

***EREMOCHLOA OPHIUROIDES* (POACEAE) —  
DISTRIBUTION AND COLLECTION CHRONOLOGY  
IN THE UNITED STATES**

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**ABSTRACT**

The east Asian grass *Eremochloa ophiuroides* was introduced to the United States as far back as the 1920s. Specimen data indicate that it was originally grown in agronomy plots, forestry plantations, and Soil Conservation Service Experiment Stations in several states. Soon after, it entered the horticultural trade and was planted in lawns; thus began a period of slow spread in the southeastern USA. The pace of spread increased in the 1980s and was augmented by use in roadside seeding projects.

Centipede grass (*Eremochloa ophiuroides* (Munro) Hackel), native to southeastern Asia, was introduced to the United States as a lawn grass, according to Hitchcock and Chase (1951). It is a perennial, long-stoloniferous, mat-forming grass with short, distichous leaves held parallel to the ground. Inflorescences are deep red or red-brown, spikelike, and held erect on slender stalks (Figures 1-3).

My interest in this species comes from the fact that it was a late addition to the North Carolina flora, just as the Manual of the Vascular Flora of the Carolinas (Radford, Ahles, & Bell 1968) went to press in 1968. The authors recorded it from only two counties in each state. Since then, however, it has spread widely and rapidly in both states and now is one of the most abundant species of mown roadsides. In this paper I track the chronology of its spread in the USA and suggest its original introduction points.

Approximately 220 specimens of centipede grass were examined online at SERNEC (2019) and the following data extracted: state, county, habitat, date, collector and number, and repository. Additional counties of occurrence were taken from various state atlases and from BONAP (Kartesz 2019). Distribution maps were prepared utilizing a program developed by Mike Lee (2019).

**Results**

Map 1 displays the overall distribution of centipede grass in the USA. Maps 2-5 display decade-by-decade spread of the species, as reflected by specimen collecting dates. Centipede grass is now naturalized on the Coastal Plain from southeastern Virginia to southern Florida, eastern Texas, and southern Arkansas; scattered records exist inland to western South Carolina, eastern Tennessee, northeastern Alabama, north-central Arkansas, and southeastern Missouri (Map 1). It is disjunct to western Massachusetts.

Locality data for the earliest collections per state are given here.

**Alabama:** 1958, roadside in Lillian, Baldwin Co. 1959, agronomy farm, Auburn University, Lee Co. 1969, near forestry plots, Auburn University, Lee Co.

**Florida:** 1925, introduced at Belle Glade Experiment Station, Palm Beach Co. 1932, no habitat, Fern Park, Seminole Co. 1934, cultivated, no locale, Orange Co. 1934, oak woods, Highlands Hammock, Highlands Co.

**Georgia:** 1937, forest plantation #20, N of Quitman, Brooks Co.

**Louisiana:** 1967, roadside at railroad crossing, St. Tammany Par.

**Massachusetts:** 1980, back yard disturbed area, Franklin Co.

**Mississippi:** 1951, planted in lawn, Adams Co. 1957, lawn in Lucedale, George Co.

**Missouri:** 1997, cultivated grass in lawn, Clearmont Street, Poplar Bluff, Butler Co.

**North Carolina:** 1941, planted and grown in nursery at Soil Conservation Service, Chapel Hill, Orange Co. 1967, Methodist College campus lawn, Cumberland Co.

**South Carolina:** 1943, introduced to yard, Hartsville, Darlington Co. 1961, roadside CR 27 at CR 23, Lancaster Co.

**Tennessee:** 1956, 204 Gadd Road, Chattanooga, Hamilton Co. 1960, cultivated at University of Tennessee Farm, Knox Co.

**Texas:** 1947, 3610 Windsor Road, Austin, Travis Co. 1968, lawn at Meadow Lane, Bryan, Brazos Co.

**Virginia:** 1995, parking lot, False Cape State Park, Virginia Beach City.

From the above it can be seen that centipede grass was indeed planted early on in lawns. However, other means of introduction are noted, and these often are the oldest in a given state. The earliest Georgia record (1937) is from a forestry plot, as is a 1969 specimen from Alabama. An even earlier specimen from Alabama (1959) was collected from a university agronomy farm, as was a 1960 specimen from Tennessee, and the earliest specimen from North Carolina (1941) was from a Soil Conservation Service nursery, just off campus from UNC-Chapel Hill. Finally, the first Florida specimen (1925) was collected in an Experiment Station in Palm Beach County.

