

FURTHER ADDITIONS TO SOME NOTES
ON THE FLORA OF THE SOUTHERN STATES,
PARTICULARLY ALABAMA
AND MIDDLE TENNESSEE

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Several more new or otherwise interesting records of vascular plants have been found through continuing field work in Alabama, Tennessee, and other southern states since my last entries in *Rhodora* (1973, 1976). These are as follows (families arranged in Engler & Prantl order):

***Phalaris arundinacea* L.**

TENNESSEE. Robertson Co.: sandy openings in Red River bottoms by Tenn. 52, 4 mi. E Orlinda, 26 Jun. 1975, *Kral 56059*; Grundy Co.: coldwater marsh meadow, SE side Tracy City, forming large stands, 13 Jun. 1975, *Kral 55960*.

Two more records, this time from middle Tennessee to add to my earlier (1976) report of it from west Tennessee (Obion Co.). Sharp et al. (1960) list it as an uncultivated introduction from the north or west, where it definitely is native.

***Carex austro-caroliniana* Bailey**

ALABAMA. Cleburne Co.: 4.8 mi. W Heflin turnoff by I-20; acidic ravine bluffs of schistaceous-micaceous rock, in deep shade, 27 Apr. 1979, *Kral 63396*.

An additional report for this rather rare southern Appalachian sedge previously reported for Jackson county (1973), and perhaps a southern-most record for the species.

***Carex baltzellii* Chapm.**

GEORGIA. Early Co.: Kolomoki Mounds State Park; sandy loam of ravine slope in beech-maple-magnolia, 16 Apr. 1979, *Kral 63311*.

Reported in Small (1933) as from Gadsden County, Florida and SW Georgia. Thorne (1954), in his fine floristic study of southwestern Georgia, did not mention this species, thus it is cited here simply to verify presence of the plant in Georgia. Dr. McDaniel has found it in several localities in southeastern Alabama.

Carex buxbaumii Wahl.

TENNESSEE. Cumberland Co.: scattered, with deepset rhizomes, in peaty open bog due north of Crossville by I-40, 5 Jun. 1975, *Kral 55912A*.

This species of sect. *Atratae* reaches further south than do the other two eastern North American species of the section, being reported as rare and local in Kentucky, North Carolina, and Arkansas. This is a first report for Tennessee.

Carex hirtifolia Mackenzie

TENNESSEE. Coffee Co.: calcareous moist rocky woods by headwaters of Crumpton's Creek, just N of Rutledge Falls, 28 Apr. 1974, *Kral 52516*.

A first report for Tennessee of this member of the sect. *Triquetrae* Carey, which occurs in rich woods and meadows across southern Canada to Ontario, in the US from New England west to Minnesota and south from Maryland west to Missouri. Probably an extension southward from Kentucky.

Carex interior Bailey

TENNESSEE. Dickson Co.: tufts on shaley creekbank by US 70, 2.8 mi. W White Bluff, 13 May 1975, *Kral 55397*. Lawrence Co.: creek bottoms in low woods by Natchez Trace, SW Napier and 4.2 mi. N turnoff to Laurel Hill Lake, 18 May 1975, *Kral 55474*. Lewis Co.: 3.1 mi. SW Hampshire; shaley shaded streambank, 1 May 1970, *Kral 38862*.

This member of the sect. *Stellulatae* is distinguished from its nearest relative, *Carex Howei*, by a combination of broader leaf and nervelessness of the upper perigynae surface. It is reported by Fernald (1950) and Gleason (1952) as being in their manual range essentially northern, ranging southward only into Ind., Ill., W. Va., and Pa.; in the western mountains it ranges southward into Mexico. Not previously recorded for Tennessee.

Carex meadii Dewey

ALABAMA. Dallas Co.: remnant of blackland prairie by US 80, 2 mi. E Marion Junction, 20 Mar. 1976, *Kral 57421*. Sumter Co.: 4.5 mi. S of Boyd, pine flatwoods, open low area, 28 Apr. 1968, *S. McDaniel 10532*; 4 mi. S Boyd by Ala. 17 in sandy-peaty clearing by railroad through pine flatwoods, 20 May 1975, *Kral 55604*.

