Recognition: Stems of *D. leibergii* grow solitary or in loose tufts or rosettes, ranging from 3-6 dm in height. The **hairy leaf blades**, which are **less than 15 mm wide (the longest of which are less than 15-20 times as long as wide)** arise along the stem and do not appear to be crowded toward the bottom of the plant. There is also a **basal rosette composed of small stubby leaves**. The leaf sheaths are shorter than the internodes, and as in several other species of *Panicum* are pubescent with soft spreading hairs. Terminating the stem is a slender to **narrowly ovoid** (5-15 mm long) panicle of spikelets, with secondary panicles sometimes arising from the upper leaf axils. Each spikelet is elliptic to obovoid (3-4 mm long), conspicuously nerved, and **covered with long soft hairs** up to ca. 1 mm in length. **The first glume, the tip of which reaches**



at least to the middle of the spikelet, is narrowly ovate. Of the many species of panic grasses known in Michigan, this is most likely to be confused with *D. oligosanthos* or *D. xanthophysum*, which may occur in the same habitats. In contrast, both of these species have spikelets with short hairs or pubescence, lacking the long spreading hairs present on the spikelets of *D.*



Photo by Ryan P. O'Connor

Close-up of spikelet

leibergii. *D. xanthophysum* has hairless leaf blades. In *D. oligosanthos* the first glume is broadly ovate and its tip is below the middle of the spikelet.

Best survey time/phenology: Flowering/fruitlet plants are required for identification. Michigan data indicate that this species has been observed in flower primarily from early to late-June, with fruiting plants usually observed in July and occasionally in August or rarely as late as September.

Habitat: In Michigan, Leiberg's panic grass inhabits a variety of dry to wet (but primarily mesic) prairie remnants, including such natural communities as dry sand prairie, hillside prairie, and oak openings, and often occurring in prairie remnants in railroad rights-of-way. Common associates may include such characteristic species as *Andropogon gerardii* (big bluestem), *Schizachyrium scoparium* (little bluestem), *Sorghastrum nutans* (Indian grass), *Stipa spartea* (needle grass), *Euphorbia corollata* (flowering spurge), *Monarda fistulosa* (wild bergamot), *Solidago rigida* (stiff goldenrod), *Liatris aspera* (rough-leaved blazing star), and *L. cylindracea* (cylindrical blazing star), among many other prairie species. In the Chicago region, this grass is considered typical of dry prairies, where it occurs with such associates as big bluestem,

little bluestem, *Aster ericoides* (heath aster), *Aster laevis* (smooth aster), *Ceanothus americanus* (New Jersey tea), flowering spurge, *Heuchera richardsonii* (alum root), *Lespedeza capitata* (prairie bush-clover), *Lithospermum canescens* (hoary puccoon), and *Phlox pilosa* (hairy phlox) (Swink and Wilhelm 1994). Elsewhere in its range this species is a characteristic plant of dry prairie and open woodlands.

Biology: *D. leibergii* is a perennial that develops a winter rosette. Kirsch and Kruse (1972) found that the cover of *D. leibergii* increased significantly following management with prescribed spring fire.

Conservation/management: Most of Michigan's colonies of this species have been severely impacted by the severe degradation and loss of Michigan's prairies. One sizeable colony is protected within a Michigan Nature Association preserve and two other sites with moderate numbers of plants are leased and managed as preserves by The Nature Conservancy. Management of *D. leibergii* populations should include prescribed burning to maintain their vitality, prevent woody and invasive plant establishment, and for the general perpetuation of open prairie habitat.

Research needs: The scarcity of this species in Michigan is related to the general loss and fragmentation of habitat as well as the lack of natural processes necessary to perpetuate Michigan's remnant prairies. In addition to continued inventory to document prairie remnants and prioritize sites for conservation, restoration research will be required to determine the optimal techniques for maintaining viable sites.

Related abstracts: Dry sand prairie, oak barrens, oak openings, purple milkweed, Sullivant's milkweed, Hill's thistle, Gattinger's gerardia, prairie buttercup, eastern box turtle, Karner blue butterfly, red-legged spittlebug

Selected references:

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