

gata Lag., 1816.] *Kuhnistera pulcherrima* Heller, Bot. Explor. Texas (Contrib. Herb. Franklin & Marshall College 1) : 50. 1895. *Petalostemon pulcherrimus*, Heller, Bull. Torr. Bot. Club 26 : 593. 1899. [Not *Dalea pulcherrima* Sesse & Moc. ex G. Don, 1832.]

The Genus *Dalea* (Including *Petalostemum*) in North-Central Texas

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The following account relates only to those species definitely known to grow within one or more of the 13 counties surrounding Dallas and Fort Worth. These 13 counties include two of the smallest of the 254 in Texas, comprising only 3.7% of the area of the state, but even this limited area (9,600 square miles) is greater than that of such eastern states as New Jersey, Massachusetts, or Vermont. Geological formations, soils, and topography are varied, usually with very abrupt transitions which are sharply reflected in the plant life. Endemic species meet with others of eastern, western, or Mexican affinities, making an exceptionally rich native flora. Since the region is still poorly known botanically, it is most probable that in time other species will be added to the list here given. The key is for use with plants in flower. Remarks under each species are based on collections in the Herbarium of Southern Methodist University, and on personal observations.

Key to Species

- 1a. Flowers widely separated, in loose, slender, curved
or nodding spikes1. *D. laxiflora*
- 1b. Flowers closely crowded, all touching or overlapping,
in dense heads or spikes
 - 2a. Flowers yellow
 - 3a. Leaflets 3 (only 1 or 2 in uppermost leaves), lance-linear,
acute2. *D. Hallii*
 - 3b. Leaflets 5 (only 3 on uppermost leaves), oblong-elliptic,
obtuse, with midrib exerted as a short point.....3. *D. aurea*
 - 2b. Flowers purple or rosy to white
 - 4a. Plant a dwarf shrub with much-branched woody stems;
flowering September-October4. *D. frutescens*
 - 4b. Plant herbaceous; flowering May-July (sometimes again
in September, when fruiting spikes from earlier are present)
 - 5a. Leaflets 15 or more.....5. *D. Drummondiana*
 - 5b. Leaflets 3-13
 - 6a. Flowers white; calyx glabrous except for the ciliate
margins of the teeth.....6. *D. multiflora*

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- 6b. Flowers "purple" (violet) or rosy to pink; calyx densely pubescent with appressed hairs, at least on the backs of the calyx teeth
- 7a. Stems or branches leafless for some distance below the flowers; plant normally about 3-6 dm. (1-2 ft.) high 7. *D. Stanfieldii*
- 7b. Stems or branches leafy nearly quite up to the flowers; plant normally dwarf, about 1.5 dm. (6 inches) high 8. *D. Reverchoni*

1. *D. LAXIFLORA* Pursh, Fl. Am. Sept. 2: 741. 1814. This is often known as *Dalea enneandra*, an anonymous name (commonly attributed to Nuttall, though he himself never acknowledged it and used Pursh's name instead in his *Genera of North American Plants* 2: 101, 1818), which name first appeared in an ephemeral nursery catalog put out by Fraser's Nursery in London in 1813, with a few lines of horticultural rather than botanical description. Pursh, Nuttall, and other authors of the time did not consider such anonymous price-lists a medium of publication of scientific names, and it is hardly wise or even proper for us at this late date to pretend that they were. Fraser's 1813 catalog was reprinted by E. L. Greene in 1890 (*Pittonia* 2: 116-119). Since then, many authors have sought to adopt names which appeared in it accompanied by any remarks which could by some straining be called a description, attributing the names to Nuttall, although there is no proof that he was responsible for all of them (only in very few cases does he acknowledge authorship or retain them in his *Genera*). But there has been no uniformity in this practise. In the 7th edition of Gray's *Manual*, for example, *Dalea enneandra* "Nutt." is retained in place of *D. laxiflora*, but *Astragalus crassicaarpus* "Nutt.", also published in Fraser's catalog, is rejected in favor of the later *A. caryocarpus* Ker; *Rudbeckia columnifera* "Nutt." is rejected in favor of the later *R. columnaris* Pursh (under *Lepachys*), but one of the editors who accepted the latter in the 7th edition now insists that the former must be used instead (Fernald, *Rhodora* 40: 353-356, 1938, under *Ratibida*). Recently it has been proposed by Dr. F. R. Fosberg, (mimeographed circular sent out by the American Society of Plant Taxonomists) that commercial catalogs, such as that of Fraser (seed lists of recognized botanical gardens of course are in another category), not be considered places of valid publication of scientific names. With this proposal I heartily concur. If we are to require the adoption of names appearing in commercial price-lists,