A first report for Alabama for this plant of prairie swales and meadows from N.J. to Mich. and Sask., s. to N.C., Ga., Ark., and

Tex. Difficult to distinguish from *C. tetanica* Schk., perhaps distinguishable on quantitative characters only.

Carex latebracteata Waterfall

ARKANSAS. Howard Co.: shaley soil under oak-hickory and in powerline right of way, by Ark. 4, 10.3 mi. E Wickes, 9 May 1979, *Kral* 63491; river bluffs, shale, 9.6 mi. E Wickes, 9 May 1979, *Kral* 63502. Polk Co.: abundant tufts on dryish sandy loams over novaculite, under oaks, by Ark. 375, 4 mi. NW end of paved road at Cossetot Road jct., 28 Apr. 1977, *Kral* 59857.

A first report of this sedge of wooded ridges and ravines over shale or novaculite and formerly thought confined to eastern Oklahoma. A strongly tufted plant with very whitened, broadened, leafy bracts and large, pale perigynes, whose closest relatives in sect. *Phyllostachyae* are far to the north and west.

Carex pedunculata Muhl.

ALABAMA. Winston Co.: abundant on sandy loam under pine-hardwood, below sandstone bluffs along west bank of Sipsey River, Sipsey Rec. Area, Bankhead National Forest, 9 Apr. 1978, *Kral* 61418.

The second known station in Alabama for this *Carex* of eastern southern Canada and the middle western U.S., which appears to range southward into Virginia and West Virginia and is now known also to occur locally in the Cumberlands of Tennessee (Grundy & Marion counties), also in northeastern Alabama (Kral, 1976) with this Winston county locality perhaps being its southernmost extension.

Carex socialis Mohlenbrock & Schwegman

ALABAMA. Colbert Co.: forming large clones by rhizome, Town Creek bottoms by Ala. 157, NW Moulton, 6 May 1978, *Kral* 61685.

TENNESSEE. Humphries Co.: ca. 2 mi. E Buffalo by I-40; wooded gravelly bottoms, 17 Apr. 1977, *Kral* 59779.

The above collections represent morphologies identical to that of the newly described *Carex* of the sect. *Bracteosae* once though endemic to southern Illinois. The plants are as Mohlenbrock & Schwegman (1969) describe, namely similar to the complex of species including *C. rosea*, which it most closely resembles, save for the habit of elongate-creeping rhizomes connecting clumps of culms with the total mass of plants forming large, dense stands.

Cyperus brevifolioides Thieret & Delahoussaye

TENNESSEE. Davidson Co.: silty clay loam of bank of Richland Creek by Belle Meade Country Club golf course, just W of Belle Meade Blvd., 8 Oct. 1977, *Kral 61103*.

A first report for Tennessee of this member of sect. *Kyllingia*, formerly treated as either *Kyllingia brevifolia* (Rottb.) Hassk. var. *leiolepis* Franch. et Sav. or as *Cyperus brevifolius* (Rottb.) Hassk. var. *leiolepis* (Franch. et Sav.) Koyama. As Thieret and Delahoussaye (1967) point out, it should be a species distinct from *C. brevifolius* in that it has a smooth scale keel, more stamens/floret. In the Davidson county locality the plants are very abundant, quite weedy in cleared areas along the stream and promises to be a rapid spreader in moist lawns. The species in the U.S. was known to range from southern New England through eastern Virginia with an inland station reported from Mitchell county in western North Carolina.

Psilocarya scirpoides Torr.

ALABAMA. Chilton Co.: ca. 1 mi. S Maplesville in sunny seep bog in longleaf pine hills, 24 Aug. 1978, *Kral 62558*.

This Bald-rush superficially resembles the much more common *P. nitens*, but differs in its persistent style surmounting a tubercle approximately as long as the akene body (in *P. nitens* the style does not persist, the tubercle is much shorter than the akene body!). Small's often too-inclusive range statements are exemplified here in that his cited (1933) range for the species includes Alabama, but this new find appears to be the first actual record. Godfrey (1979) indicates the previously known range to extend in the Coastal Plain from Mass. to N.C. and the Florida panhandle, with outliers in the Great Lakes Lowland.

