UPON A COLLECTION OF PLANTS MADE BY MR. G. C. NEALLEY, IN THE REGION OF THE RIO GRANDE, IN TEXAS, FROM BRAZOS SANTIAGO TO EL PASO COUNTY.

By JOHN M. COULTER.

Mr. G. C. Nealley was engaged by the Division of Botany to make collections of plants during the seasons of 1887, 1888, and 1889, in the more unexplored parts of Texas, chiefly in the counties bordering the Rio Grande. It was hoped that many of the rarer plants of the Mexican Boundary Survey and other early collections would be re-discovered, that additional Mexican types would be found to be members of our flora, and that species new to science would be brought to light. How far these hopes have been realized is shown in the following report. It is to be regretted that in many cases the stations are no more definitely given, but they are given with all the fullness that the field-notes will justify.[1]

1. **Clematis crispa** L. Near Brazos Santiago in April, and later at Ballinger (Runnels county).
2. **Clematis Drummondii** Torr. & Gray. In great abundance along the Rio Grande near Roma (Starr county).
3. **Clematis Pitcheri** Torr. & Gray. Concho county.
4. **Aquilegia chrysantha** Gray. Southwestern Texas.
5. **Cocculus diversifolius** DC. (*C. oblongifolius* DC.) Southwestern Texas. Two forms of this species occur in Mr. Nealley's collections; one with ovate leaves, the other with narrowly oblong leaves.
6. **Castalia elegans** Greene (*Nymphæa elegans* Hook.). Along the lower Rio Grande near Santa Maria (Cameron county), and apparently in considerable abundance. This rare and beautiful species, remarkable on account of its light blue petals, was discovered by Charles Wright in 1849, "near the head of the Leona River," a Texan tributary of the Rio Grande. Grown from seed at Kew, it was described and figured by Hooker in *Curt. Bot. Mag.*, t. 4604. Afterwards a single specimen was found by Berlandier in northern Mexico, and other specimens by Charles Wright in Cuba. For many years it was unreported, when it was re-discovered in 1887 at Waco, McLennan county, by Misses Trimble and Wright (reported by E. E. Stern in *Bull. Torr. Bot. Club*, xv, 13); and in 1888 by C. G. Pringle, in lagoons near Brownsville. *Bourgeau* 4, from Santa Anita, Mexico, referred in *Hemsl. Biol. Centr. Amer.*, i. 25, to this species, is probably *Castalia flava* Greene.

[1] In the case of sets distributed before the publication of this contribution, the numbers on the labels should be changed to the serial numbers of this paper. Some changes, also, have been made in determination, and hence a few names on already distributed labels are misleading.

7. **Castalia flava** Greene (*Nymphæa flava* Leitner). Rio Grande City (Starr county). To this must be referred *Bourgeau* 4, from Santa Anita, Mexico, as noted under the preceding species. The discovery of this Florida yellow water-lily along the Rio Grande in Texas, as well as in Mexico, is an interesting one. In Pringle's distribution of 1888, no. 1956, from lagoons near Brownsville, is labeled *Nymphæa Mexicana* Zucc., and it is undoubtedly the same as our specimens from Mr. Nealley. There seems to be so much uncertainty, however, as to what *N. Mexicana* is, and our plants so closely accord with the well-known *Castalia flava*, that we have ventured to so name them. It is but fair to say that none of the Nealley specimens are in fruit, and it may be discovered that all of these Texano-Mexican yellow water-lilies are *Castalia Mexicana*.
8. **Nelumbo lutea** Pers. (*Nelumbium luteum* Willd.) Along the lower Rio Grande, near Santa Maria (Cameron county).
9. **Argemone platyceras** Link & Otto, var. **rosea** Coulter *n. var.* Petals bright rose-purple. Corpus Christi. This includes also the form referred to by Watson (*Proc. Am. Acad.*, xvii. 318) under *Palmer* 20.
10. **Thelypodium linearifolium** Watson. Limpia cañon (Presidio county).
11. **Thelypodium micranthum** Watson. Limpia cañon and Chenate Mountains (Presidio county). Mr. Nealley's plants are quite small and sometimes simple, some of them being not more than 9 inches or 1 foot high. They are sometimes also quite glabrous, even as to the lower leaves, and the stigma seems sessile. This species is confused in herbaria with *T. longifolium* Watson, in which the flowers are twice as large.
12. **Thelypodium Vaseyi** Coulter, *n. sp.* Glaucous and glabrous throughout, 6 to 9^{dm} high, branching, with coarse stems: leaves thin, oblanceolate, becoming narrower above, entire or lower leaves somewhat repand-denticulate, clasping by rounded auricles (or the lowest merely sessile), 2.5 to 10^{cm} long, 1.25 to 3.75^{cm} broad: flowers very small, white, about 3^{mm} high: pods very slender, becoming distant and ascending or erect, 3.75 to 5^{cm} long, on pedicels 6 to 8^{mm} long.—Near Rio Grande City, Texas (*Nealley*); also collected in 1881 by G. R. Vasey (no. 29) in the mountains west of Las Vegas, New Mexico, in immature condition. Vasey's plants were too young to be characterized, although Mr. Watson, to whom the specimens were submitted, considered them as probably representing a new species. Mr. Nealley's specimens supply nearly mature pods, which may become longer than noted in the description. The species seems to be very distinct from any other Thelypodium.
13. **Thelypodium Wrightii** Gray. Limpia cañon (Presidio county). Specimens in fine fruiting condition show pods mostly 3 inches long or over.
14. **Lesquerella argyrea** Watson (*Vesicaria argyrea* Gray). Roma (Starr county) and Chenate Mountains (Presidio county).
15. **Lesquerella Engelmanni** Watson (*Vesicaria Engelmanni* Gray). Camp Charlotte (Ixion county). The collection includes two forms: one leafy, with very narrow and entire leaves; the other with nearly all the leaves rather broad and sinuate-dentate.
16. **Lesquerella gracilis** Watson (*Vesicaria gracilis* Hook.). Brazos Santiago.
17. **Sisymbrium canescens** Nutt. Limpia cañon (Presidio county).
18. **Sisymbrium diffusum** Gray. Limpia cañon (Presidio county) and Chisos Mountains (Foley county). This species was collected by Wright and the Mexican Boundary Survey in the southwest corner of Texas. G. R. Vasey and Rusby have collected it in adjoining New Mexico, and Pringle in Mexico. Mr. Nealley's Limpia cañon specimens were collected at Wright's original station.
19. **Erysimum asperum** DC. Limpia cañon (Presidio county).