there is no telling how much searching through dusty attics may be necessary before all the possibilities of fresh name changes have been exhausted, nor what horticultural or advertising jargon our definition of a valid description may be strained to cover. In the particular case of Fraser's catalog, since the list was anonymous, and such scanty remarks as appear are plainly horticultural and not botanical, I see neither the desirability nor the necessity of adopting any names which appear in it, unless they received valid publication elsewhere.

Dalea laxiflora is a somewhat weedy, tall perennial from a stout, yellow taproot, preferring silty or fine sandy soils, but found also on eroding limestone or in gravel. Rather common from Tarrant County westward; the easternmost locality known is 2.4 miles west of Midlothian, in extreme northwestern Ellis County. Flowers white, with cream-colored keel. Mid-June to early July; occasionally later.

2. D. HALLII Gray,² Proc. Amer. Acad. 8: 625. 1873. A low, trailing or half erect perennial, of rocky or gravelly, dry prairies, on the Austin Chalk or resistant limestone members of the Washita, Fredericksburg, Trinity, and similar formations. Corollas yellow, contrasting with the brown-red calyxes. Late May through June, occasionally during summer, and commonly again in September and October. One of many highly restricted endemics in the state, *Dalea Hallii* is known from five counties in north central Texas: Grayson, Dallas, Tarrant, Hood, and Mills—a distribution pattern almost identical with that of the unique *Silphium albidiflorum* T. & G. (Distribution note for these two species is based on collections at the Missouri Botanical Garden and University of Texas, as well as Southern Methodist University.)

3. D. AUREA Pursh, Fl. Am. Sept. 2: 740-741. 1814. (Usually attributed to Nuttall in Fraser's catalog; see remarks under *D. laxiflora*, above. In this case, Nuttall later did claim authorship of the species, *Genera* 2: 101.) Perennial with erect or oblique, unbranched stems, and short, thick spikes.

²The foremost of American taxonomists is often referred to as "A. Gray," because of the earlier English S. F. Gray. This is a British provincialism which has become fashionable in the United States. If the latter's work were of such quantity, value, or concern to Americans that confusion might arise without the initials, there would be grounds for citing them. Such is hardly the case. So often does Asa Gray figure in any account of North American plants that to cite the initial in every instance would mean a great and unnecessary loss of time in the course of a year's work. Americans will surely not need any other reason for adhering to the old-fashioned, briefer way.

Locally common on rocky limestone prairies from Collin and Dallas counties westward. Flowers yellow. End of May to early July. To those familiar with the northeastern species of *Petalostemum*, *Dalea aurea* will look like a yellow-flowered member of that genus.

4. *D. FRUTESCENS* Gray, Boston Journ. Nat. Hist. 6:175. 1850. Dwarf shrub a foot or two high, forming large clumps or mats; found on rocky limestone soil in the eastern part of the Edwards Plateau, and extending northeastward to Hood and Bosque counties. Flowers violet. September-October. Allied to Southwestern Desert and Mexican species of the genus.

5. *D. DRUMMONDIANA* Shinners, Field & Lab. 17:83. 1949. *Petalostemon microphyllus* (T. & G.) Heller; not *Dalea microphylla* HBK. Low perennial with numerous small leaflets and long slender spikes; found on sandy soils, Trinity River Terraces west to the West Cross Timbers (Dallas to Parker county). Flowers white. June; sometimes again in September.

6. *D. MULTIFLORA* (Nutt.) Shinners, Field & Lab. 17: 82. 1949. *Petalostemon multiflorum* Nutt. Much-branched, rather bushy, clump-forming perennial, with very short spikes or heads. Found in calcareous clay or rocky limestone soil, Black and Grand Prairies; much less common on sandy soils in the East and West Cross Timbers, where in places it has the appearance of a recent invader. Flowers white. Mid-June through July, about two weeks later than *D. Stanfieldii*, with which it commonly grows.

