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Vegetative Key to Texas *Desmanthus* (Leguminosae) and Similar Genera

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There are several genera of *Mimosoideae* in Texas that resemble each other, especially when only the flowers are present. Probably the plants most frequently wrongly identified in the genus *Desmanthus* are *Acacia hirta* Nutt. and *A. texensis* T.&G. (*A. cuspidata* Schl.), followed closely by the prostrate plants of *Neptunia*. Other similar Texas genera are *Calliandra*, *Hoffmanseggia*, *Schrankia*, and *Mimosa strigillosa* T.&G. The following vegetative key is designed as a quick aid to place species of this complex of plants in their proper places when flowers and/or fruit are absent.

KEY TO DESMANTHUS AND VEGETATIVELY-SIMILAR GENERA

1. Stem beset with numerous, erect, prickles (Fig. 1).....1. *Schrankia*
1. Stem glabrous, strigose, pubescent, or glandular, but never with erect prickles.
 2. Leaves with a petiolar gland between the lowest pair of pinnae (sometimes minute) (Fig. 2).
 3. Stipules wide, obliquely cordate.....2. *Neptunia plena*
 3. Stipules narrow, linear.....3. *Desmanthus*
 2. Leaves without a petiolar gland between the lowest pair of pinnae.
 3. Leaflets with conspicuous raised reticulate or palmate veins, at least beneath.
 4. Stems prostrate, widely spreading; plants of central and eastern Texas.
 5. Root orange; stem pubescent to glabrate.....4. *Neptunia*
 5. Root not orange; stems with many appressed prickles, otherwise glabrous.....5. *Mimosa strigillosa*
 4. Stems erect, or the lower sometimes decumbent, but never widely spreading; plants of Trans-Pecos Texas6. *Calliandra*
 3. Leaflets smooth, without raised reticulate or palmate veins (often glandular).
 4. Leaflets 12 or more pairs on at least some of the pinnae; stipules linear or wanting.....7. *Acacia*
 4. Leaflets 2-11 pairs on each pinna; stipules variously shaped, rarely linear.....8. *Hoffmanseggia*

1. *SCHRANKIA* (*nomen conservandum*). Britton & Rose (1928) in their treatment of this genus list 11 species as occurring in Texas. Two of these are possibly superfluous,

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Schrankia Berlandieri (Britton) Standl. and *Schrankia angustisiliqua* (Britton & Rose) Hermann. The genus is mainly restricted to central and eastern Texas. Two species, *S. occidentalis* (Woot. & Standl.) Woot. & Standl. and *S. Nuttalli* (DC.) Standl. are found on the high plains of the Panhandle. *S. occidentalis* extends southward to Ward and Winkler Counties. Though the genus is technically separated from other genera in the tribe *Mimosoideae* by its tetragonal pod, this does not hold for Texas plants. *S. Roemeriana* (Scheele) Blankinship, *S. hystericina* (Small) Standl. and *S. mimosoides* (Small) Standl. have flattened pods. Morphologically, the genus is very similar to *Mimosa* and possibly should be included in it. Vegetatively or in flower the species of *Schrankia* are almost inseparable, mature pods being necessary for correct identification.

2. NEPTUNIA PLENA (L.) Benth. Widely distributed in tropical or subtropical areas of North America, South America, and Asia. Britton & Rose exclude it from the continental United States in their treatment of the genus. Possibly the first confirmed collection of this species for the United States is *Robert Runyon 1959*, "moist grounds or in ponds, south of Armstrong in Kenedy Co., Oct. 17, 1938" (U.S. National Herbarium). The coastal plain of Texas has long been neglected by plant collectors. Early collectors sampled the area but lightly, doing the greater part of their collecting inland and westward (for accounts of early botanists in Texas see Geiser's "Naturalists of the Frontier," 1948). Later botanists followed suit. Undoubtedly many tropical and subtropical species will have their ranges extended as the vegetation of the coastal swamps and bays is more carefully collected and studied.

3. DESMANTHUS (*nomen conservandum*). This genus with 8 species and 2 varieties in Texas is found throughout the state. It is distinguished vegetatively by the leaves which bear a petiolar gland between the lowest pair of pinnae. In *D. velutinus* Scheele, *D. reticulatus* Benth., and *D. obtusus* S. Wats. these glands are small; but upon well developed leaves they may be seen easily with a lens. In Texas the genus is one of low suffrutescent (scarcely shrubby) or prostrate plants. For distributions and key to the species of *Desmanthus* in Texas see p. 56.