Rhynchospora chalarocephala Fern. & Gale

TENNESSEE. Coffee Co.: 2.2 mi. E of Manchester off US 41; sandy clay of low place in oak barrens, 9 Aug. 1973, *Kral 51053*.

An extension of known range for this beakrush which is commonest in the lower terraces of the Atlantic and Gulf Coastal Plain.

Schoenus nigricans Beauv. ex R. & S.

FLORIDA. Gadsden Co.: limerock outcrop ledges (Marianna Limestone) at S side Chattahoochee, 8 Jun. 1976, *Kral 58219*.

Reported here more for the unusual location, considerably inland from recently reported coastal stations in northern Florida. This

densely caespitose, dark-bracted sedge is wide-ranging in the tropics, often in brackish marshy sites in arid regions.

Scirpus erismana Schuyler

ALABAMA. Houston Co.: sandy peaty edges of Indigo Pond, a limesink pond, SE Cottonwood, 10 Oct. 1973, *Kral* 52348; same locality 12 Oct. 1978, *Kral* 62923.

Dr. Schuyler, monographer of *Scirpus*, does not indicate (1969) Alabama records for this little sedge which he described from the karst country of peninsular and northwestern Florida, southwest Ga., and eastern S.C. The plants appear abundantly every now and then on sands and sandy peats of shores of limesink ponds and lakes.

Scirpus purshianus Fernald (*S. debilis* Pursh)

ALABAMA. Russell Co.: peaty drying margins of large pond at Seale, 11 July 1978, *Kral* 62293.

Previously added to the Alabama flora (1973) but only from the very north; this new locality is from well inside the Coastal Plain of Alabama, thus is a considerable extension of known range southward.

Tradescantia rosea Vent. var. **rosea** (*Tripogandra rosea* (Vent.) Woods.; *Cuthbertia rosea* (Vent.) Small).

ALABAMA. Russell Co.: oak-pine woodland, sandy loam, in light to full shade, above Bluff Creek, S of Ft. Mitchell; petals pink, 19 Jun. 1978, *Kral* 62068.

This distinctive, pale-pink-petalled, spiderwort was previously believed to occur in upland and lowland pine-hardwood formations of Piedmont and Coastal Plain from the Carolinas southward into Florida; it is a novelty for Alabama. It and the other variety (var. *graminea* (Small) Anders. & Woods.) are distinguished from other southeastern spiderworts by bracts being shorter than, rather than longer than, the cyme.

Lilium catesbaei Walt.

ALABAMA. Chilton Co.: ca. 1 mi. S Maplesville in hillside seep in longleaf pine, 24 Aug. 1978, *Kral* 52550.

Certainly not a first report for Alabama, the species being locally very abundant in wet pineland savanna and bogs in the lowermost counties. However, this is a most unusual find for so far inland in the State, and an indication of the close floristic affinity that the bogs of Autauga, Chilton, and Elmore counties have with those of the lower Coastal Plain in Alabama. These inland sites present a floristic

situation somewhat comparable to the Fall Line floras of eastern Virginia that intrigued M. L. Fernald.

Hexastylis heterophylla (Ashe) Small

ALABAMA. Cleburne Co.: sandy loam under *Kalmia* along stream, Pine Glen, Talladega Nat. Forest, 24 Apr. 1978, *Kral 61628*; under *Kalmia*, sandy loam, in ravine, Talladega Nat. Forest just E of Coleman Lake and SE Pine Glen, 24 Apr. 1978, *Kral 61636*; sandy loam of acid moist ravine ca. 1 mi. NE Heflin off US 78, 24 Apr. 1978, *Kral 61639*. Winston Co.: hemlock forested ravine 4 mi. W Addison, 16 Apr. 1978, *Kral 61530*; hemlock ravines ca. 2 mi. E Addison, 16 Apr. 1978, *Kral 61522*; ravine in sandstone just S of Houston in Bankhead Nat. Forest, 6 May 1978, *Kral 61660*.

