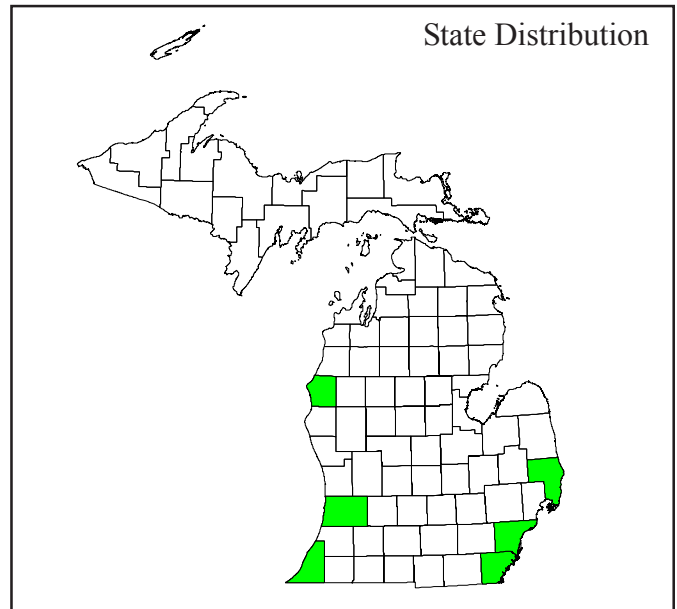
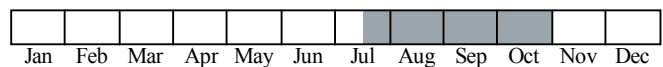


Robert H. Mohlenbrock @ USDA-NRCS PLANTS Database



Best Survey Period



Status: State threatened

Global and state rank: G4G5/S1S2

Other common names: short-fruit rush, rush

Family: Juncaceae (rush family)

Total range: *Juncus brachycarpus* occurs on the Atlantic Coastal Plain from Massachusetts to Texas (excluding Florida) and inland to Kansas, Oklahoma, and the Midwest, including southern Ontario. It is considered rare in Georgia, Illinois, Kansas, New York, North Carolina, Virginia, and Ontario and is known only from historical records in New Jersey and West Virginia (NatureServe 2003).

State distribution: Short-fruited rush, which reaches its northern range limit in Michigan, is known from 13 localities, occurring primarily in southeastern Lower Michigan, the majority in Wayne County (seven sites), with two sites in Monroe County and one site in St. Clair County. Elsewhere there are single localities in southwestern Michigan in Berrien and Allegan counties, with the state’s northernmost locality occurring in Mason County. All but four of these records have been discovered since 1989, particularly during inventories of lakeplain wet prairie remnants and other natural

communities with a similar floristic composition, such as coastal plain marshes.

Recognition: *Juncus brachycarpus* is perennial forb, producing erect stems from stout rhizomes. The **leaves of this rush are round in cross-section and have firm interior cross-partitions (septa)**, which can be easily detected by pinching a leaf or by pressing and running a fingernail across its length. The stems terminate in a loose to somewhat dense cluster of **bristly, spherical, brownish flower heads**. Each tiny flower, which **contains three stamens, produces an ovoid fruit capsule that is much shorter than the sharp-pointed, bract-like flower sepals and petals**, and thus is mostly hidden by them. **The seeds lack the elongate “tails”** present in some rush species. *J. scirpoides* is a very similar species that can be distinguished from *J. brachycarpus* by its capsule, which tapers to a small but strongly beaked tip and distinctly exceeds the petals. *Juncus* is a diverse genus in Michigan with more than two dozen species, and several are superficially similar. However, in *J. brachycarpus* the combination of round leaves with cross partitions, spherical flower heads, and sharp-pointed sepals and petals (sometimes termed “tepals”), as well as seeds that lack tails enable it to be distinguished from all other Michigan rushes.



Best survey time/phenology: This species has been documented from about mid-July through late October, which is when this species is best sought. Older persistent culms can be identified by experienced botanists considerably later, though such surveys would not be considered reliable with respect to conducting status assessments.

Habitat: Most recent collections of this species have been identified in lakeplain wet prairies and lakeplain wet-mesic prairies, where this species is often associated with several additional rarities, including coastal plain disjuncts. In Wayne County, where the majority of the state occurrences have been documented, short-fruited rush has been found wet, sandy depressions in sites that are seasonally inundated. Associates include such species as *Sorghastrum nutans* (Indian grass), *Andropogon gerardii* (big bluestem), *Spartina pectinata* (prairie cordgrass), *Rhynchospora capitellata* (beak-rush), *Juncus biflorus* (two-flowered rush), *Aletris farinosa* (colic-root), *Aristida longespica* (three-awned grass), *Quercus palustris* (pin oak), *Ludwigia alternifolia* (seedbox), *Salix humilis* (prairie willow), *Aster umbellatus* (flat-topped aster), *Euthamia graminifolia* (grass-leaved goldenrod), *Carex pellita* (sedge), *Cladium mariscoides* (twig-rush), *Andropogon virginicus* (broom-sedge), *Spiranthes cernua* (ladies' tress orchid) and numerous other prairie and coastal plain species.

One of several specimens from Monroe Piers came from the "sandy shore of Lake Erie". The Mason County populations grows in deep muck (over fine sand) on the margin of a seasonally inundated swale flanked by low sand ridges supporting sparse jack pine and aspen. There *Juncus brachycarpus* grows with *Spartina pectinata* (prairie cordgrass) — the dominant species — and *Lobelia spicata*, (spike lobelia), *Viola lanceolata* (lance-leaved violet), *A. simplex* (panicked aster), *Juncus effusus*, *J. canadensis*, *J. greenei*, *J. acuminata*, *J. vaseyi* (rushes), *Scirpus atrovirens* (bulrush), *Ludwigia palustris* (marsh purslane), *Salix interior* (sandbar willow), *Ilex verticillata* (Michigan holly), and *Spiraea alba* (meadowsweet). In the Chicago area this rush occurs in sandy swales, prairies, and old fields. Associates there include *Juncus greenei* (rush), *Panicum virgatum* (switch grass), *Lycopus americanus* (water horehound), and *Lythrum alatum* (winged loosestrife).

Elsewhere in the eastern U.S., the species inhabits moist sand, clay, or peat soil in ditches, marshes, savannas, and ponds.

Biology: *Juncus brachycarpus* is a rhizomatous perennial rush.

Conservation/management: The habitat of the short-fruited rush is undoubtedly sensitive to hydrologic disturbances and could in some cases (e.g., prairies) require fire management to retain its open character. The Mason County locality is on National Forest land and is recognized as a special management area to protect the habitat of *Juncus brachycarpus*, *J. vaseyi*, and other rarities within a large wet meadow complex. In addition, portions of a high quality lakeplain wet prairie remnant in Wayne County are being managed via prescribed fire and other management activities directed toward restoring hydrology and eliminating non-native invasive plants.

Research needs: Relatively little is known about this species in Michigan, and thus continued inventory as well as monitoring populations to determine their responses to experimental management activities would assist in conservation.

Related abstracts: Coastal plain marsh, lakeplain wet prairie, lakeplain wet-mesic prairie, oak barrens, Gattinger's gerardia, Skinner's gerardia, three-awned grass, chestnut sedge, Leiberg's panic grass, smooth beard tongue, few-flowered nut-rush, purple milkweed, Sullivant's milkweed, Hill's thistle, northern appressed clubmoss, Eastern prairie fringed orchid, Allegheny plum, meadow-beauty, blazing star borer, culver's root borer, eastern box turtle, red-legged spittlebug, Silphium borer

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