

TRAGIA URTICIFOLIA Michx. var. **texana** Shinners, var. nov.—A specie differt foliis longiuscule petiolatis, petiolis foliorum inferiorum ad 40 mm. longis. TYPE: sandy field, edge of oak woods, 6 miles northwest of Grapevine, Tarrant Co., Texas, *Shinners 11133*, May 8, 1949. (Type and specimens cited below all in Herb. Southern Methodist University.) In var. *urticifolia*, found in Texas chiefly in the eastern Pine Belt, as far west as Leon and Van Zandt counties, the leaves are sessile or short-petioled, the lower petioles up to 12 mm. long, middle ones 1-5 mm. long. In var. *texana*, all the leaves are petioled, lower petioles up to 40 mm. long, middle ones 5-20 mm. long. The new variety occurs in the East and West Cross Timbers and similar sandy soils of central and north-central Texas. The following additional collections have been seen. DALLAS Co.: near Seagoville, in sandy post-oak woods, *C. L. & Amelia A. Lundell 9225*, June 1, 1940. DENTON Co.: Post Oak Belt 4½ miles north of Grapevine, at "Cheatum Oaks," *Eula Whitehouse 17385*, October 13, 1946. LEE Co.: 2½ miles southwest of Giddings, infrequent on roadside, *V. L. Cory 55763*, May 6, 1949. MONTAGUE Co.: Post Oak Belt 4.4 miles north of Nocona near Molsbee Chapel, sandy prairie, *Whitehouse 10078*, June 22, 1945. PALO PINTO Co.: 8.5 miles west of Metcalf Gap on Highway 180, *Whitehouse 16708*, September 13, 1946. TARRANT Co.: east of Euless on Bear Creek north of Highway 183, Post Oak Belt, *Whitehouse 16138*, July 2, 1946. TRAVIS Co.: Austin, *B. C. Tharp*, May 14, 1940. WICHITA Co.: 18.9 miles southeast of Electra, sandy loam along railroad track, *Whitehouse 9796*, May 5, 1945.—*Lloyd H. Shinners*.

CROTON CAPITATUS Michx. var. **albinoides** (A. M. Ferguson) Shinners, comb. nov.—*C. Engelmanni albinoides* Ferguson, Ann. Rept. Mo. Bot. Gard. 12: 55-56. 1901. Primarily an endemic race of the central and lower Gulf Coast of Texas, but found locally inland as far as Hill County, on the Brazos River.—*Lloyd H. Shinners*.

CROTON GLANDULOSUS L. var. **hirsutus** Shinners, var. nov.—Caulis ramique longe denseque stellato-hispidis pilis partim patentibus 2-2.5 mm. longis. Stem and branches conspicuously hispid-hirsute, the stellate hairs partly widely spreading, 2-2.5 mm. long, yellowish or somewhat ferruginous. A restricted endemic of the central Gulf Coastal area of Texas. TYPE: 6½ miles northeast of Rockport, frequent in sandy, open woods, Aransas Co., Texas, *V. L. Cory 54597*, July 2, 1948. Type and two additional collections in Herb. Southern Methodist University. HARRIS Co.: Channelview, *Geo. L. Fisher 50162*, Oct. 4, 1950. SAN PATRICIO Co.: 1 mile south of Ingleside, in fine white sand, *Fred B. Jones 486*, May 5, 1951.—*Lloyd H. Shinners*.

A New Species of *Andropogon* from the Edwards Plateau of Texas

F. W. Gould¹

Recent study of *Andropogon barbinodis* Lag. and plants of southern Texas and northern Mexico commonly referred to *A. perforatus* Trin. ex Fourn. has disclosed interesting facts concerning these grasses. The glume-pit, used as the primary identifying character for *A. perforatus*, was found to be present in varying degrees in otherwise typical *A. barbinodis* plants. Close examination of herbarium specimens shows that pitted glumes are present in *A. barbinodis* as far north and west as

¹Curator of the Tracy Herbarium, Texas A.&M. College, and Collaborator, Southern Methodist University Herbarium.

southern Utah and central Arizona. The glume-pits are best developed northern Mexico. At the extremities of the range of this character the and most consistently present in *A. barbinodis* in southern Texas and pits are relatively small and shallow and occur in few (often only one or two) spikelets of a panicle.

