Notes on Texas Compositae—VI

Lloyd H. Shinners

**XANTHISMA TEXANUM DC.**, Prodr. 5: 94-95. 1836. **TYPE:** “In sylvis Mexicanae provinciae Texas legit cl. Berlandier (pl. exs. n. 2639)” (isotype examined in Gray Herbarium).

**X. texanum var. Berlandieri** Gray, Pl. Wright. 1 (Smithsonian Contrib. vol. 3 art. 5) : 98. 1852. **TYPE:** Texas, *Drummond* (examined in Gray Herbarium). Incorrectly treated as typical *X. texanum* by Small, Fl. S.E. U.S. 1184. 1903. Phyllaries oblong or oblong-ovate, with rounded tips. Restricted to the Rio Grande Plain; specimens have been seen from Dimmit, Frio, Hidalgo, Kenedy, and Kleberg counties.

**XANTHISMA TEXANUM var. DRUMMONDI** (T.&G.) Gray, Pl. Wright. 1 (Smithsonian Contrib. vol. 3 art. 5) : 98. 1852. **TYPE:** Texas, *Drummond* (examined in Gray Herbarium). Phyllaries oblong-lanceolate or ovate-lanceolate, abruptly contracted to a sharp stiff point. More northern and much more widespread than the typical variety, occurring from Gillespie, Tarrant, and Taylor counties north and northwest to the Red River and throughout the Panhandle; also found in Oklahoma, as far northeast as Osage County.

**CHRYSOPSIS MARIANA** (L.) Nutt. A perennial southeastern species not previously reported from Texas, but found in a limited area in the extreme southeastern part of the state.


**ISOPAPPUS DIVARICATUS** (Nutt.) T.&G., Fl. N.A. 2: 239. 1842. *Inula divaricata* Nutt., Gen. 2: 152. 1818. “Hab. In the vicinity of Savannah in Georgia; common. Discovered by Dr. Baldwyn.” Type not seen, but several Georgia speci-

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1Where not otherwise indicated, cited specimens and those on which measurements are based are in the Herbarium of Southern Methodist University.
2Director of the Herbarium, Southern Methodist University.
mens examined.) *Aplopappus divaricatus* (Nutt.) Gray, Explorations and Surveys... (Pacific R.R. Reports) 4: 99. 1856. Involucre 4.5-6 mm. high; rays usually 5-8, occasionally 4-11; lower leaves 4-12 mm. wide. Specimens of the typical variety have been seen from North Carolina, Georgia, Louisiana (total 7 specimens), and eastern Texas as far west as Jack and Brazos counties (18 specimens).

**Isopappus divaricatus** var. *Hookerianus* (T.&G.) Shinners, comb. nov. *Isopappus Hookerianus* T.&G., Fl. N.A. 2: 239. 1842. “Gonzales, Texas, Drummond!... Only a few specimens having been collected, this species is not to be found in many of the sets of the late Mr. Drummond's plants. The specimens we have examined are in the herbarium of Sir Wm. Hooker.” (Topotype examined.) *Isopappus validus* Rydb., Brittonia 1: 100-101. 1931. TYPE: Sandhills south of Arkansas River, about 6 miles south of Ellinwood [Barton Co., Kansas], Rydberg & Imler 1309, July 23, 1929 (in Herb. N.Y. Bot. Gard.; not seen). Involucre 5.8-9 mm. high; rays usually 10-12, occasionally 9-13; lower leaves 5-20 mm. wide. (Measurements from 1 Kansas and 18 Texas specimens.) Despite overlap in measurements and in geographic distribution, the robust western plant seems worthy of recognition as a variety. It is the exclusive form in the Panhandle, but occurs locally southeastward to Gonzales, Freestone, Tyler, and Dallas counties, well within the range of the typical variety.

**Isopappus divaricatus** var. *hirtellus* Shinners, var. nov. Caule superne ramisque (junioribus praeципue) glandulosis atque hispidulis vel subincanis. TYPE: 10 miles south of Falfurrias, in sandy oak region, Brooks Co., Texas, C. L. & Amelia A. Lundell 10813, March 19, 1942 (in Herb. Southern Methodist University). Resembling the typical variety in having few rays (8), var. *Hookerianus* in the large involucre (7.2 mm. high); differing from both in the rather dense double pubescence. Known only from the type collection.

**Astranthium integrifolium** (Michx.) Nutt. Including var. *ciliatum* (Raf.) Larsen, Ann. Mo. Bot. Gard. 20: 35, 1933, and var. *rosulatum* Larsen, l.c. 36. I am quite unable to follow Miss Larsen in distinguishing her three varieties of this species. Her key differences ("Leaves not rosulate" vs. "Leaves rosulate" and "Plants not conspicuously
branched" vs. "Plants conspicuously branched") are not only exceedingly indefinite, but represent no more than growth stages of the same plant. When beginning to flower (January or February in southern Texas) the plants are generally very dwarf with short unbranched stems, and still possess basal rosette leaves. As the season progresses the basal leaves usually wither, the stems elongate and are branched below the middle. Often there is a second flowering period in summer, when numerous branchlets develop bearing smaller heads than in the spring form. *Astranthium integrifolium* is an abundant weedy annual of sand, sandy-clay, or silty soils, occurring in Texas south to Kenedy and west to Taylor and Montague counties. In this form (measurements from 36 Texas specimens) the involucre is 2.2-4.2 mm. high, the rays 5-11 mm. long. In the Trans-Pecos it is replaced by


*Hedypnoides cretica* Willd. This eastern Mediterranean weed, long established in California where it was collected as early as 1895 (W. W. Robbins, *Alien Plants Growing*

The True Clovers (Trifolium) of Texas

Joe F. Hennen1

In Texas the true clovers do not represent a group of as much economic importance as the bur clovers (Medicago) and the sweet clovers (Melilotus). Trifolium repens, however, is widely grown in lawns and pastures. The native species, especially T. amphianthum, are of some value in pastures in the eastern half of the state. According to herbarium records, true clovers are lacking in the Panhandle and Southern Plains regions of Texas, and only one species is reported from the Trans-Pecos. It is likely, however, that introduced species do grow in these sections.

The key is based on obvious vegetative characteristics as far as possible, and secondarily on floral characters. Specimens studied are in the Herbarium of Southern Methodist University, and cited specimens are located there if not otherwise stated. Lists from the University of Texas Herbarium (determinations verified by Mr. Robert Van Vleet) and the Missouri Botanical Garden Herbarium (verified by Dr. L. H. Shinners) were used in making distribution maps.

The flowering periods of the eastern species range from the latter part of March in south Texas to the early part of June in the north.

**Artificial Key to Texas Species of Trifolium**

1a. Leaflets over three times as long as wide

2a. Plant silky-pubescent; inflorescence villous, elongate, not subtended by bracts; introduced........................................1. T. arvense

2b. Plant glabrous or nearly so; inflorescence glabrous, globose, subtended by deeply divided involucral bracts; native in Trans-Pecos.................................................................2. T. Wormskjoldii

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