4. *NEPTUNIA*. Prostrate plants from a tough, orange tap root, occurring in eastern, central and South Texas. The westernmost collection for the genus is recorded as "Painted Caves"² by Torrey in his report on the Mexican Boundary Survey (pt. 1, p. 60, 1859). Four species and a variety are recognizable within the state. In north-central and northeast Texas the common species is *N. lutea* (Leavenw.) Benth. *N. pubescens* Benth. is a widely distributed species occurring along the Texas gulf coast to Florida, throughout the West Indies and South America.

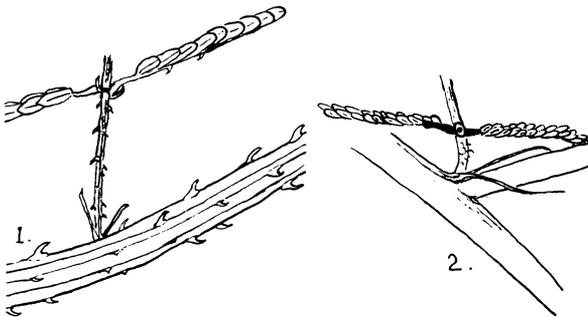


Fig. 1. *Schrankia*, showing prickly stem. Fig. 2. *Desmanthus*, showing petiolar gland.

5. *MIMOSA STRIGILLOSA*. This plant occurs most abundantly along the Gulf Coast, where it is a weed growing on burned-over areas, vacant lots, and frequently on mowed lawns. Occasional specimens are found further inland (GREGG Co., Gladewater, *Reverchon s.n.*). Because of the broad membranous stipules this plant is often mistaken for *Neptunia*. In fruit *M. strigillosa* has a pod beset with numerous short prickles, whereas *Neptunia* has a glabrous or softly pubescent one.

6. *CALLIANDRA*. Two species in Texas, *C. eriophylla* Benth. and *C. humilis* Benth. (*C. herbacea* Engelm.), both occurring only in the mountainous areas of the Trans-Pecos. The former is commonly found on both limestone

²This locality is probably in error, it being the common practice of early botanists to collect along a certain route for several days and then write them up at convenient stops. The proper locality is more likely somewhere in Uvalde or Kinney County. The Painted Caves are located in Val Verde Co., 14 miles west of Del Rio in Castle Canyon and were probably one of the more important camping points on the early army route to El Paso. (National Speleological Society, Bull. 10, *The Caves of Texas*, 1948.)

and igneous soils; whereas the latter seems confined to igneous ones. *C. reticulata* Gray has been reported for Texas, but I have not seen specimens identifiable as that species. *C. eriophylla* in Texas specimens has consistently only one pair of pinnae. Specimens from more western states have from 1-7 pairs.

7. ACACIA. Two species, *A. texensis* and *A. hirta*, are frequently confused with *Desmanthus*. In flower they are easily separated by the number of stamens. *Acacia* has numerous stamens, *Desmanthus* has only 5 or 10. Vegetatively, their separation is more difficult. The presence of a petiolar gland between the lower pinnae of the leaves on *Desmanthus* seems the best artificial character. *A. texensis* is a low suffrutescent plant occurring in the Trans-Pecos. *A. hirta* occurs in east Texas as well as the Trans-Pecos.

8. HOFFMANSEGGIA. Ten species in Texas (Britton & Rose, 1928), mainly in southern and western Texas. In flower, this genus is easily recognized as belonging to the subfamily *Caesalpinioideae*. Vegetatively, however, the genus is frequently confused with *Desmanthus*, or other herbaceous form of *Mimosoideae*.

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Texas Species of *Desmanthus* (Leguminosae)

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The Texas species of *Desmanthus* (*nomen conservandum*), as treated in the present paper, total nine, one of which has two varieties. Six of these are found almost exclusively within the state (Maps 2-6, 10); three others are restricted to the continental United States or north-western Mexico; the remaining one (*D. virgatus* var. *depressus*) is a species widely distributed along coastal areas of Florida, the West Indies, Mexico, and South America.

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