7. *D. STANFIELDII* (Small) Shinners, Field & Lab. 17:84. 1949. *Petalostemon Stanfieldii* Small. *P. pulcherrimus* Heller. Simple or sparingly branched, erect perennial. Found with *D. multiflora* on calcareous prairies, but less abundant, and apparently not inclined to spread onto sandy soils. Flowers "purple" (violet or rosy violet). Late May to early July.

8. *D. REVERCHONI* (Wats.) Shinners, Field & Lab. 17:84. 1949. *Petalostemon Reverchoni* Wats. Dwarf perennial. Flowers "deep pink or red," according to the original description. June. Known only from the type collections and later topotypes collected by H. Eggert (in Herb. Missouri Botanical Garden) on the summit of Comanche Peak, Hood County. This is one of the most highly restricted endemics in north Texas. Comanche Peak is a massive, flat-topped

outlier capped by one of the resistant limestone formations which make up the Edwards Plateau farther south and west. On the Edwards Plateau, the Comanche Peak limestone lies beneath other beds, but it is exposed at many places in the intervening "Lampasas Cut Plain" and elsewhere. Quite possibly the actual range of *Dalea Reverchoni* is greater than known at present.

Notes

ARENARIA Drummondii Shinnery, nom. nov.—*Stellaria Nuttallii* T. & G., Fl. N. A. 1: 183-184. 1838. [Not *Arenaria Nuttallii* Pax, 1893, under which name this plant is erroneously listed in Cory and Parks' *Catalogue of the Flora of Texas* (Texas Agric. Exp. Sta. Bull. 550: 44, "1937" [1938]).] The authors of the species remarked: "Habit of *Cerastium nutans*. The sinus of the petals is so shallow that the plant might be ranked with *Arenaria* almost as well as with *Stellaria*." Their epigonus, B. L. Robinson (Synopt. Fl. N. A. 1 pt. 1: 236-237, 1897), placed this and other species under the heading "approaching *Arenaria*." The shallowly notched petals are so similar to those of *Arenaria patula* Michx., and so unlike those of most species of *Stellaria*, that in the absence of other deciding features, it seems preferable to place it with the former, as was done by Small (Fl. S.E. U.S., 1903 under *Alsineopsis*.) Arguments for retaining *Arenaria* in a broader sense than that of Small have been given by Fernald (Rhodora 21: 1-7, 1919). Torrey and Gray, in the Supplement to volume 1 of their *Flora* (p. 675, 1840), mention an unpublished species, *Alsine Drummondii* Fenzl, as a synonym of their *Stellaria Nuttallii*. The new name here proposed, however, is based directly on *Stellaria Nuttallii* T. & G., not on *Alsine Drummondii* Fenzl ex T. & G. in synonymy.—LLOYD H. SHINNERS, Director of University Herbarium, Southern Methodist University, Dallas.

DELPHINIUM VIRESCENS Nutt. var. **Wootoni** (Rydb.) Shinnery, comb. nov.—*D. Wootoni* Rydb., Bull. Torr. Bot. Club 26: 587. 1899. *D. virescens* ssp. *Wootoni* (Rydb.) Ewan, Univ. Colorado Studies (Ser. D) 2: 169. 1945. The above new combination is needed to provide uniform nomenclature for the Texas varieties of *Delphinium virescens*. In addition to var. *Wootoni*, the typical variety and var. *macroceratilis* (Rydb.) Cory, Field & Lab. 14: 50, 1946, are found in the state.—LLOYD H. SHINNERS

ASCLEPIAS TUBEROSA L. var. **interior** (Woodson) Shinnery, comb. nov.—*A. tuberosa* ssp. *interior* Woodson, Ann. Mo. Bot. Gard. 31: 368-369. 1944. A Florida congener, not found in Texas, is *A. tuberosa* var. *Rolfsii* (Britton) Shinnery, comb. nov. *A. Rolfsii* Britton ex Small, Fl. S.E. U.S. 943 and 336. 1903. *A. tuberosa* ssp. *Rolfsii* (Britton) Woodson, l. c. 368. 1944.—LLOYD H. SHINNERS