In the last revision of *Hexastylis* (1957) Dr. Blomquist indicated a range for *H. heterophylla* as Appalachian from Va. and W. Va. southward through western N.C. and eastern Tenn. into western S.C. and northeastern Ga. For some reason unknown, he made no mention of Dr. Small's statement of range (1933) to wit: "Piedmont to Appalachian Plateau, Ga. to Ala., W. Va., and S. Va." The Alabama populations I have observed fit well the Blomquist description, though showing the great variation in flower size and sepal lobe length that one comes to expect on viewing a "spread" of this species.

Hexastylis minus (Ashe) Blomq. (*Asarum virginicum* Ashe; *A. minus* Ashe)

VIRGINIA. Montgomery Co.: 2 mi. E Ellett; dry shale bluff, fls. pale purple with definite carina below calyx lobes, 16 Apr. 1960, *Kral 9819*; shaley White pine-Hemlock woods just below Ellett by rd. to Christiansburg, 17 Apr. 1975, *Kral 55120*.

Reported by Blomquist (1957) and Radford et al. (1968) as from bluffs and streambanks through the Piedmont of North Carolina and South Carolina, also foothills of the mountains in both states; not previously reported for Virginia. Distinctive in its combination of small flower, prominent flange midway up calyx tube, and longer calyx lobes (relative to *H. virginica* (L.) Small).

Portulaca pilosa L.

TENNESSEE. Wilson Co.: limestone glade and adjacent gravelly shoulders of I-40, ca. 1 mi. W of jct. US 70 at Lebanon; petals deep rose-pink, 6 Sept. 1978, *Kral 62823*.

This is probably a disjunct population of the var. *mundula* (I. M. Johnst.) Legrand, which is found in limestone glade situations and calcareous outcrops from western Mo. southward and westward. A first report of this taxon for Tennessee.

Rorippa sylvestris (L.) Besser (*Radicula sylvestris* (L.) Druce)

TENNESSEE. Davidson Co.: grounds of Geddes-Douglass Nursery, by Hobbs and Estes, south side of Nashville; cor. deep yellow, 18 Jul. 1974, *Kral* 53672; wet open areas along Richland Creek, Belle Meade Country Club, S side Nashville, forming showy yellow patches, 15 Jun. 1979, *Kral* 63856.

This Yellowcress has been reported for far western Tennessee by Stuckey (1972); it ranges mostly through the northern U.S. with occasional extensions southward into Kentucky, Miss., and the Virginias. In our area it appears to be abundant locally along streams that flow over limestones and is the showiest of our *Rorippa*.

Psoralea lupinellus Michx. (*Rhithidomene lupinellus* (Michx.) Rydb.)

ALABAMA. Autauga Co.: longleaf pine sandhills by US 82, 17 mi. NW Prattville, 3 Oct. 1979, *Kral* 64402.

An extension of known range into Alabama from Coastal Plain sandhills to the east from N.C. south to peninsular Fla. Very distinctive in its digitate-filiform leaflets.

Psoralea onobrychis Nutt.

ALABAMA. Dekalb. Co.: edge of open limestone woods by I-59, ca. 14 mi. SSW Ft. Payne just S of jct. Ala. 68, 25 May 1974, *Kral* 52842 (in flower); 21 Jun. 1974, *Kral* 53171 (in fruit).

A first report for Alabama for this Scurf-pea, previously known to occur in woods, thickets, and clearings, Ohio to Ill., south to western Va., Tenn., eastern Mo. The most robust, tallest, broadest-leaved, of our eastern species. The Alabama site is quite calcareous.

Sesbania drummondii (Rydb.) Cory (*Daubentonia drummondii* Rydb.)

ALABAMA. Mobile Co.: sandy dock area by truck bypass US 98-90 across river from Mobile, 20 Sept. 1975, *Kral* 56620; shrub, fls. yellow, of sandy Mobile docks area just N of N boundary Air Force Base, 15 Aug. 1973, *Kral* 51354.

This, if also the same as *Daubentonia longifolia* (Cav.) DC., is reported by several authors, the most recent being Correll &

Johnston (1970), as continuous along the Gulf coast from Fla. into Tex. and Mexico. Alabama records appear to be scarce however, and so these localities are added.

Croton elliotii Chapm.