20. **Greggia camporum** Gray. Chenate Mountains (Presidio county). This species is remarkably variable, a fact which is better known in herbaria than in publication. Very little seems to have been added to Gray's original description in *Pl. Wright.*, i. 8, but the immaturity of his specimens prevented him from discovering certain characters which seem generic. No mention is made of the fact, nor does it appear in the plate in *Pl. Wright.*, that the mature stamens are strongly sagittate and coiled, as in *Thelypodium*. The pod, instead of being short and allied to that of *Synthlipsis*, is a silique (a fact recognized by Bentham & Hooker), often quite elongated (an inch or more), and usually more or less curved at maturity. In fact, the persistent septum is always curved, often strongly so. The sepals also become strongly reflexed. The species *G. camporum* presents such great variations in the size and shape of its leaves that extreme forms are never recognized by a collector as forms of the same species. These specimens from the Chenate Mountains have broad and sinnate-dentate leaves, the leaves being sometimes an inch broad and so deeply sinuate-dentate as to appear almost pinnatifid.
21. **Greggia camporum** Gray, var. **angustifolia** Coulter, *n. var.* Leaves mostly entire (occasionally sinuate-toothed) and very narrow (but 2 to 4^{mm} broad).—Camp Charlotte (Ixion county). If certain intermediate forms were not common this variety would represent a fairly good species. The pods are also quite variable in length in the same specimen. Considering the great variability of the leaves and pods the following may be but another variety of this polymorphous species:
22. **Greggia linearifolia** Watson. Camp Charlotte (Ixion county), mixed with the last, to which it is closely related.
23. **Lepidium alyssoides** Gray. Camp Charlotte (Ixion county).
24. **Synthlipsis Berlandieri** Gray, var. **hispida** Watson. Brazos Santiago.
25. **Cakile maritima** Scop., var. **æqualis** Chapman. Brazos Santiago. A West Indian and Floridian species found along the Texan coast.
26. **Polanisia trachysperma** Torr. & Gray. Corpus Christi. Ballinger (Runnels county) and Limpia cañon (Presidio county).
27. **Ionidium polygalæfolium** Vent. Roma (Starr county).
28. **Polygala alba** Nutt. Brazos Santiago and Chenate Mountains (Presidio county).
29. **Polygala ovalifolia** DC. Western Texas.
30. **Polygala puberula** Gray. Santa Anna (Coleman county).
31. **Silene laciniata** Cav., var. **Greggii** Watson. Limpia cañon (Presidio county).
32. **Stellaria prostrata** Baldw. Santa Maria (Cameron county) and Chenate Mountains (Presidio county). The Chenate specimens are much smaller than usual.
33. **Talinum parviflorum** Nutt. Corpus Christi.

33a. **Talinum lineare** HBK. (*T. aurantiacum* Engelm.) Corpus Christi.

34. **Malva borealis** Wallm. Brazos Santiago. An Old World plant, apparently naturalized throughout our southern border from the Gulf coast of Texas to California.
35. **Callirrhoe linearifloba** Gray. Pena (Duval county).
36. **Malvastrum coccineum** Gray. Rio Grande City (Starr county).
37. **Malvastrum spicatum** Gray. Brazos Santiago. A Mexican species.
38. **Malvastrum tricuspidatum** Gray. Brazos Santiago. Specimens smaller in all dimensions than usual.
39. **Malvastrum Wrightii** Gray. Corpus Christi. A very small form, with unusually reduced bractlets.
40. **Anoda hastata** Cav. "Screw Bean" (Presidio county).
41. **Anoda pentaschista** Gray. Chenate Mountains (Presidio county). The lower leaves are rather larger than usual, some of them being broadly triangular

and 2 inches long by 1½ inches wide. The variation in the leaves passing up the stem is remarkable. In addition to the broad triangular leaves, some are 3-lobed, then above become narrower and hastate, finally narrowing to linear, but always hastate.

42. **Sida hederacea** Gray. Pecos flats, near Pecos City (Reeves county).

43. **Sida lepidota** Gray. Chenate Mountains (Presidio county).

44. **Sida longipes** Gray. Pena (Duval county). This seems to be the first recorded collection of this species since Wright's in 1851 and that of the Mexican Boundary Survey. It very closely resembles *S. Lindheimeri* Eng. & Gray, but the muticous carpels, as well as the elongated fruiting pedicels, serve well to distinguish it.

45. **Sida physocalyx** Gray. Pena (Duval county).

46. **Abutilon Berlandieri** Gray. Corpus Christi (Nueces county) and San Diego (Duval county); also found in 1882 by G. W. Letterman at Laredo (Webb county) and distributed as *A. holosericeum* Scheele. A Mexican species, Berlandier's 1550, 3050, and 3108, from northeast Mexico, being the same.

47. **Abutilon crispum** Gray. Rio Grande City (Starr county).

48. **Abutilon holosericeum** Scheele. Santa Maria (Cameron county).

49. **Abutilon incanum** Don. (*A. Texense* Torr. & Gray). Rio Grande City (Starr county). *A. incanum* is a species of the Sandwich Islands, but considered by Dr. Gray (Proc. Am. Acad., xxii. 301) identical with our *A. Texense*, "notwithstanding the disjointed range."

50. **Abutilon Nealleyi** Coulter, *n. sp.* Stem slender, erect, 6 to 12^{dm} high, soft puberulent above, becoming glabrous below: leaves broadly cordate and long acuminate, entire or slightly crenate, green and soft puberulent (becoming glabrous) above, white with fine dense stellate pubescence beneath, 6 to 10^{cm} long, 5 to 7.5^{cm} wide, becoming smaller above, on long petioles (2.5 to 9^{cm} long), the lower with axillary fascicles of small leaves: flowers in loose, few-flowered, long peduncled, upper-axillary and terminal panicles, very small, not more than 4^{mm} high: calyx stellate-pubescent, deeply cleft, the ovate acute lobes about half as long as the petals and very much shorter than the carpels: petals yellow or orange, hardly 4^{mm} long: carpels 5, becoming 6 to 8^{mm} long, puberulent, with a short acuminate beak, 2 or 3-seeded; seeds usually with a tuft of white hairs.—Near Hidalgo (Hidalgo county). This species is an addition to the group of herbaceous, large-leaved, rather naked paniculate and small-flowered forms, represented heretofore by *A. Sonoræ* Gray, *A. reventum* Watson, and *A. Xanti* Gray. *A. Nealleyi* has much the smallest flowers, and looks somewhat like a species of *Bastardia*, but the 2 or 3-seeded carpels are plainly those of *Abutilon*.

51. **Abutilon parvulum** Gray. Near Pena (Duval county) and in the Chenate Mountains (Presidio county).

52. **Abutilon Wrightii** Gray. Corpus Christi.

53. **Sphæralcea ambigua** Gray. Pena (Duval county). *S. Emoryi* in Ives Col. Exp. Bot. 8, and Bot. Calif. partly, not Pl. Fendl. nor Pl. Wright. Abundant on the arid plains of southern California, Nevada, and Arizona, and now found in southern Texas.

54. **Sphæralcea angustifolia** Spach., var. **cuspidata** Gray. Camp Charlotte (Ixion county).

55. **Sphæralcea Fendleri** Gray. Chenate Mountains (Presidio county).

56. **Sphæralcea subhastata** Coulter, *n. sp.* Low (7 to 22^{cm}), frutticose and branching, covered throughout with coarse almost scurfy stellate-pubescence: leaves thick, ovate to oblong, mostly obtuse and subhastate, rugose and more or less serrate, 1.25 to 3.75^{cm} long, 10 to 16^{mm} broad, on thick petioles 6 to 16^{mm} long: flowers mostly solitary and axillary on very short pedicels: calyx cleft about half way, the lobes acute or somewhat acuminate, little more than half as

long as the purplish (in dried specimens) corolla, which is 1.25 to 2.5^{cm} in diameter: fruit subglobose, densely stellate-pubescent, with no apparent cusps.—"Screw Bean" (Presidio county). To this species is referred *Wright* 883 in part, collected in New Mexico in 1851; also *Palmer* 93, from Coahuila, Mexico, collected in 1880. The species is intermediate between *S. hastulata* Gray and *S. angustifolia*, var. *cuspidata* Gray. *Palmer* 93 was considered by Mr. Watson (Proc. Am. Acad., xvii. 331) to be a form of *S. hastulata*. Mature fruit, as well as the coarse stellate-pubescence, indicates a much closer relationship to *S. angustifolia*, var. *cuspidata*, under which polymorphous species it should be included if not entitled to specific rank. It differs, however, from that species in its low habit, short ovate or oblong subhastate leaves, solitary short-pedicelled flowers, and its pointless carpels.