From the available historical record, it would appear that *Eremochloa ophiuroides* was first grown in various agronomy farms, experiment stations, and forestry plantations, perhaps as a means of "testing" its suitability to local conditions. Then it soon became available to private landowners, which increased the distribution of the species. As far as the specimen record indicates, geographical spread appears to have been slow through the 1950s (Map 2), moderate through the 1970s (Map 3), and rapid in the 1980s and more recently (Maps 4-5).

One final means of spread, not mentioned above, is that of state departments of transportation, or highway departments — deliberate planting on major highway medians and shoulders and on mown sides of secondary roads. For example, centipede grass has been part of roadside seed mixes in North Carolina since the late 1980s (R. Badgett, NCDOT, pers. comm.). It is highly likely that recent use (since the 1980s) of centipede grasses in seed mixes has augmented the rapid spread in North Carolina and perhaps other states.

#### ACKNOWLEDGEMENTS

A study of this nature could not have been done without the countless hours of specimen data entry into the SERNEC website; thanks to herbarium managers and data entry people. Thanks to John Kartesz for his many years of critical work in maintaining the BONAP database. I thank Mike Lee for developing the county-level mapping program.

**LITERATURE CITED**

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Figure 1. *Eremochloa ophiuroides*. Large population dominant on open roadside. Moore Co., North Carolina.



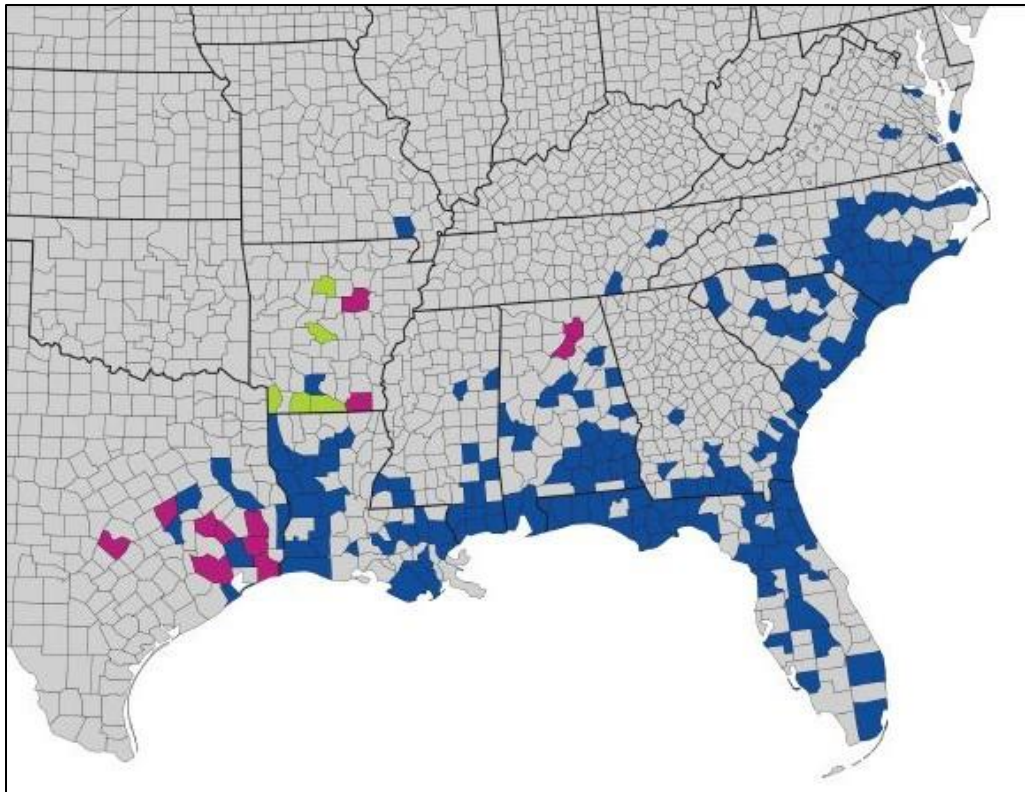


Figure 2. *Eremochloa ophiuroides*. Flowering culms. Moore Co., North Carolina.