ALABAMA. Escambia Co.: sandy field by US 31, 0.5 mi. E Canoe, 7 Oct. 1968, *Kral* 33889. Houston Co.: sandy fields and upper sandy beaches of Indigo Pond, SW of Cottonwood, 21 Aug. 1977, *Kral* 60847.

Long ago collected from Mobile county by Dr. Mohr, but not reported since. Neither had it been reported in recent years from stations known for it in southwestern Georgia. The plants were however in great abundance around most of the karst lakes and ponds in southwest Georgia and northwestern Florida in summer of 1977, a disastrously dry season for farmers of the area but which, through drying of the ponds and lakes, appeared to have created suitable areas of drying sandy peat. The species belongs to that complex of entire-leaved *Croton* containing *C. capitatus* and *C. monanthogynus*, but is distinguished by a combination of erect pistillate flowers, with the unequal sepals strongly hooded, and lineal leaves. While *C. elliotii* is listed as an endangered species I have observed it in populations of countless thousands not only around the pond margins but also in cultivated fields adjacent. Such intermittent abundance must mean that the seeds often have to lie dormant, sometimes for many years, until a correct combination of factors arises.

Pirequeta caroliniana (Walt.) Urban

ALABAMA. Houston Co.: sandy live oak woods bordering Indigo Pond, SE Cottonwood, 21 Aug. 1977, *Kral* 60848b.

A first record for Alabama for this rather showy Turneraceous annual, so frequent around the limesink lakes and ponds of southwestern Ga. and northwestern and peninsular Fla.

Ludwigia arcuata Walt. (*Lugwigiantha arcuata* (Walt.) Small)

ALABAMA. Geneva Co.: sandy peaty bank of pond by Ala. 53, 7.3 mi. NE Geneva, forming mats, 25 Jun. 1974, *Kral* 53498.

First noted for Alabama by Dr. Rebecca Bray in her thesis (unpublished) on the Flora of Dauphin Island, this species is known to range from Va. southward into Fla. Reported here in order to enter it for the State flora and also to add another county. It is definitely a rare plant in Alabama.

***Oenothera missouriensis* Sims.**

TENNESSEE. Rutherford Co.: locally abundant, the corollas pale but bright yellow, on broken limestone of open glade by Factory Rd., ca. 3-4 mi. E of Murphreesboro, 13 Jun. 1975, *Kral 55994*.

This and one other locality of limestone barrens east of Murphreesboro are the only known stations east of the Mississippi River for this spectacularly large-flowered Evening primrose which centers in the sandy or calcareous barrens of Missouri, Arkansas, Texas, and Kansas. The locality has long been known to Dr. Hal DeSelm of the University of Tennessee and to the Faculty of Botany at Middle Tennessee State University. The species grows readily from seed and is a fine addition to a sunny garden.

***Ammoselinum butleri* (Wats.) Coult. & Rose**

TENNESSEE. Davidson Co.: abundant on low cleared area of main picnic grounds by tributary of Harpeth River, Edwin Warner Park, S side Nashville; petals white, 20 Apr. 1975, *Kral 55204*; weed on Vanderbilt University Campus, by Garland Hall, 10 Apr. 1979, *Kral 63254*.

This little plant, in our area found mixed with *Galium pedemontanum*, *Alchemilla microcarpa*, and various lawngrasses, is here reported as new to the Tennessee flora. The species is frequent in Texas, Oklahoma, and Arkansas, where it occurs in low prairies and open wooded bottoms in prairies. Its spread eastward must be rapid in that there are now records for it from the Carolinas and eastern Tennessee.

***Ammoselinum popei* T. & G.**

TENNESSEE. Davidson Co.: cedar glades by the road from Smith Springs Rd. to the Couchville Pike, 31 May 1942, *J. M. Shaver 2538*. Rutherford Co.: gravelly bulldozed limestone glade by US 71S, 3.5 mi. E Murphreesboro, 20 May 1974, *Kral 52830*.

The Rutherford Co. record is entered here to confirm the continued presence in middle Tennessee of this adventive from the western U.S. first found in the state by Dr. Shaver.