57. **Malachra palmata** Mœnch. Brazos Santiago.
58. **Hibiscus cardiophyllus** Gray. Rio Grande City (Starr county).
59. **Hibiscus Coulteri** Harvey. Chisos Mountains (Foley county). Pringle's Arizona specimens have petals purplish outside, but Nealley's are pure sulphur yellow, as in the original specimens of Wright and the Mexican ones of Coulter.
60. **Hermannia Texana** Gray. Rio Grande City (Starr county) and Pena (Duval county). Apparently somewhat abundant along the Texan frontier, but it seems not to have been recently reported from Texas.
61. **Linum rigidum** Pursh. Brazos Santiago.
62. **Malpighia glabra** L. Santa Maria (Cameron county).
63. **Janusia gracilis** Gray. Corpus Christi (Nueces county), San Diego (Duval county), in "western Texas" from several localities without specific stations, and in the Chenate Mountains (Presidio county).
64. **Guiacum angustifolium** Engelm. (*Porlieria angustifolia* Gray). Rio Grande City (Starr county). In *Proc. Am. Acad.*, xxii. 306, Dr. Gray says that the genus *Porlieria* can not be kept up.
65. **Geranium cæspitosum** James. Limpia cañon (Presidio county).
66. **Oxalis Berlandieri** Torr. Pena (Duval county). A species not very abundantly nor recently collected.
67. **Oxalis corniculata** L., var. **stricta** Sav. Santa Maria (Cameron county).
68. **Oxalis dichondræfolia** Gray. Santa Maria (Cameron county).
69. **Ptelea trifoliata** L., var. **mollis** Torr. & Gray. Devil's River (Val Verde county).
70. **Kœberlinia spinosa** Zucc. Roma (Starr county) and Limpia cañon (Presidio county).
71. **Zizyphus obtusifolius** Gray. Santa Maria (Cameron county) and Hidalgo (Hidalgo county).
72. **Karwinskia Humboldtiana** Zucc. Santa Maria (Cameron county).
73. **Ceanothus Greggii** Gray. Chisos Mountains (Foley county). A species heretofore known to extend from Utah to Arizona, New Mexico, and Mexico, and now discovered in western Texas.
74. **Adolphia infesta** Meisner. Limpia cañon (Presidio county).
75. **Urvillea Mexicana** Gray. Santa Maria (Cameron county) and Hidalgo (Hidalgo county).
76. **Cardiospermum molle** HBK. Limpia cañon (Presidio county). A north Mexican species new to our flora.
77. **Ungnadia speciosa** Endl. Chenate Mountains (Presidio county).
78. **Rhus virens** Lindh. Limpia cañon (Presidio county).
79. **Crotalaria incana** L. Brazos Santiago. A common Mexican and West Indian species. Our specimens are quite low, with very villous-hirsute stems, not very much resembling the tall and rather smooth forms of S. Florida referred to this species.
80. **Melilotus Indica** All. (*M. parviflora* Desf.). Brazos Santiago.

81. **Hosackia rigida** Benth. (incl. *H. puberula* Benth. and *H. Wrightii* Gray). Chisos Mountains (Foley county). In *Bot. Calif.* i. 136, Dr. Watson suggests that *H. puberula* Benth. and *H. Wrightii* Gray are but forms of *H. rigida* Benth. Botanists will testify to the impossibility sometimes of distinguishing these species. In Nealley's collection there are some remarkable specimens that combine in one plant all the important characters of these three so-called species. Some of the peduncles are short, and others very long; the calyx-teeth equal the tube or are shorter; the leaves are from obovate or oblong to narrowly linear. These specimens should be referred to *H. puberula* if the old specific distinctions are to be kept up. After examining a large series of specimens, however, it seems best to consider them all but as forms of a wide-spread and very polymorphus species, of which *H. Bryanti* Brandegee (*Pl. Baja Calif.* 144) seems to be but another form.
82. **Psoralea linearifolia** Torr. & Gray, var. **robusta** Coulter, *n. var.* Whole plant, in all its parts, more robust than the type: leaves linear-oblong, 4 to 6^{cm} long, 5 or 6^{mm} wide, thickly black-dotted above and below: flowers mostly in clusters of three, distant along the rhachis.—Clarendon (Donley county). Collected by Nealley in 1888.
83. **Psoralea tenuiflora** Pursh. Chenate Mountains (Presidio county).
84. **Dalea alopecuroides** Willd. Limpia cañon (Presidio county).
85. **Dalea aurea** Nutt. Santa Anna (Coleman county).
86. **Dalea Domingensis** DC., var. **paucifolia** Coulter, *n. var.* Whole plant more hairy: leaflets but three or four pairs and larger: inflorescence becoming more or less compact-clustered in the upper axils, and the calyx-tube nearly glabrous, making very prominent the large amber-colored glands.—Rio Grande City (Starr county). This is also *Palmer* 1049, collected in northern Mexico between San Luis Potosi and Tampico, and referred by Hemsley to *D. Domingensis* DC. The species has been found in S. Florida, and Mr. Hemsley (*Biol. Central Amer.*, i. 239) credits it to Texas and New Mexico, but from what collectors we are not aware. Mr. Nealley's collection brings the first Texan specimens we have seen.
87. **Dalea formosa** Torr. Chenate Mountains (Presidio county).
88. **Dalea frutescens** Gray. Devil's River (Val Verde county), and Chenate Mountains (Presidio county).
89. **Dalea mollis** Benth. Chisos Mountains (Foley county).
90. **Dalea nana** Torr. Roma (Starr county).
91. **Dalea pogonathera** Gray. Roma (Starr county), and Chisos Mountains (Foley county). The Chisos specimens have unusually broad cuneiform leaflets. A Mexican species, apparently extending northward only into southern Texas and New Mexico.
92. **Dalea Wrightii** Gray. Chisos Mountains (Foley county). With unusually broad bracts.
93. **Petalostemon emarginatus** Torr. & Gray. Pena (Duval county).
94. **Petalostemon multiflorus** Nutt. Corpus Christi.
95. **Petalostemon violaceus** Michx., var. **tenuis** Coulter, *n. var.* A slender low form rarely as much as a foot high, with round or roundish-oblong small often few-flowered heads on long slender peduncles, and shorter pointed bracts (not equaling the calyx, and hence not very apparent in the head).—Santa Anna (Coleman county). Apparently the form referred to in *Pl. Fendl.* under no. 138. The species is an exceedingly variable one, but the above variety is so distinct in character that it seems to deserve a name and description.
96. **Astragalus leptocarpus** Torr. & Gray. Brazos Santiago.
97. **Astragalus Nuttallianus** DC., var. **trichocarpus** Torr. & Gray. Brazos Santiago. Apparently very common.

98. **Zornia tetraphylla** Michx. Pena (Duval county).

99. **Desmodium spirale** DC. Limpia cañon (Presidio county). This seems to be the first record of this Mexican species occurring in the United States. It is quite variable in its pubescence, as well as its leaves. Our specimens are all 3-foliolate, and hence seem not to be the same as *D. annuum* Gray (described from Wright's Sonoran specimens), which Grisebach has included under *D. spirale* DC. However, they are clearly the same as the Mexican *D. spirale* of *Pringle*, no. 612, and of *Parry & Palmer*, no. 181, and accord well with all published descriptions.

100. **Desmodium Wrightii** Gray. Chenate Mountains (Presidio county).

101. **Vicia Ludoviciana** Nutt. Point Isabel.

102. **Galactia heterophylla** Gray. Pena (Duval county) and Chenate Mountains (Presidio county). This remarkable species was first collected by Lindheimer. Nealley's collection brings excellent specimens from both Pena in eastern Texas, and the Chenate Mountains of western Texas.

103. **Cologania longifolia** Gray. Chenate Mountains (Presidio county).

