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## NOTES ON THE VASCULAR FLORA OF TENNESSEE, PARTICULARLY OF THE NORTHWEST HIGHLAND RIM, II

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## ABSTRACT

New distributional data are presented for 24 species of vascular plants previously reported for but of limited occurrence within Tennessee and two taxa, *Leptoloma cognatum* (Schul.) Chase and *Sonchus arvensis* L. are first reported or verified for the state.

## INTRODUCTION

Until recently the synopsis of Gattinger (1901) and the checklists of Sharp *et al.* (1956, 1960) have been the only state-wide accounts of the Tennessee seed plants. Both have been important to those interested in the state flora but the Gattinger work is now of historical significance only and the checklists are limited in two ways: (1) they were not formally published and hence not widely distributed or always readily available and (2) for the most part they are based only upon specimens in the State Herbarium.

Numerous reports of new taxa, additional distributional data, taxonomic revisions, and nomenclatural changes since 1960 mandated a revised checklist and such was initiated by Evans *et al.* (1974) in the form of an atlas. This atlas, which is being published in installments (Wofford and Evans, 1979a, 1979b; Wofford, 1980), endeavors to synthesize available information and update the checklists by including new State Herbarium records, the sizeable Vanderbilt University holdings, and pertinent literature reports. Also, non-flowering vascular plants are included and taxonomy and nomenclature are revised to correspond to that of recent manuals, revisions, and monographs.

When complete the atlas will provide the most comprehensive list and distributional account of the Tennessee vascular plants available. However, as pointed out by Van Horn and Williams (1981), reports from other, albeit smaller, herbaria are necessary if the most complete data base possible on the state flora is to be developed. This is especially true since curators of most smaller herbaria do not have resources or time to distribute duplicates to the collections included in the atlas and proper stewardship and conservation practices forbid exhaustive collections for many species anyway.

With these thoughts in mind, a series of reports has been initiated concerning the flora of the Northwest Highland Rim (NWHR) or that area between the Central Basin and

the Tennessee River which includes the drainage system of the lower Cumberland and Red Rivers. The adjacent eastern drainage of the Tennessee River is also included. Like the first report (Chester, 1983), the purpose is to (1) add to the distributional data for species previously reported for but which are of limited occurrence within the state and (2) to report new taxa. In this paper 26 species are discussed, of which two are new to the reported state flora.

## RESULTS

Voucher specimens representing cited collection numbers are in the Austin Peay State University Herbarium (APSU). The arrangement of taxa follows Fernald (1950).

*Sparganium americanum* Nutt. Beal (1960) studied the southeastern species of *Sparganium* extensively and showed that *S. americanum* occurs throughout eastern Tennessee and sparingly across southern Middle and West Tennessee. Specimens from Robertson Co. (Chester 82-480) represent the first report from the NWHR.

*Sagittaria brevirostra* Mack. & Bush. This species is usually found in states north and northwest of Tennessee but is abundant in at least one Cumberland River Swamp of Montgomery Co. Specimens (Chester 2410, Dodson 1972) were determined by Dr. E. O. Beal and represent a second record for the state. The previous report (Beal *et al.* 1982) was from Cumberland County.

*Sagittaria graminea* Michx. var. *graminea*. This species was accorded threatened status by the Committee for Tennessee Rare Plants (1978) and listed from Coffee and Fentress counties. It was discovered in a Dickson Co. roadside pond in 1979 (Chester 4066, 4107) and grew there in abundance until the site was destroyed in 1981.

*Diplachne halei* Nash. = *Leptochloa panicoides* (Pres.) Hitchcock. Underwood *et al.* (1973) reported this species only from Shelby Co. and noted its rareness. However large stands are often found in Stewart Co. (Chester 3107) on mudflats of both the Cumberland and Tennessee rivers.

*Tridens stricta* (Nutt.) Benth. Otherwise known from west of the Tennessee River (Underwood *et al.* 1973), this tall grass is abundant in some wet upland fields of northern Montgomery Co. (Chester 4472, 4556).

*Phalaris arundinacea* L. Kral (1981) verified the presence of this species in the state and cited collections

from Grundy, Obion, and Robertson counties. My collection from bottomlands in Stewart Co. (81-568) increases the known distribution.

*Leptoloma cognatum* (Schultes) Chase. Underwood *et al.* (1973) reported that while Tennessee was within the range of this species, no collections verified its presence. My specimens from thickets along the Red River in Robertson Co. (81-832) definitely add this grass to the state flora.

*Eulalia viminea* (Trin.) Ktze. = *Microstegium vimineum* (Trin.) Ktze. Underwood *et al.* (1973) reported this grass from East and West Tennessee but noted its absence from the middle section. However it is often weedy in moist fields and roadside ditches of Houston (Chester 81-444), Montgomery (81-850), and Stewart (82-807) counties.

*Carex crus-corvi* Shuttlw. Reported by Sharp *et al.* (1956) from West Tennessee and Cocke Co., this robust sedge often dominates swampy fields of Stewart (Ellis 1818) and Montgomery (Chester 81-292, 81-267) counties.