***Lycopus amplexans* Raf.**

ALABAMA. Barbour Co.: ca. 10 mi. N Eufaula in cypress-gum pond by US 431, 11 Oct. 1978, *Kral 62877*.

This record is included so as to help clear up a small distributional riddle broached by Dr. Norlan Henderson in his revision of *Lycopus* (1962), in which he indicates a distribution of the species including the

Great Lakes Lowland, the Coastal Plain from New England south to northeastern Fla. and westward to southwestern Ga., and western Carolina. Dr. Henderson mentions that Rafinesque indicated that the plant grew in Alabama, which is in fact the type locality, but that he had seen no authentic specimen from Alabama. The species actually is abundant locally in southwestern Georgia in boggy areas along cypress-gum branches or in bogs around cypress ponds, its common herbaceous associates being such species as *Eriocaulon compressum*, *E. decangulare*, *Xyris fimbriata*, *Ludwigia sphaerocarpa*, *L. pilosa*, *Polygala cymosa*, *Sabatia bartramii*, *Lobelia boykinii*, *Rhexia aristosa*, etc. Shrubby *Hypericum*, particularly *H. fasciculatum* abound.

Agalinis oligophylla Pennell. (*Gerardia microphylla* (Gray) Small)

ALABAMA. Sumter Co.: chalk prairie remnant near Geiger, corolla lavender-rose, 19 Sept. 1975, *Kral* 56583; chalk outcrop prairie 5.8 mi. W Greenville, corolla pink, 7 Oct. 1976, *Kral* 59390.

These are records for Alabama of a species previously known to range eastward only to the Florida parishes of La. Both stems and leaves are minutely scabrid, the leaves mostly under 1 cm long, sharp-tipped, the pinkish corollas ca. 2 cm long, the ripe fruit ca. 5 mm long, more than 1/2 its length covered by an obscurely reticulate calyx tube, the calyx lobes very short.

Utricularia floridana Nash.

ALABAMA. Covington Co.: shallows of Blue Pond, Blue Springs Game Mgmt. Area, Conecuh Nat. Forest, SW of Andalusia; corolla pale yellow, 26 Jun. 1974, *Kral* 53515.

A first report for Alabama for this rather bulky Bladderwort previously known only from Fla. and Ga.

Ruellia brittoniana Leonard.

ALABAMA. Mobile Co.: old homelot, downtown Old Mobile, in preserved area near Government Street, 20 Sept. 1975, *Kral* 56595.

Seemingly an escape from cultivation, this is a record for Alabama of a showy species which is native in Florida, scattered (introduced?) elsewhere in the Gulf Southeastern U.S.

Viburnum lentago L.

ALABAMA. Montgomery Co.: shrub of low blackland woods by city bypass, south side Montgomery, 23 Jun. 1974, *Kral* 53369; tall shrubs on sandy clay of oak-pine woods by I-85, 1 mi. E jct. Perry Hill Rd., Montgomery, 24 Aug. 1978, *Kral* 62591.

Small (1933) indicates that this essentially northern species ranges south into Ga., presumably through the Appalachians, but several reports of this taxon from southern localities turn out, when specimens are examined, to be extremes of *V. prunifolium* or *V. rufidulum*. However, this Alabama material agrees very well with that I have collected from around tamarack bogs in southern Michigan and northern Indiana, and may actually represent a considerable extension of known range.

Lobelia boykinii T. & G.

ALABAMA. Barbour Co.: forming large clones by pale rhizomes in shallow Tupelo-*Hypericum* pond, ca. 8.5 mi. N Eufaula by US 431; corolla blue, 19 Jun. 1978, *Kral* 62053.

A first Alabama report for this (apparently rather rare and local) species of acidic pineland ponds, hitherto believed to occur only in S.C., Ga., and Fla. Associated species are those it is found with in southwestern Ga., namely, *Polygala cymosa*, *Rhynchospora perplexa*, *R. tracyi*, *Eriocaulon compressum*, and *Rhexia aristosa*.

Sphenoclea zeylanica Gaertn.

ALABAMA. Mobile Co.: moist sands by river across from Mobile in dock area off truck bypass US 90-98, 20 Sept. 1975, *Kral* 56609.