104. **Phaseolus acutifolius** Gray. Limpia cañon (Presidio county). This species has heretofore been collected only in Arizona, New Mexico, and Mexico. Our specimens represent the large-leaved Mexican form.

105. **Phaseolus umbellatus** Britton. (*P. helvolus* of Am. authors, not of L.) Corpus Christi.

106. **Phaseolus macropoides** Gray. Chenate Mountains (Presidio county). So far as the United States is concerned this species has only been found in New Mexico by Wright, in 1851; by the Mexican Boundary Survey; and lately (1881) by Rusby in the Mogollon Mountains. Mr. Nealley's discovery of it in extreme western Texas not only brings us more of a rare plant, but considerably extends its range. *Pringle* 1233 (1887), from plains near Guerrero, Chihuahua, referred to *P. heterophyllus* Willd., also seems to be this species.

107. **Rhynchosia menispermoidea** DC. Corpus Christi.

108. **Rhynchosia Texana** Torr. & Gray. Corpus Christi.

109. **Hoffmanseggia Jamesii** Torr. & Gray. Pena (Duval county).

110. **Hoffmanseggia melanosticta** Gray. Chisos Mountains (Foley county). So far as I know, this species has been reported but once from the United States side of the Rio Grande, and then by *Parry*, in the valley of the Rio Grande below Donna Ana, in the Mexican Boundary Survey. It was found originally, and but once since, in northern Mexico (by *Edwards* at Rinconada and Monterey, and by *Gregg* near Buena Vista and in a valley near Azufrora), and is altogether one of the rarest of species. This Chisos Mountain collection contains quite an amount of fruiting and flowering material. The specimens conform exactly to the original description. In the case of the Mexican Boundary Survey specimens Dr. Torrey speaks of the plants differing somewhat from the description of Schauer in having only two or three pairs of leaflets, and the vexillum destitute of glands and dots. In the Nealley specimens the leaflets are three and four pairs (mostly the former), and the vexillum is decidedly dotted; the single specimen of Parry that we have seen shows the same characters. This species is the only American representative of the section *Melanosticta*, the two other species being South African. The section is characterized chiefly by the densely black-glandular calyx-lobes. The species somewhat resembles our common *H. Jamesii* Torr. & Gray, but the leaflets are fewer, larger, and more distant, the whole plant more villous, and the legumes larger and much more muricate and glandular. As no description of the species has been published in English, and the Latin description is not very accessible, I append a translation of the description given in *Walp. Ann.* i. 257: "Fruticose: branchlets and racemes

canescent with short villous retrorse hairs: leaves with two pairs of pinnæ and a terminal pinna; pinnæ all abrupt, with a mucronate rhachis; leaflets three or four pairs, obliquely elliptical, very short petiolulate, very obtuse or retuse, together with the rhachis loosely villous, black-punctate beneath, as are the calyx and legume: racemes terminal or lateral, peduncled, loose-flowered: legume two to three-seeded, muriculate, the short muriculations stellate-pilose at apex."

111. **Hoffmanseggia oxycarpa** Benth. Western Texas, collected in 1888. This seems to be a very rare species, having been reported only by *Wright* from Texas in 1851, and by the botanists of the *Mex. Bound. Surv.* from extreme western Texas.

112. **Hoffmanseggia stricta** Benth. Corpus Christi (Nueces county) and Chenate Mountains (Presidio county).

113. **Parkinsonia aculeata** L. Hidalgo (Hidalgo county).

114. **Parkinsonia Torreyana** Watson. Hidalgo (Hidalgo county). The finding of this species along the lower Rio Grande was unexpected, as it has heretofore seemed restricted to southern and western Arizona and contiguous California. Its representative in the Rio Grande Valley is *P. florida* Watson, and they were thought to be as distinct in range as in characters, although the western type was for a time confused with that of the Rio Grande. Nealley's specimens, however, collected in both flower and fruit, show the characteristic inflorescence, the thick-edged pod with its double groove, and the leaflets of *P. Torreyana*. It is possible that the two forms should not be considered distinct species.

115. **Cassia bauhinioides** Gray. Roma (Starr county).

116. **Cassia nictitans** L. Chenate Mountains (Presidio county).

117. **Cassia procumbens** L. Pena (Duval county). This is a variable tropical-American species, first found in Texas by *Berlandier* (no. 2427), and afterward by the *Mex. Bound. Surv.* Berlandier's specimen is larger than the type. Nealley's specimens conform better in size, but have the decidedly larger stipules and flowers of the Berlandier specimen. In a species so widely extended and variable such variation counts for little.

118. **Cassia pumilio** Gray. Chenate Mountains (Presidio county).

119. **Desmanthus depressus** Humb. & Bonpl. Saute Maria (Cameron county). This species is abundant enough in southern Florida and the West Indies, also from northern Mexico southward, but has only occasionally been collected in Texas. The present collection indicates that it grows in abundance in Cameron county, the most southern coast county of Texas.

120. **Desmanthus reticulatus** Benth. Corpus Christi (Nueces county) and Pena (Duval county).

121. **Mimosa Berlandieri** Gray. Brazos Santiago. This rare species seems to have been collected heretofore only by Schott, along the lower Rio Grande in Texas, and by Berlandier (no. 3146) near Matamoras, on the Mexican side of the river. Both of these discoveries were reported in Bot. Mex. Bound. Survey (1859). Nealley's station, from which he has brought considerable material, is just north of the mouth of the Rio Grande.

122. **Mimosa biuncifera** Benth. Southwestern Texas. Collected in 1887.

123. **Mimosa dysocarpa** Benth. Limpia cañon (Presidio county). This species was collected by *Chas. Wright* in his New Mexican collection of 1851, and by *Emory* in the Mexican Boundary Survey. Since then, it was collected in 1874 in Arizona by *Rothrock*, and by *Pringle* in his Chihuahua collections. With the present collection in western Texas we have the range of this species extending throughout northern Mexico and adjacent parts of the United States.

124. **Mimosa Lindheimeri** Gray. Roma (Starr county).

125. **Mimosa malacophylla** Gray. Santa Maria (Cameron county).

125a. **Mimosa strigillosa** Torr & Gray. Brazos Santiago.

126. **Leucæna retusa** Benth. Limpia cañon (Presidio county). This species was collected by *Wright* (no. 171) in western Texas in 1849, and in New Mexico (no. 1046) in 1851; then by the *Mexican Boundary Survey* (no. 318) in the valley of the Rio Grande below Donna Ana; most recently by *Reverchon* (no. 1262) on rocky bluffs near Junction City (Kimble county).

127. **Acacia amentacea** DC. Roma (Starr county). This collection brings to hand, for the first time, the mature legumes of this species, at least Bentham, in his *Rev. Mimoseæ*, says "legumen ignotum," and I find no record of any subsequent discovery. The legume is short-stipitate, arcuate, 7.5 to 10^{cm}. long, and but 4 to 6^{mm}. wide. It thus differs from its congener, *A. flexicaulis*, in its stipitate and very narrow legume, as well as in its leaves with a single pair of pinnæ.

128. **Acacia Berlandieri** Benth. Hidalgo (Hidalgo county). Apparently quite common on the dry hills of the lower Rio Grande.

129. **Acacia constricta** Benth. Roma (Starr county.) An abundance of fine fruiting specimens.

130. **Acacia Farnesiana** Willd. Hidalgo) Hidalgo county) and Roma (Starr county).

131. **Acacia filicina** Willd. Chisos Mountains (Foley County). Our plants show an unusual reduction of the leaves of this abundant and exceedingly variable species, the pinnæ being 2 to 5 pairs, and the leaflets 5 to 10 pairs.