*Carex torta* Boott. Sharp. *et al.* (1956) reported this species only from mountain streams of east Tennessee where it is often abundant. A population exhibiting a disjunction of considerable distance was found in a cool Montgomery Co. stream by Alfred Clebsch in 1946 (372) and it still grows there in abundance (Chester 82-139).

*Populus grandidentata* Michx. This was a special concern species of the Committee (1978) who verified records from Morgan, Sevier, and Washington counties. To these may be added a Land Between the Lakes record from Stewart Co. (Chester 4543) and two Montgomery Co. sites (Chester 2392, Snyder *s.n.* 1980).

*Populus X canescens* Sm. = *P. alba X P. tremula*. This collection (Wofford 2311) was included with *P. alba* material from Stewart Co., Land Between the Lakes, by Ellis *et al.* (1971) and Chester *et al.* (1976) but was determined as the hybrid by Dr. J. E. Eckenwalder in 1982. It has otherwise been reported as an escape in Anderson Co. by Sharp *et al.* (1960). It is like *P. alba* in that both have a propensity for spreading from root suckers.

*Froelichia gracilis* (Hook.) Moq. First reported for the state by Rogers and Bowers (1971) from McMinn Co., they later (1973) added Madison, Shelby, and Rutherford counties. To these may be added Robertson (Chester 82-481) and Montgomery (82-525). Almost all collections have been from gravel and slag along railroad tracks and the species will probably be found in most counties where major railroads exist.

*Alternanthera philoxeroides* (Mart.) Griseb. Wofford and Dennis (1976) first reported this species from Knox Co. and Wofford *et al.* (1977) added Henry Co.; Benton Co. was added by Wofford in 1980. My collection from along the Tennessee River in Humphreys Co. (4238) adds a fifth county and includes the middle section within the known distribution.

*Cardiospermum halicacabum* L. First reported by Thomas and Chester (1967) from Shelby and Stewart counties; Humphreys (Chester 4231) and Montgomery (Chester 1911) may now be added.

*Jussiaea uruguayensis* Camb. This aquatic, mat-forming primrose was first reported by Chester (1970) as an abundant species of some lowland swamps in Montgomery Co. Collections from Stewart Co. (Chester 81-561) were from similar Cumberland River bottomland swamps.

*Oenothera triloba* Nutt. Sharp *et al.* (1960) recorded this species from Blount, Knox and Rutherford counties; Montgomery should also be included (Chester 81-68).

*Leucothoe racemosa* (L.) Gray. This tall shrub was reported by Gattinger (1901) from Roane Co. but voucher material is apparently not extant. Rogers and Bowers (1971) found it in Morgan Co. and the Committee (1978) included it as a threatened species from there. My collection from Robertson Co. (4008) represents a considerable disjunction.

*Polypremum procumbens* L. Wofford and Dennis (1976) summarized the state distribution as Fentress, Hardin, Henderson, and Coffee counties. To these may be added Montgomery (Chester 4404).

*Trachelospermum difforme* (Walt.) Gray. Reported by Sharp *et al.* (1960) from West Tennessee, my collection (4087) from a Robertson Co. swamp places the known distribution east of the Tennessee River.

*Asclepias purpurascens* L. The Committee (1978) included this as a special concern species from Stewart Co. Attempts to re-locate the reported sites have been unsuccessful but two collections may be reported from Montgomery Co. One site has now been destroyed by road construction (Scott & Wallen 2060) but the second (Chester 82-395) is intact.

*Chaenorrhinum minus* (L.) Lange. First reported by Rogers and Bowers (1971) from McMinn Co., several other counties were later added by Rogers and Bowers (1973). This report adds Montgomery (Chester 82-524) and Robertson (82-482). Like *Froelichia*, most collections have been from railroad rights-of-way and a broad distribution is suspected.

*Galium pedemontanum* All. Rogers and Underwood (1968) first reported this species from Anderson and Sevier counties and Rogers and Bowers (1973) added Sumner and Davidson. My records are from Montgomery (81-282) and Stewart (82-69). This appears to be a potentially weedy species of lawns and waste grounds.

*Matricaria matricarioides* (Less.) Porter. The pineapple weed was reported as new for the state by Rogers and Bowers (1971), based on a collection from Shelby Co. My collection from Montgomery Co. (81-165) was from a similar habitat, *i.e.*, disturbed roadsides and railroad embankments.

*Hypochoeris radicata* L. Rogers and Bowers (1969) listed this species as new for the state after finding it in Sevier and Polk counties. Another Polk Co. site and Shelby Co. was later added (Rogers and Bowers, 1971). My collections from Montgomery Co. (2971, 4415) indicate a broad state distribution for this introduced weed.

*Sonchus arvensis* L. This European introduction is first reported for the state here. A large colony, resulting from spreading by root suckers, grows along U.S. Highway 41A in Montgomery Co. (Chester 3165, 81-379). This material has the non-glandular involucre and peduncles of the var. *glabrescens* (Guenth.) Grab. & Wimm. = *S. uliginosus* Bieb. after Cronquist (1980).

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