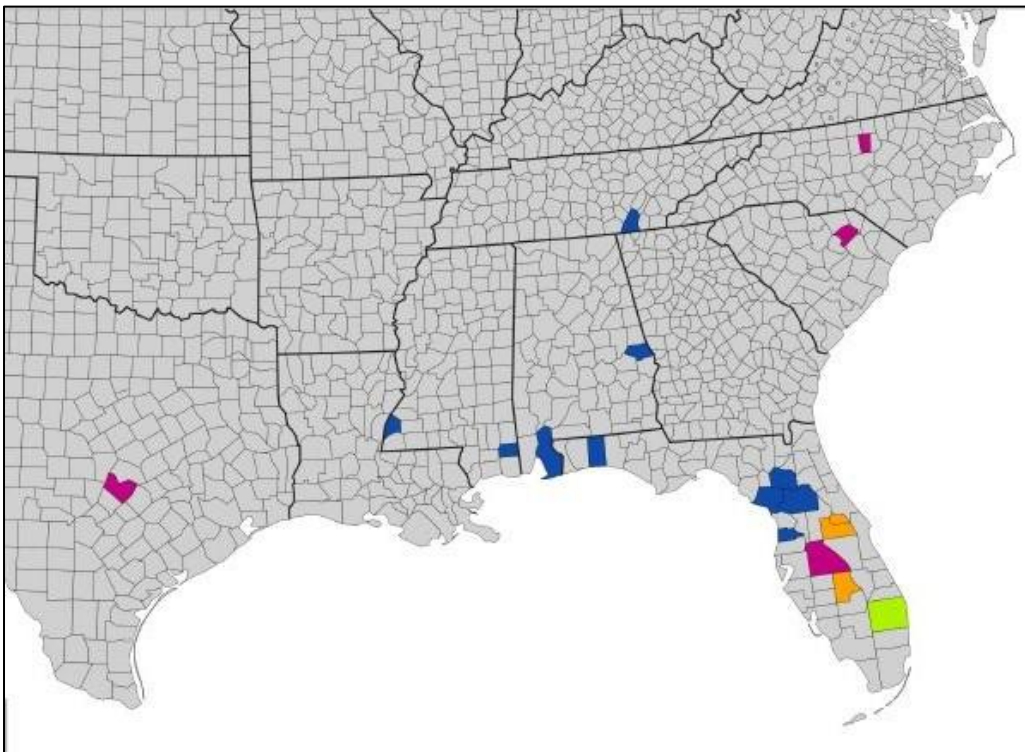


Figure 3. *Eremochloa ophiuroides*. Prostrate stem and leaves. Moore Co., North Carolina.