132. **Acacia flexicaulis** Benth. Santa Maria (Cameron county). This species seems to belong to both coasts, having been found by Dr. Palmer at Corpus Christi Bay, and by Mr. Nealley along the coast of Cameron county; also by Xantus along the coast of Lower California from Cape St. Lucas northward, and by Dr. Palmer at Los Angeles Bay.

133. **Pithecolobium (Unguis-cati) Texense** Coulter, *n. sp.* A shrub or small tree armed with short stout stipular spines, the inflorescence and branchlets puberulent: leaves with 1 or 2 pinnæ, the lower pair (if any) much the smaller; leaflets in the upper part of pinnæ 3 or 4 pairs, in the lower 1 or 2 pairs, obliquely elliptical and the terminal pair mostly obovate, venulose and with more or less excentric midrib, 6 to 10^{mm} long, 4 to 6^{mm} wide: peduncles (about 12^{mm} long) apparently in axillary clusters (in fact on very much reduced branches): spike rather loosely flowered, oblong, 2.5 to 4^{cm} long: the staminal tube exserted: pod coriaceous, becoming very hard and more or less arcuate, with the thickened edges somewhat impressed between the seeds, 10 to 15^{cm} long, 18 to 25^{mm} wide, about 8-seeded.—Near Roma (Starr county). This species bears a somewhat striking resemblance to *Acacia flexicaulis*, and it is more than probable that it has been collected and referred to that species. If collected only in foliage and fruit it would most probably be referred to *A. flexicaulis*. However, the flowers not only show the indefinite monadelphous stamens of the tribe *Ingeæ*, but the staminal tube is exserted. Belonging to the *Unguis-cati* section, it differs from those with oblong spikes in the leaves having usually a second and smaller pair of pinnæ. Its nearest allies belong to tropical America, some of them reaching north into Mexico.

134. **Cowania plicata** D. Don. Chisos Mountains (Foley county). A north Mexican species, reported for the first time within our borders.

135. **Fallugia paradoxa** Endl. Near Bone Spring (Foley county).

136. **Sedum Wrightii** Gray. Devil's River (Val Verde county).

137. **Lythrum alatum** Pursh, var. **linearifolium** Gray. Santa Maria (Cameron county).

138. **Nesæa salicifolia** HBK. Santa Maria (Cameron county).

139. **Epilobium coloratum** Muhl. Chenate Mountains (Presidio county).

140. **Œnothera Drummondii** Hook. Corpus Christi.
141. **Œnothera Hartwegi** Benth. Pena (Duval county). Petals purplish veiny outside.
142. **Œnothera Hartwegi** Benth., var. **lavandulæfolia** Watson. "Screw Bean" (Presidio county).
143. **Œnothera Jamesii** Torr. & Gray. Chenate Mountains (Presidio county).
144. **Œnothera rosea** Ait. Santa Maria (Cameron county). Some of the specimens are simply puberulent, while others are quite villous. They all have rather broad lanceolate leaves. This South American and Mexican species has heretofore been reported from Arizona and New Mexico, but not from Texas.
145. **Œnothera rosea** Ait., var. **parvifolia** Coulter, *n. var.* Low and diffusely branching, 7.5 to 15^{cm} high, villous: leaves very much smaller than in the species, seldom 12^{mm} long: calyx purple.—Limpia cañon (Presidio county). Quite different in appearance from the species, being much smaller in all its parts. The red purple of the calyx and the lilac-purple of the corolla give a fuchsia-like look to the flowers.
146. **Œnothera serrulata** Nutt. Brazos Santiago. Petals purplish-veiny outside.
147. **Œnothera serrulata** Nutt., var. **spinulosa** Torr. & Gray. Devil's River (Val Verde county).
148. **Œnothera speciosa** Nutt. Santa Maria (Cameron county).
149. **Gaura coccinea** Nutt., var. **parvifolia** Torr. & Gray. Santa Anna (Coleman county). This variety at best seems to be a poorly defined one, as there is much intermingling of lanceolate and linear, denticulate and entire leaves upon individual specimens.
150. **Gaura Nealleyi** Coulter, *n. sp.* Near to *G. suffulta* Engelm.; but lower part of the stem sparingly hirsute, the rhachis, calyx, and bracts glandular-pubescent: leaves rather crowded below, linear, acute, entire, closely sessile or somewhat tapering at base, glabrous except the minute and rigid more or less hooked hairs on the margins and midrib beneath, 12 to 36^{mm} long, but 2 or 3^{mm} broad: inflorescence few-flowered, rather loose: fruit as in *G. suffulta*, but with a tapering base or short stipe.—Chenate Mountains (Presidio county).
151. **Gaura parviflora** Dougl. Santa Maria (Cameron county).
152. **Gaura sinuata** Nutt. Camp Charlotte (Ixion county). Both the glabrous and hairy forms.
153. **Cevallia sinuata** Lag. Roma (Starr county), and Limpia cañon (Presidio county).
154. **Mentzelia multiflora** Gray. Camp Charlotte (Ixion county). A low form, with sharply acute petals and short turbinate capsules.
155. **Mentzelia oligosperma** Nutt. Limpia cañon (Presidio county).
156. **Mentzelia Wrightii** Gray. Limpia cañon (Presidio county).
157. **Eucnide bartonioides** Zucc. Devil's River (Val Verde county).
158. **Turnera diffusa** (?), var. **aphrodisiaca** Urban. (*T. aphrodisiaca* Ward.) Roma (Starr county). This is the first record of the discovery of the somewhat famous "Damiana" within our borders. It grows abundantly throughout western Mexico and Lower California, and more sparingly in eastern Mexico. The original description of Prof. L. F. Ward appears in the *Virginia Medical Monthly* for April, 1876.
159. **Passiflora fœtida** L. Near Rio Grande City (Starr county).
160. **Passiflora inamœna** Gray. Hidalgo (Hidalgo county).
161. **Passiflora tenuiloba** Engelm. Roma and Rio Grande City (Starr county).
162. **Melothria pendula** L. Santa Maria (Cameron county) and Hidalgo (Hidalgo county).
163. **Cyclanthera dissecta** Arnott. Limpia cañon (Presidio county).
164. **Sesuvium Portulacastrum** L. Corpus Christi (Nueces county) and Camp Charlotte (Ixion county).