On rangelands of the A.&M. College of Texas Substation 14, twenty miles south of Sonora, there is a bunchgrass with deeply pitted glumes that is strikingly different from *A. barbinodis*, both in vegetation and inflorescence characters. At first this was assumed to be the true *A. perforatus*. Examination of a panicle fragment (in the U.S. National Herbarium) of the type specimen of *A. perforatus*, however, has led me to conclude that the name is based on a plant referable to *A. barbinodis* or a hybrid derivative of that species. This contention is supported by the original description of *A. perforatus*, written by Fournier,² which refers in a general way to a plant of the *A. barbinodis* type. The following new species is therefore proposed.

ANDROPOGON edwardsianus Gould, sp. nov. Culmi graciles rigide erecti dense caespitosi simplices vel paniculis parvis lateralibus tarde ornati. Folia juniora glauca laminis filiformibus, foliorum basalium plerumque 1-2 mm. latis 10-25 cm. longis, basin versus longe ciliatis. Paniculae ramosae ramulis 3-6 racemosis simplicibus; spiculae sessiles 5-8 mm. longae (arista exclusa), gluma inferior fovea profunda glandulosa ab apice 2-2.5 mm. distante ornata, lemmatis arista 24-28 mm. longa; spiculae pedicellatae steriles ca. 3 mm. longae pedicello ca. 4.7-5 mm. longa. Chromosomata somatica 60.³

Culms mostly 35-65 cm. tall, densely tufted, slender, stiffly erect, geniculate-spreading only at margins of large clumps, unbranched above or with lateral panicles sparingly produced after development of terminal panicle; upper culm nodes glabrous or glabrate, lower glabrous to densely short-hairy, the hairs not over 1 mm. long; leaves mostly in a basal tuft, with a waxy bloom during growing period, the blades filiform, mostly 1-2 (rarely -3.5) mm. wide, those of the basal tuft 10-25 cm. long, ciliate on the margins below the middle with hairs 4-7 cm. long. Panicle of 3-6 simple racemose branches, these mostly 6-10 cm. long; panicle axis short, not over 1.8 cm. long, with 1-3 nodes. Sessile spikelet bisexual, fertile, 5-8 mm. long (excluding awn); first glume relatively narrow, gradually tapering to an acute or slightly bifid apex, glabrous and shiny dorsally on all specimens examined, with a deep cylindrical glandular pit 2-2.5 mm. from apex; lemma reduced, membranous, with a geniculate awn 20-28 mm. long; rachis node at base of sessile spikelet with a dense tuft of hairs 1-2 mm. long. Pedicellate spikelet sterile, awnless, glabrous or scabrous, slender, averaging 3 mm. long; pedicel averaging 4.7-5 mm. long, with a deep medial groove and with densely long-ciliate margins, the hairs near apex longer than those below. Somatic chromosome number (2n)=60; meiotic division in pollen-grain formation regular. TYPE: Experimental garden at College Station, Texas; clump transplanted from

²According to J. R. Swallen, Smithsonian Institution, Washington, D.C., in personal communication.

³Latin diagnosis supplied by Dr. Lloyd H. Shinners.

Substation 14, 20 miles south of Sonora, Edwards Co., Texas, *Gould & Merrill 6097*, Sept. 19, 1951 (Tracy Herb., Texas A.&M. College; isotypes from same clump as type). Additional collections (Tracy Herb.), all from rangelands of Texas A.&M. College Substation 14, Edwards Co.: *Cory*, in 1925; *Gould & Merrill 5763*; *Gould 5971, 5972, and 5973*.

Andropogon edwardsianus is readily differentiated from *A. barbinodis* plants with pitted glumes by the slender, stiffly erect, relatively unbranched culms, glabrous upper nodes, tufted leaves with filiform, ciliate blades, panicle of only 3-6 simple, racemose branches, and sterile spikelets averaging 0.6-0.7 as long as their supporting pedicels. In *A. barbinodis* plants of the same vicinity the sterile spikelets average as long as the pedicels or slightly longer. Colonies of plants intermediate in general characteristics between *A. edwardsianus* and *A. barbinodis* are not infrequent in south-central Texas and appear to be of hybrid origin. These plants are fertile and occur in dense stands in roadside ditches and other areas of disturbed soils. They probably are to be regarded as a distinct species. Interestingly enough, the chromosome complement is $2n=60$ in *A. edwardsianus*, $2n=120$ in the supposed hybrid type, and $2n=180$ in *A. barbinodis* in the vicinity.