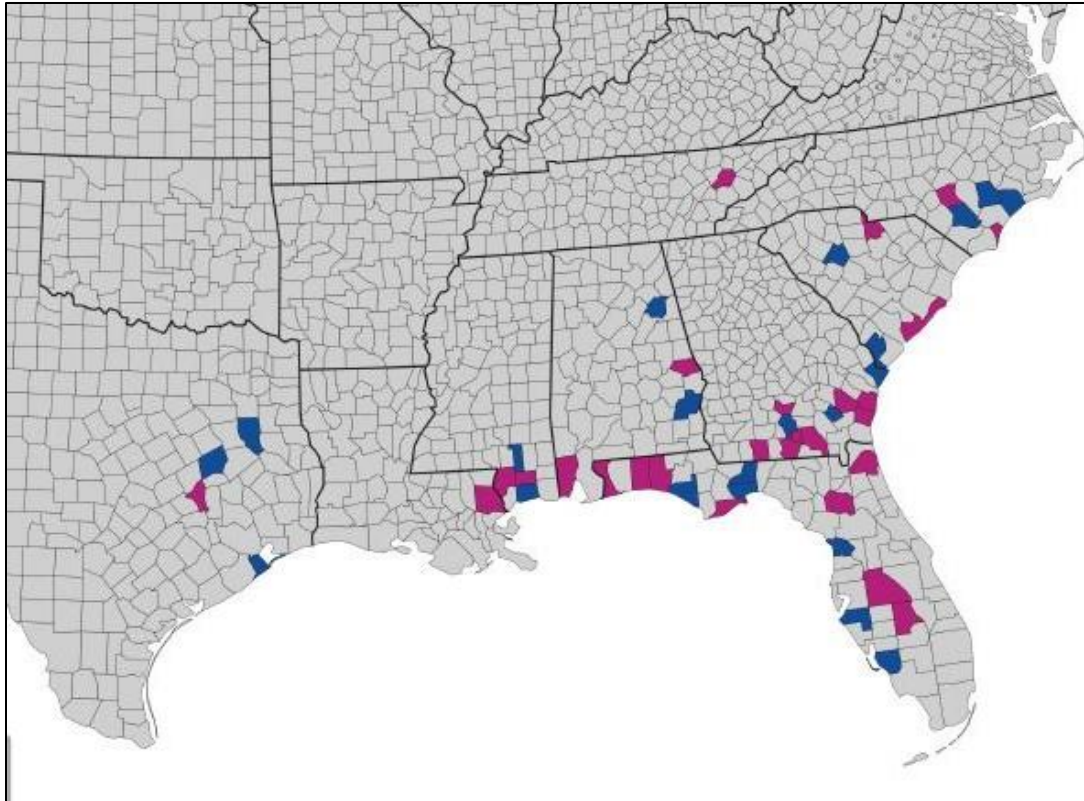




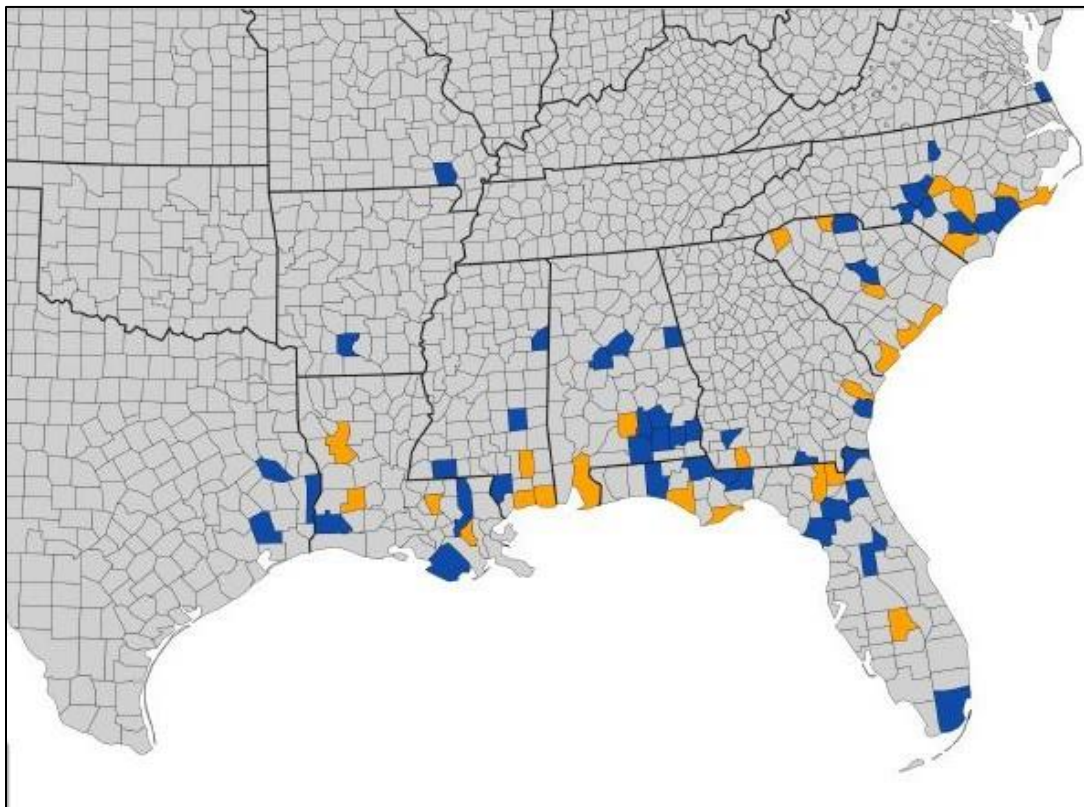
Map 1. Distribution of *Eremochloa ophiuroides*. Blue = specimen record from herbaria or SERNEC. Green = state plant atlas. Red = BONAP map.