165. **Mollugo verticillata** L. Limpia cañon (Presidio county). A remarkable form of this widely distributed and polymorphous species. The leaves are all very short and broadly obovate, but leaf contours can not be made to define even a variety in this species.
166. **Daucus pusillus** Michx. Brazos Santiago.
167. **Eryngium Leavenworthii** Torr. & Gray. Pena (Duval county).
168. **Eryngium nasturtiifolium** Juss. Santa Maria (Cameron county). A south Mexican species, found in northern Mexico by Palmer and now discovered within our southern border (in the southernmost Gulf county) by Nealley.
169. **Eryngium Wrightii** Gray. Chenate Mountains (Presidio county). Heads sometimes more than 12mm high, and bracts not twice as long.
170. **Ammoselinum Popei** Torr. & Gray. Brazos Santiago.
171. **Fœniculum vulgare** Gærtn. Brazos Santiago.
172. **Apium leptophyllum** F. Muel. Brazos Santiago.
173. **Bowlesia lobata** Ruiz & Pavon. Brazos Santiago.
174. **Ammi majus** L. Brazos Santiago. This species was very probably collected on ballast, although possibly an introduced weed. It has been found on ballast at Philadelphia, and at Portland, Oregon.
175. **Bouvardia triphylla** Salisb., var. **angustifolia** Gray. Limpia cañon (Presidio county).
176. **Houstonia acerosa** Gray. Chisos Mountains (Foley county).
177. **Houstonia angustifolia** Michx. Chenate Mountains (Presidio county).
178. **Houstonia angustifolia** Mx., var. **filifolia** Gray. Corpus Christi (Nueces county) and Ballinger (Runnels county).
179. **Spermacoce glabra** Michx. Brazos Santiago.
180. **Galium microphyllum** Gray. Chenate Mountains (Presidio county).
181. **Galium virgatum** Nutt. Brazos Santiago.
182. **Galium Wrightii** Gray. Chenate Mountains (Presidio county). The bristles of the fruit are not always as long as its diameter.
183. **Stevia serrata** Cav. Limpia cañon (Presidio county).
184. **Carminatia tenuiflora** DC. Limpia cañon (Presidio county). Smaller plants than usual, some being not more than 6 inches high, with leaves proportionally reduced.
185. **Eupatorium ageratifolium** DC., var. **acuminatum** Coulter, *n. var.* Branchlets, lower leaf surface, and involucral bracts finely and often densely pubescent: leaves smaller (36 to less than 25mm long), and sharply acuminate.—Point Isabel.
186. **Eupatorium Greggii** Gray. Chenate Mountains (Presidio county).
187. **Eupatorium solidaginifolium** Gray. Limpia cañon (Presidio county). The thyrsoid panicle becomes much larger and more lax and leafy than in the type specimens, and anything but "small," as in the original description. In the present specimens the panicle sometimes becomes 15 to 20cm long and 14 to 18cm across the base, being at the same time very lax and leafy. Associated with these large panicled specimens are others with panicles of the described dimensions.
188. **Eupatorium Wrightii** Gray. Chisos Mountains (Foley county). This beautiful species does not seem to have been reported within our border since Wright's original collection, the station of which was in the same general region as the present collection. Pringle collected it in 1885 in the mountains of Chihuahua.
189. **Brickellia oliganthes** Gray, var. **crebra** Gray. Chenate Mountains (Presidio county). This is the same as *Pringle* 635 (of 1885), from Chihuahua. The leaves are decidedly petioled and very different from those of the species.
190. **Kuhnia rosmarinifolia** Vent. Limpia cañon (Presidio county).
191. **Liatris punctata** Hook. Santa Anna (Coleman county).

192. **Gymnosperma corymbosum** DC. Limpia cañon (Presidio county).
193. **Gutierrezia Euthamiæ** Torr. & Gray, var. **microcephala** Gray. Screw Bean (Presidio county).
194. **Gutierrezia Texana** Torr. & Gray. Screw Bean (Presidio county). Ligules unusually short and heads few-flowered.
195. **Grindelia inuloides** Willd. Corpus Christi.
196. **Chrysopsis villosa** Nutt., var. **canescens** Gray. Santa Anna (Coleman county), and Screw Bean (Presidio county).
197. **Chrysopsis villosa** Nutt., var. **hispida** Gray. Pena (Duval county).
198. **Xanthisma Texanum** DC. Ballinger (Runnels county).
199. **Aplopappus Nealleyi** Coulter, *n. sp.*, § *Aplopappus* proper: From 3 to 6dm high, somewhat branching above, glabrous or nearly so and somewhat glaucous, terminated by long (10 to 12.5cm) naked (or minutely bracteate) peduncles which are enlarged beneath the large solitary heads: leaves narrowly linear or almost filiform, 2.5 to 5cm long, entire or pinnatifid with two or three linear lobes: head about 2.5cm broad; the involucral bracts oblong, obtuse, glabrous, dark-veined, loosely imbricated in about three successively shorter rows: rays ten to fifteen, narrowly linear, 12 to 18mm long: disk-flowers with rather deeply lobed corolla: akenes 10-striate, the striæ rugulose and sparsely pubescent, about 3mm long: pappus of numerous scabrous rufous bristles: style-tips with short ovate appendages.—Santa Maria (Cameron county). This species is apparently related to *A. tenuilobus* Gray, but the almost smooth akenes and very short style appendages, as well as the smooth oblong, obtuse and unequal involucral bracts, and leaf characters, serve well to distinguish it.
200. **Aplopappus rubiginosus** Torr. & Gray. Pena (Duval county), and Chenate Mountains (Presidio county).
201. **Aplopappus rubiginosus** Torr. & Gray, var. **phyllocephalus** Gray. Corpus Christi and Point Isabel. Collected at former station also by Palmer.
202. **Aplopappus spinulosus** DC. Screw Bean (Presidio county).
203. **Aplopappus Texanus** Coulter, *n. sp.*, § *Stenotus:* Low and somewhat lignescent at base, glabrous and somewhat glaucous, bearing a few medium-sized heads: leaves narrowly linear or almost filiform, 24 to 36mm long, often fascicled in the axils: head 6 to 9mm high; the involucral bracts oblong, obtuse or acutish, glabrous, yellowish tinged, loosely imbricated in about two nearly equal rows: rays few or none, exserted, ovate, not more than 3mm long: disk-flowers with rather deeply lobed corolla: akenes 10-striate, the striæ sparsely pubescent, 3mm long: pappus of numerous scabrous white bristles.—Chisos Mountains (Foley county). In foliage and akenes much resembling *A. Nealleyi*, but in size of heads, and character of involucral scales, rays, and pappus, very different. With the present grouping of species these differences refer the two species to different sections of the genus.
204. **Bigelovia Wrightii** Gray. Screw Bean (Presidio county).
205. **Solidago Missouriensis** Nutt. Screw Bean (Presidio county).
206. **Aphanostephus Arkansanus** Gray. Santa Maria (Cameron county).
207. **Aphanostephus Arkansanus** Gray, var. **Hallii** Gray. Point Isabel.
208. **Aphanostephus ramosissimus** DC. Santa Maria (Cameron county).
209. **Aster exilis** Ell. Screw Bean (Presidio county).
210. **Aster oblongifolius** Nutt., var. **rigidulus** Gray. Limpia cañon (Presidio county).
211. **Aster tanacetifolius** HBK. Screw Bean (Presidio county.)
212. **Erigeron repens** Gray. Santa Maria (Cameron county).
213. **Erigeron strigosus** Muhl. Pena (Duval county). A very peculiar form, that would deserve at least varietal rank in almost any other group. Its characters belong to both *E. strigosus* and *E. annuus*, species which vary and

intergrade interminably. It is low and slender, a few inches to a foot high, with a cluster of spatulate more or less dentate or lobed leaves tapering into a long petiole, and long filiform branches bearing small and narrowly linear entire leaves and long-pedunculate solitary heads. The involucre is about as bristly as in *E. annuus*, and much of the pubescence is not appressed.

214. **Erigeron tenuis** Torr. & Gray. Point Isabel.

215. **Conyza Coulteri** Gray. Camp Charlotte (Ixion county). An unusually broad-leaved specimen.

216. **Baccharis angustifolia** Michx. On the Pecos near Pecos City (Pecos county).

217. **Baccharis Bigelovii** Gray. Chenate Mountains (Presidio county).

218. **Gnaphalium decurrens** Ives. Limpia cañon (Presidio county).

219. **Gnaphalium palustre** Nutt. Santa Maria (Cameron county).

220. **Gnaphalium Sprengelii** Hook. & Arn. Limpia cañon (Presidio county).

221. **Melampodium cinereum** DC. Roma (Starr county), and Limpia cañon (Presidio county).

222. **Berlandiera lyrata** Benth. Screw Bean (Presidio county).

223. **Parthenium incanum** HBK. Screw Bean (Presidio county).

224. **Hymenoclea monogyra** Torr. & Gray. Chisos Mountains (Foley county).

225. **Xanthium spinosum** L. Pena (Duval county). Introduced.

226. **Zinnia acerosa** Gray. Chenate Mountains and Screw Bean (Presidio county).