NEW SPECIES, TRANSFERS, ETC. IN VOLUME XIX

Plants

- AGAVE *lata* Shinnery (171).
 ALLIUM *Fraseri* (M. Ownbey) Shinnery (104).
 AMSONIA *repens* Shinnery (126-127).
 ANDROPOGON *edwardsianus* Gould (184).
 CALLIRHOE *digitata* var. *stipulata* Waterfall (117), *digitata* var. *stipulata* f. *alba* Waterfall (118), *involutrata* f. *novomexicana* (E. G. Baker) Waterfall (111).
 CEANOTHUS *herbaceus* var. *pubescens* (T.&G.) Shinnery (33).
 CIRSIUM *texanum* var. *stenolepis* Shinnery (81).
 CROPTILON *divaricatum* var. *hirtellum* Shinnery (134), var. *Hookerianum* (T.&G.) Shinnery (134).
 CROTON *capitatus* var. *albinoides* (Ferguson) Shinnery (183), *glandulosus* var. *hirsutus* Shinnery (183).
 CYNANCHUM *barbigerum* (Scheele) Shinnery (65), *Palmeri* (S. Wats.) Shinnery (65).
 ERICAMERIA *triantha* (Blake) Shinnery (133).
 GRINDELIA *lanceolata* var. *texana* (Scheele) Shinnery (78).
 HETEROTHECA *Breweri* (Gray) Shinnery (71), *camporum* (Greene) Shinnery (71), *canescens* (DC.) Shinnery (68), *echioides* (Benth.) Shinnery (71), *foliosa* (Nutt.) Shinnery (71), *fulcrata* (Greene) Shinnery (71), *gossypina* (Michx.) Shinnery (71), *graminifolia* (Michx.) Shinnery (71), *mariana* (L.) Shinnery (71), *microcephala* (Small) Shinnery (71), *nervosa* (Willd.) Shinnery (68), *oregona* (Nutt.) Shinnery (71), *pilosa* (Nutt.) Shinnery (68), *Rutteri* (Rothrock) Shinnery (71), *sessiflora* (Nutt.) Shinnery (71), *stenophylla* (Gray) Shinnery (68), *trichophylla* (Nutt.) Shinnery (71), *villosa* (Pursh) Shinnery (71), *wisconsinensis* Shinnery (71).
 HYBANTHUS *linearis* (Torr.) Shinnery (126).
 HYMENOCALLIS *Eulae* Shinnery (103), *Liriosme* (Raf.) Shinnery (102).
 HYMENOXYS *glabra* (Nutt.) Shinnery (80), *scaposa* var. *villosa* Shinnery (79).
 JUSTICIA *Warnockii* Turner (100).
 LIATRIS *glabrata* var. *alabamensis* (Alexander) Shinnery (76), *pycnostachya* var. *lasiophylla* Shinnery (74).
 MIRABILIS *albida* var. *lata* Shinnery (176), *collina* Shinnery (180-181), *dumetorum* Shinnery (179), *eutricha* Shinnery (176-177), *gigantea* (Standley) Shinnery (177), *Lindheimeri* (Standley) Shinnery (175), *serotina* Shinnery (179).
 PHLOX *Drummondii* var. *McAllisteri* (Whitehouse) Shinnery (127), var. *peregrina* Shinnery (127).
 PHYSOSTEGIA *edwardsiana* Shinnery (167), *praemorsa* Shinnery (166).
 PINAROPAPPUS *roseus* var. *foliosus* (Heller) Shinnery (48).

- PSORALEA *digitata* var. *parvifolia* Shinnery (19), *latestipulata* Shinnery (22), *scaposa* var. *breviscapa* Shinnery (24), *subulata* var. *minor* Shinnery (23).
PYRRHOPAPPUS *Geiseri* Shinnery (81).
RHUS *aromatica* var. *flabelliformis* Shinnery (86).
SOLIDAGO *mollis* var. *texana* Shinnery (188).
TRAGLIA *urticifolia* var. *texana* Shinnery (183).
VITIS *mustangensis* var. *diversa* (Bailey) Shinnery (182).
XANTHOCEPHALUM *amoenum* Shinnery (77), *amoenum* var. *intermedium* Shinnery (77-78).
YUCCA *Freemanii* Shinnery (168).

Animals

- BUFO *debilis retiformis* Sanders & Smith (Amphibia), 153.
METAPTERUS *normae* Elkins (Hemiptera), 90.