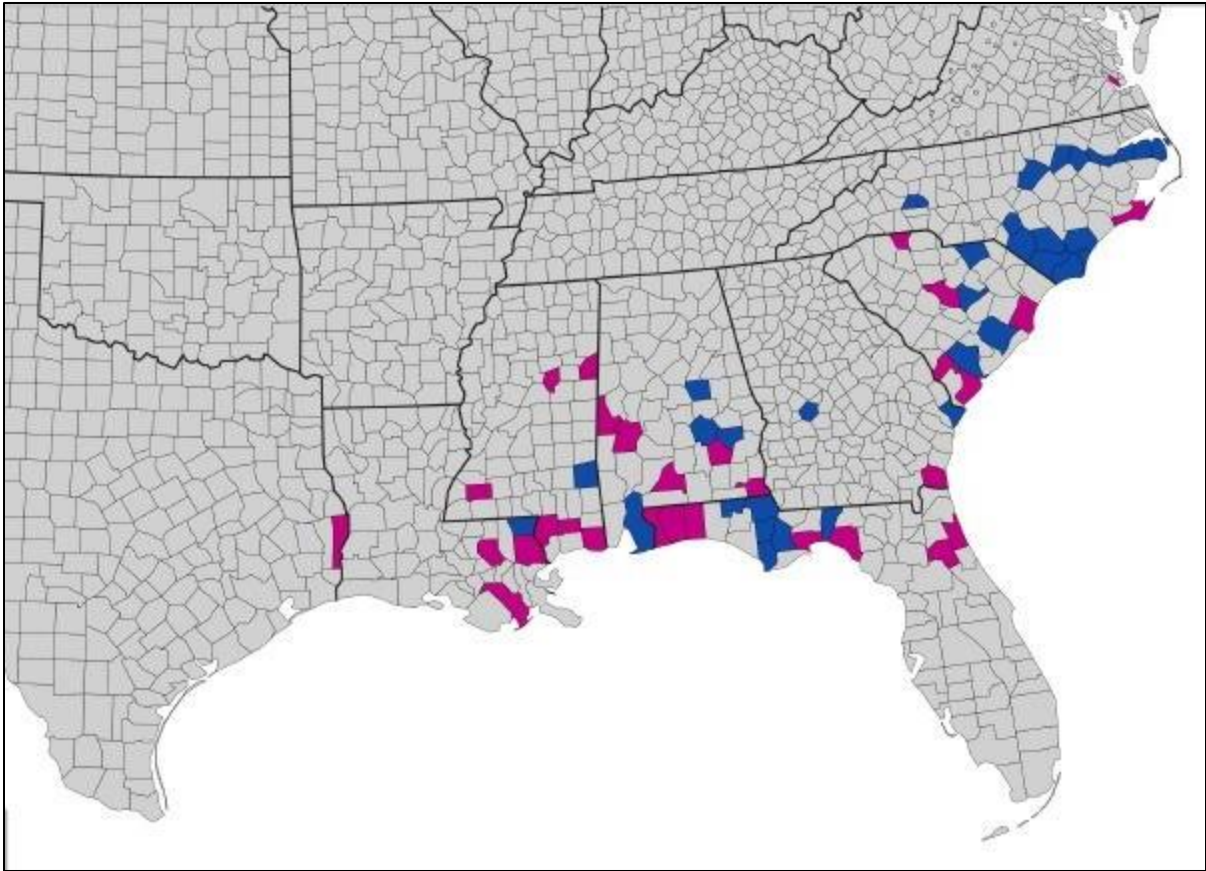
Map 2. Collections of *Eremochloa ophiuroides*, 1920-1959. Green = 1920s. Orange = 1930s. Red = 1940s. Blue = 1950s.



Map 3. Collections of *Eremochloa ophiuroides*, 1960-1979. Red = 1960s. Blue = 1970s.



Map 4. Collections of *Eremochloa ophiuroides*, 1980-1999. Orange = 1980s. Blue = 1990s.



Map 5. Collections of *Eremochloa ophiuroides*, 2000-2019. Red = 2000s. Blue = 2010s.