This wetlands weed, common in the Gulf Coastal Plain from Miss. westward and reported by Radford et al. (1968) as an adventive in Jasper Co., S. C., has not been reported previously for Alabama. Dr. Robert Haynes of the University of Alabama, in his recent field work on the aquatic plants of that state, has found several more localities, proof that the species is now well established.

Ambrosia bidentata Michx.

GEORGIA. Catoosa Co.: cherty gravelly sandy clay of bank by I-75, 1 mi. N turnoff to Ft. Oglethorpe, 29 Sept. 1976, *Kral* 59136.

Evidently rapidly spreading eastward in Tenn., now also in Ga., and already reported for N.C. Appears to be moving with good speed along highways and railroads from its once much more western area.

Ambrosia psilostachya DC.

ALABAMA. Green Co.: 1 mi. N of Pleasant Ridge, common on open chalk prairie, black belt region, 30 Sept. 1967, *S. McDaniel* 9859a. Marengo Co.: rhizomatous, on shallow soil over chalk by US 43, 0.5 mi. S Demopolis just S of railroad and 2 mi. S jct. US 80, *Kral* 59392. Sumter Co.: dry chalk barrens just N of Epes, 16 Sept. 1954, *R. M. Harper* 4312 (not identified to species by Harper!); blackland

prairie patch by rd. between Gainesville and Ala. 17, 20 May 1975 (sterile), *Kral* 55620; prairie remnant near Geiger, 19 Sept. 1975, *Kral* 56582; chalk barren prairie between Gainesville and Geiger on Ala. 116, 19 Sept. 1975, *Kral* 56579.

This perennial, reported as long ago as 1901 by Dr. Mohr for Alabama (from the Prattville area), is entered here simply to verify its continued presence and spread as a weed. It appears to have become an abundant plant in some parts of the Black Belt. Outliers, as for example from the longleaf pine sandhills of Autauga Co. to the east, show tendencies toward another rhizomatous perennial, *A. rugelii* Rydb. Further study of these will be required before a true treatment of the genus for Alabama is ready.

***Aster commixtus* (Nees) Kuntze. (*A. mirabilis* T. & G.)**

ALABAMA. Lee Co.: acid sandy loam of bouldery slopes and ravines along Hallawakee Creek ca. 6 mi. ENE Opelika in shade of oak-pine-*Kalmia*; rays pale blue, *Kral* 62331, 62389, 62523 (last number at full anthesis, collected 20 Aug. 1978).

This squarrose-bracted member of the sect. *Macrophylli* has been reported by Small (1933) as from "dry woods, Appalachian provinces, Ga. and Ala." Subsequently combined with this taxon is *A. mirabilis* T. & G., a blunter-bracted entity from Piedmont areas of N.C., S.C., and Ga. The slender bract tips of the Lee County population relate it more to the type material, another indication of the very Appalachian character of the ravine flora of Piedmont Alabama. This species is of very rare occurrence in the state and probably should be considered endangered or threatened.

***Aster phyllolepis* T. & G.**

ALABAMA. Sumter Co.: blackland prairie patch by hwy., 5.8 mi. W Greenville, 7 Oct. 1976, *Kral* 59389; chalk barren between Gainesville and Geiger by Ala. 116, 19 Sept. 1975, *Kral* 56578.

FLORIDA. Gadsden Co.: calcareous open rocky outcrop at south side Chattahoochee; rays deep purple-blue, 5 Oct. 1976, *Kral* 59318.

This spindly, tall *Aster* is in most ways similar to *A. sericius* Vent., differing mainly in its broader, less-hairy, more strongly ciliate phyllaries, its generally sparser but harsher pubescence. Previously, *A. phyllolepis* has been known from dryish open woods or from prairies west of the Mississippi River in Louisiana and Texas. In the Florida locality it is associated with *Schoenus nigricans*, a strange companion which in that state is normally found near the coast.

Cacalia suaveolens L. (*Synosma suaveolens* (L.) Britt.)