227. **Gymnolomia multiflora** Benth. & Hook. Chisos Mountains (Foley county).

228. **Gymnolomia tenuifolia** Benth. & Hook. Santa Maria (Cameron county), Chenate Mountains, and Screw Bean (Presidio county).

229. **Lepachys columnaris** Torr. & Gray, var. **pulcherrima** Torr. & Gray. Santa Maria (Cameron county).

230. **Viguiera longipes** Coulter, *n. sp.* Herbaceous, or somewhat lignescent at base, hispid and scabrous, 45 to 60^{cm} high, simple or somewhat branching above, ending in a long naked (rarely 1 or 2 bracteate) peduncle (15 to 25^{cm} long) bearing a solitary head (with sometimes shorter lateral peduncles): leaves all opposite, ovate-lanceolate to linear, three-ribbed from the base, from irregularly laciniate or toothed to almost entire, with margins mostly revolute, tapering at base into a more or less distinct petiole, 2.5 to 5^{cm} long: involucre about 12^{mm} high; bracts ovate, acute or the outer ones acuminate, somewhat coriaceous at base, hispid, the inner ones with softly ciliate margins, in two or three series: disk corollas with very narrow tube about as long as the awns, much enlarged above into a campanulate five-toothed limb: chaffy bracts of the receptacle gradually acuminate, with a strong blackish midrib: akenes narrowly oblong, sparingly pilose or glabrate, longer than the often unequal scabrous awns which are chaffy at base; the intermediate chaffy palea laciniate or erose.—Corpus Christi. Related in certain particulars to both *V. cordifolia* and *V. laciniata*, but very different from both.

231. **Helianthus ciliaris** DC. Santa Maria (Cameron county).

232. **Helianthus debilis** Nutt., var. **cucumerifolius** Gray. Chisos Mountains (Foley county).

233. **Flourensia cernua** DC. Chenate Mountains (Presidio county).

234. **Eucelia calva** Gray. Roma (Starr county).

235. **Verbesina encelioides** Benth. & Hook. Corpus Christi.

236. **Verbesina Virginica** L. Santa Maria (Cameron county). A low depauperate simple form, only a foot high, with winged stem, and leaves abruptly wing-petioled.

237. **Synedrella vialis** Gray. Brazos Santiago.

238. **Heterospermum pinnatum** Cav. Limpia cañon (Presidio county).

239. **Coreopsis coronata** Hook. Brazos Santiago.

240. **Coreopsis tinctoria** Nutt. Chenate Mountains (Presidio county).

241. **Thelesperma gracile** Gray. Corpus Christi (Nueces county), Pena (Duval county), Santa Anna (Coleman county), and Screw Bean (Presidio county). In the Santa Anna specimens the heads are nearly always radiate, with deep yellow rays about 6^{mm} long, and the pappus can hardly be called "subulate." In fact, descriptions have hardly done justice to the very conspicuous pappus, which is composed of two lanceolate, retrose, bristly scales nearly as long as the corolla-tube.

242. **Thelesperma longipes** Gray. Screw Bean (Presidio county).

243. **Cosmos parviflorus** HBK. Limpia cañon (Presidio county). Many of the akene beaks are four-awned.

244. **Bidens Bigelovii** Gray. Limpia cañon (Presidio county).

245. **Perityle Vaseyi** Coulter, *n. sp.* Minutely glandular pubescent, simple or with short branchlets, from a slightly lignescent base, 2 to 3^{dm} high, leafy: leaves large for the genus, 3.5 to 6.5^{cm} long, including the petiole (which is somewhat shorter than the blade), with broad outline, palmately or pinnately divided into three long-stalked broadly cuneate divisions; the divisions three to five-parted; the ultimate segments mostly cuneate and three-lobed: heads rather few and scattered, on long or short peduncles, 10 to 12^{mm} high: involucral scales linear-oblong, acute or acuminate, with margins more or less ciliate at tip: rays 4 to 6^{mm} long, deep yellow, oblong, three-toothed at apex: disk-corollas funnelform, yellow, 5½^{mm} long: style-tips setaceous-filiform and hirsute: akenes oblong, pubescent on the faces, hispid-villous on the margins, 3.5^{mm} long, crowned with a pappus of bristle-like squamellæ and a single more or less barbellate awn as long as the akene.—Chisos Mountains (Foley county). Nearest *P. Parryi* Gray, but decidedly distinct, and in the shape of the disk-corolla not even a member of the same section.

246. **Baileya multiradiata** Harv. & Gray. Chenate Mountains (Presidio county).

247. **Riddellia arachnoidea** Gray. Chenate Mountains (Presidio county).

248. **Riddellia tagetina** Nutt. Screw Bean (Presidio county).

249. **Bahia absinthifolia** Benth. Rio Grande City (Starr county).

250. **Bahia absinthifolia** Benth., var. **dealbata** Gray. Screw Bean (Presidio county).

251. **Bahia pedata** Gray. Screw Bean (Presidio county.)

252. **Schkuhria Wrightii** Gray. Limpia cañon (Presidio county). A species of southern Arizona, whose range is thus extended across New Mexico into western Texas.

253. **Hymenothrix Wrightii** Gray. Chenate Mountains (Presidio county). Not reported before east of Arizona in the United States, but Pringle has collected it in Chihuahua.

254. **Florestina tripteris** DC. Point Isabel.

255. **Sartwellia Flaveriæ** Gray. Screw Bean (Presidio county).

256. **Flaveria chloræfolia** Gray. Screw Bean (Presidio county). Fine specimens of this imperfectly known species bring to light some additional characters. The plant becomes more than 6^{dm} high, with a thick stem, and the lower leaves become 7.5^{cm} long and 5^{cm} wide at the perfoliate base. The coarse glaucous stem, with its broad connate-perfoliate smooth and entire leaves, give the plant the look of an Asclepias. A more important fact is that all the Nealley material has pappus, composed of two to four thin paleæ, which are all on one side, leaving the other side naked. In the *Synopt. Flora* (p. 354) it is said that "a few flowers were once seen with a pappus of four thin paleæ." As this character appears in all of our abundant material the genus character should be amended in that character. It is impossible to admit these specimens into *Flaveria*, as defined by Bentham & Hooker or Gray, as "no pappus" is one of its distinctive characters.

257. **Porophyllum macrophyllum** DC. Limpia cañon (Presidio county).

258. **Porophyllum scoparium** Gray. Chisos Mountains (Foley county).

