

T. gracile were observed in which the plants had been grazed to the extent that only the lower parts of the scapes were present.

Trillium gracile J. Freeman

Nacogdoches Co.—One mi. sw. of Chireno on the Woden road, riverbottom area under fairly heavy tree cover, brown sandy-loam soil: 29 Apr. 1967, *Nixon and Muse* 332, and 11 Apr. 1968, *Nixon and Muse* 433; From Nacogdoches n. turn left off U. S. 59 by Lakeside Nursing Home, go ca. 4 mi. n. on road taking n. road at two intersections, on west side of road along creek under pine-hardwood cover: 11 Apr. 1968, *Nixon and Sullivan* 446; San Augustine Co.—Harvey's Creek Recreational Area, Sam Rayburn Lake, sloping hill near lake under pine-hardwood trees: 18 Apr. 1968, *Nixon and Muse* 550.

Trillium recurvatum Beck

Nacogdoches Co.—Garrison, growing in moist woodland: 10 Apr. 1942, *Williams s.n.* Rusk Co.—Langston forest, ca. 4 mi. n. on Freewill Baptist Church road on right ca. 200 yds. into creek area, creek bottom area with large pines and hardwood trees, frequent in small populations: 27 Mar. 1968, *Nixon, Sullivan and Brown* 413.—*E. S. Nixon, J. R. Sullivan, J. T. Brown, Stephen F. Austin State College, Nacogdoches, Texas 75961; Janice B. Lacey, Drawer 1312, Nacogdoches, Texas 75961; J. D. Freeman, Department of Botany and Plant Pathology, Auburn University, Auburn, Alabama 36830.*

REFERENCES

FREEMAN, JOHN D. 1969. *Trillium gracile* (Liliaceae), a new sessile-flowered species from eastern Texas and Louisiana. *Sida* 3: 289-292.

GOULD, FRANK W. 1963 ("1962"). Texas Plants—a Checklist and Summary. Texas Agr. Exp. Sta. Bull. No. MP-585.

NOVELTIES IN LYGODESMIA AND STEPHANOMERIA (COMPOSITAE-CICHORIEAE).—It seems advisable to report the following new species and new combinations at this time because a forthcoming monograph of *Lygodesmia* (A Cytotaxonomic Study of the Genus *Lygodesmia* (Compositae-Cichorieae), Ph.D. dissertation, The University of Texas at Austin, 1970) will not appear in print for at least a year. I have treated *Lygodesmia* and *Stephanomeria* as distinct genera because they differ in their base chromosome numbers, pollen grains, achenes, and cotyledon morphology (details in the dissertation just cited). The work here reported was supported in part by N. S. F. Training Grant GB 6914.

LYGODESMIA *arizonica* Tomb, sp. nov. Perennis herbacea. Folia basalia non rosularia, suprema ca. 2.0—4.0 cm longa, linearia, integra (nec brevissima squamiformia sicut in *L. dianthopside*). Achaenia 1.0—1.3 cm longa facie adaxiali valde sulcata, abaxiali obscure rugosa. ARIZONA, Coconino Co.: on sandy soil of mesa, 17 miles NE of Tuba City on road to Kayenta, Navajo Indian Reservation, *C. T. Mason & W. S. Phillips* 1914, 6 June 1961 (holotype TEX, isotypes ARIZ and UT) (illustrated).



G.K.

Herbaceous perennial, 5-25 cm tall (usually 15 cm or less); roots not woody, usually deep seated and stoloniferous, bearing 1 to several rhizomes, rhizomes usually ca 4-7 cm long unbranched, covered with a thin, light brown periderm; stems branched from base, glabrous, not striate; basal leaves linear 4-8 cm long, 0.3-0.6 cm wide, entire, not midribbed, ascending, thick; cauline leaves similar to basal, numerous, progressively shorter near the summit, but not reduced to scales; heads one to several, 5-flowered (rarely 7-flowered); involucre cylindroid 1.8-2.5 cm long, ca 5 mm wide at anthesis; principal involucral bracts 5, linear 1.7-2.3 cm long, ca 3 mm wide, elongating slightly before fruit maturity, obscurely midribbed, outer surface scabrate, margins hyaline, apices usually unappendaged; outer involucral bracts, subulate much shorter, in ca one series, margins ciliate, forming a calyculum; ligules before drying pale pink 1.8-2.5 cm long, ca 0.6-1.0 cm wide, usually slightly narrowed at their apices; corolla tube 1.0-1.1 cm long; anthers 0.7-0.9 cm long, exerted ca 4-8 mm, pale pink or white; style branches ca 2-4 mm long; receptacle narrow, flat, bearing achene scars around the outer edge; achenes sub-cylindric 1.0-1.3 cm long, ca 1.5-2.0 mm wide, 4-6 angled, strongly sulcate and rugose on the adaxial surface, the abaxial surface obscurely sulcate and rugose, usually abruptly narrowed below the summit; pappus bristles capillary, ca 1.4 cm long, often basally connate; sap; milky white, pollen grains echinolophate, tricolporate, mean equatorial diameter 56.2 microns; chromosome number, $n = 9$.

Distribution: Sandy soil in desert areas of northwestern Arizona, southeastern Utah, and adjacent New Mexico and Colorado; 4,000 - 5,500 ft. May - June.

This species and the following have been treated previously as belonging to *Lygodesmia grandiflora*. They differ from the latter taxon in habit, number of flowers per head, sculpturing of their achenes and distribution (Tomb, 1970).

LYGODESMIA dianthopsis (Eaton) Tomb, comb. nov.

Lygodesmia juncea var. *dianthopsis* Eaton ex King. U. S. Geol. Explor. 40th Par. 5:200. 1871.

This species is distinguished from the closely related *L. arizonica* by its shorter upper leaves, attenuate achene summits, and distribution.

STEPHANOMERIA spinosa (Nutt.) Tomb, comb. nov.

Lygodesmia spinosa Nutt., Trans. Am. Phil. Soc. ser. 2. 7:444. 1841.

Pleiacanthus spinosus (Nutt.) Rydb., Fl. Rocky Mount. 1023. 1917.

I have transferred this remarkable spiny plant to *Stephanomeria* because of its gross morphology, echinate pollen grains and base chromosome number of $x = 8$. The last two characters are found in all species of *Stephanomeria* examined to date. *Lygodesmia* has echinolophate pollen and base chromosome numbers of $x = 9$ and $x = 6$.—Andrew Spencer Tomb, Department of Botany, The University of Texas at Austin, Texas 78712.