FLORIDA. Levy Co.: 1.9 mi. E Gulf Hammock and just E of Wekiva Run, by Fla. 326; low hammock with loblolly pine-*Sabal*, 16 Apr. 1979 (rosettes), *Kral* 63300; 5 Oct. 1979 (at anthesis), *Kral* 64504.

This find came as quite a surprise. In preparation of a manuscript on Florida *Cacalia* (1958) Dr. Godfrey and I borrowed all the Florida material on deposit at GH, NY, US, DUKE, FLAS, and FSU. In that *C. suaveolens* was indeed reported for western Florida by Chapman (1897) and subsequently for that state by Fernald (1950) and Cronquist (1952), we felt that some authentic material of it would show up. However, no specimens from Florida were located in those loans; we decided to omit the species from our synopsis with the reservation that something had to provide a basis for Chapman's comments and that suitable habitat could exist in "western" Florida. The plant is pretty local even in interior provinces in the southeast; there are no Georgia records at GA and none for it in Alabama herbaria. Thus perhaps the reader will share to some extent my amazement at seeing this plant of cool, alluvial woodlands in hundreds in the shade of *Sabal palmetto* in a peninsular Florida hammock.

Doellingeria reticulata (Pursh) Greene. (*Aster reticulatus* Pursh)

ALABAMA. Geneva Co.: ca. 5 mi. S Samson; edge of hillside bog in longleaf pine, 19 Jun. 1978, *Kral* 62084.

Here reported as new to Alabama, this species, common in low pinelands and savannas of the Coastal Plain from southern S.C. southward into southern Fla., becomes increasingly scarce in the Gulf Coastal Plain west of Apalachicola in Fla. Its strongly caespitose habit, broadish, entire, thickish leaves, and whitish to lavender liguled heads arranged on corymbs make it a striking and distinctive species. Unlike others of its genus, and unlike most *Aster*, this flowers in spring (with summer and fall flowering sometimes resulting from disturbance, particularly fire!).

Gnaphalium helleri Britt. (*G. obtusifolium* L. var. *helleri* (Britt.) Blake)

TENNESSEE. Polk Co.: sandy oak-hickory-pine woodland at north side of Benton, 3 Oct. 1978, *Kral* 62800.

Using the treatment of this species done by Dr. Mahler (1975), I come up with the var. *helleri*. His map shows the northeastern var.

micradenium (Weatherb.) Mahler as extending southward from eastern Ky. through eastern Tenn. into northern Ga., but indicates no localities for the var. *helleri* in that area. In the field this plant from a distance resembles *G. obtusifolium* but differs in its visibly glandular indumentum as well as in a very pungent, not altogether pleasant, odor. Var. *helleri* is locally abundant, primarily in the Coastal Plain, from N.J. south through Ga., west to La., Ark., and e. Tex.

Heterotheca trichophylla (Nutt.) Shinnars. (*Chrysopsis trichophylla* Nutt.)

NORTH CAROLINA. Bladen Co.: Sandridge in pineland near Kelley, 19 Sept. 1977, *Kral 60988*.

This Golden-aster was known to range on sandy soils in the Coastal Plain from eastern S.C. into peninsular Fla. and west through the Gulf Coastal Plain into Miss. It was not reported for N.C. in Radford et al. (1968).

Rudbeckia triloba L. var. **pinnatiloba** (T. & G.) Beadle (*R. pinnatiloba* T. & G.)

ALABAMA. Bibb Co.: limestone woods and sunny calcareous roadbanks, just NE Pratt's Ferry, 18 Jul. 1979, *Kral 64002*; ca. 1 mi. NE Pratt's Ferry in rocky limestone woods, same date, *Kral 64008*.

This shaggy-stemmed, pinnate-leaved var. of *R. triloba* has been reported previously only from calcareous sites in northeastern Florida and western North Carolina.

Verbesina walteri Shinnars. (*Ridan paniculata* (Walt.) Small)

NORTH CAROLINA. Polk Co.: moist areas, light shade of hardwoods, west face of Tryon Mountain, el. ca. 2000', 22 Sept. 1977, *Kral 61079*.

This rather rare Crown-beard, scattered in the Atlantic and Gulf Coastal Plain from S.C. south to Fla., west into Ala. is not reported for N.C. by Radford et al. (1968).

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