259. **Hymenatherum acerosum** Gray. Screw Bean (Presidio county.)
260. **Hymenatherum Hartwegi** Gray. Screw Bean (Presidio county).
261. **Hymenatherum pentachætum** Gray. San Diego (Duval county).
262. **Hymenatherum tenuilobum** DC. Pena (Duval county), and Rio Grande City (Starr county).
263. **Hymenatherum Wrightii** Gray. Corpus Christi (Nueces county).
264. **Pectis filipes** Gray. Chenate Mountains (Presidio county).
265. **Pectis papposa** Gray. Chenate Mountains (Presidio county).
266. **Pectis tenella** DC. Rio Grande City (Starr county).
267. **Helenium amphibolum** Gray. Devil's River (Val Verde county).
268. **Helenium microcephalum** DC. Rio Grande City (Starr county).
269. **Amblyolepis setigera** DC. Ballinger (Runnells county).
270. **Gaillardia lanceolata** Michx. Pena (Duval county). Differs from the ordinary type in the fact that the leaves are all more or less toothed or even lobed, rather than "entire or sparsely serrate."
271. **Gaillardia pinnatifida** Torr. Ballinger (Runnels county), and Screw Bean, Chenate Mountains, and Limpia cañon (Presidio county). The Chenate specimens have almost all the leaves narrowly linear and entire.
272. **Gaillardia pulchella** Foug. Point Isabel.
273. **Actinella linearifolia** Torr. & Gray. Santa Anna (Coleman county), and Limpia cañon (Presidio county).
274. **Actinella scaposa** Nutt., var. **linearis** Nutt. Pena (Duval county), Chenate Mountains and Screw Bean (Presidio county). In the Pena specimens the rays are larger than usual, sometimes becoming 14 to 16^{mm} long.
275. **Artemisia filifolia** Torr. Screw Bean (Presidio county).
276. **Artemisia Ludoviciana** Nutt. Camp Charlotte (Ixion county). With narrow leaves and completely white-tomentose.
277. **Artemisia Mexicana** Willd. Limpia cañon (Presidio county).
278. **Artemisia redolens** Gray. Chisos Mountains (Foley county). This species is new to our borders, having been described from Pringle's collection of 1885 (no. 296) in the mountains of Chihuahua.
279. **Senecio Douglasii** DC. Screw Bean and Limpia cañon (Presidio county).
280. **Senecio lobatus** Pers. Brazos Santiago.
281. **Senecio multilobatus** Torr. & Gray. Limpia cañon (Presidio county).
282. **Cnicus altissimus** Willd., var. **filipendulus** Gray. Point Isabel.
283. **Perezia nana** Gray. Pena (Duval county).
284. **Trixis angustifolia** DC. Chisos Mountains (Foley county).
285. **Pyrrhopappus Carolinianus** DC. Point Isabel.
286. **Pyrrhopappus multicaulis** DC. Brazos Santiago.
287. **Lygodesmia aphylla** DC., var. **Texana** Torr. & Gray. Screw Bean (Presidio county).
288. **Lobelia Berlandieri** A. DC. Brazos Santiago. These specimens are undoubtedly *Berlandier* 3177, which Dr. Gray suggests (*Synopt. Fl.* ii. 7) may be a depauperate form of *L. Cliffortiana* L. It also approaches *L. subnuda* in habit, the rosulate tuft of root-leaves being entirely unlike *L. Cliffortiana*, but the seeds are those of the latter species. If not entitled to specific rank it should probably become a variety or form of *L. Feayana* Gray.
289. **Lobelia cardinalis** L. Chenate Mountains (Presidio county). The narrow leaves suggest *L. splendens* Willd., but the plants are completely pubescent. These two species are too near together.
290. **Lobelia fenestralis** Cav. Chenate Mountains (Presidio county).
291. **Campanula rotundifolia** L. Chenate Mountains (Presidio county).
292. **Samolus ebracteatus** HBK. Camp Charlotte (Ixion county).
293. **Menodora heterophylla** Moricand. Dry hills, Roma (Starr county), and Ballinger (Runnels county).

294. **Menodora pubens** Gray. Camp Charlotte (Ixion county), and Chenate Mountains (Presidio County).
295. **Menodora scabra** Gray. Camp Charlotte (Ixion county), and Chenate Mountains (Presidio county).
295a. **Amsonia longifolia** Torr. Camp Charlotte (Ixion county).
296. **Philibertia cynanchoides** Gray. Pena (Duval county).
297. **Asclepias arenaria** Torr. Limpia cañon (Presidio county). A very glabrate form.
298. **Asclepias longicornu** Benth. Pena (Duval county).
299. **Asclepias perennis** Walt., var. **parvula** Gray. Limpia cañon (Presidio county).
300. **Metastelma barbigerum** Scheele. Corpus Christi (Nueces county), and Santa Maria (Cameron county).
301. **Gonolobus parviflorus** Gray. Pena (Duval county).
302. **Gonolobus reticulatus** Engelm. Hidalgo (Hidalgo county).
303. **Buddleia scordioides** HBK. Camp Charlotte (Ixion county). Specimens with the dense axillary flower clusters in contact with each other, giving the appearance of a long, thick spike from which the upper leaves project as bracts.
304. **Sabbatia calycosa** Pursh. Brazos Santiago.
305. **Eustoma Russellianum** Griseb. Pena (Duval county), and Hidalgo (Hidalgo County). In the Hidalgo specimens the petals are unusually narrow.
306. **Eustoma silenifolium** Salisb. (*E. exaltatum* Griseb). Hidalgo (Hidalgo county).
307. **Phlox Drummondii** Hook. Pena (Duval county).
308. **Phlox nana** Nutt. Chenate Mountains (Presidio county).
309. **Gilia Havardi** Gray. Chenate Mountains (Presidio county).
310. **Gilia incisa** Benth. Brazos Santiago.
311. **Gilia Macombii** Torr., var. **laxiflora** Coulter, *n. var.* Stems from a strong ligneseent base: flowers very loosely cymose or scattered: corolla white (perhaps a little purplish-tinged), with tube 15 to 18mm long, and ovate mucronulate lobes 4 or 5mm long: stamens all included.—Camp Charlotte (Ixion county). The loose inflorescence, larger and white corolla with ovate lobes, and included stamens, distinguish this variety from the species, which has only been reported from the mountains of Arizona.
312. **Gilia rigidula** Benth., var. **acerosa** Gray. Camp Charlotte (Ixion county).
313. **Phacelia congesta** Hook. Limpia cañon (Presidio county).
314. **Phacelia patuliflora** Gray. Brazos Santiago.
315. **Nama dichotomum** Choix. Corpus Christi (Nueces county), Roma (Starr county), and Devil's River (Val Verde county). A species new to our boundary. The Corpus Christi and Roma specimens are typical; while the Devil's River specimens have narrower leaves, approaching the var. *angustifolium* Gray.
316. **Nama Jamaicense** L. Brazos Santiago.
317. **Nama origanifolium** HBK. Roma (Starr county), and Limpia cañon (Presidio County).
318. **Nama undulatum** HBK. Brazos Santiago.
319. **Cordia Boissieri** A. DC. Roma (Starr county).
320. **Coldenia Greggii** Gray. Chisos Mountains (Foley county). "Equally inserted stamens," is one of the published generic characters of *Coldenia;* but these specimens of *C. Greggii* have unequally inserted stamens, the whole flower structure conforming more closely to that of *Draperia*, a Hydrophyllaceous genus, than to *Coldenia*. In fact, it is a pertinent question whether this species should not be transferred to *Draperia*.
321. **Coldenia hispidissima** Gray. Camp Charlotte (Ixion county).

322. **Heliotropium angustifolium** Torr. Camp Charlotte (Ixion county). Our plants represent this species in every particular except that the corolla-lobes are not "ovate and acute." The lobes are those of *H. tenellum*. Much of the "acuteness" of the lobes of *H. angustifolium* is apparently the result of drying.
323. **Heliotropium confertifolium** Torr. Roma (Starr county).
324. **Heliotropium convolvulaceum** Gray. Pena (Duval county).
325. **Heliotropium Curassavicum** L. Pecos Flats, near Pecos City (Pecos county).
326. **Heliotropium inundatum** Swartz. Hidalgo (Hidalgo county).
327. **Heliotropium tenellum** Torr. Pena (Duval county).
328. **Krynitzkia floribunda** Gray. Limpia cañon (Presidio county).
329. **Lithospermum Matamorense** DC. Brazos Santiago.
330. **Ipomœa costellata** Torr. Limpia cañon (Presidio county).
331. **Ipomœa Nealleyi** Coulter, *n. sp.* Glabrous, with slender creeping or twining stems: leaves thin, triangular in outline, cordate at base with a broad sinus, angulately three-lobed (the lateral lobes resembling the basal lobes of a broadly hastate leaf, and often with an additional basal angle), 2 to 3^{cm} long and somewhat broader, angles all mucronulate, on slender petioles: peduncles slender, usually a little shorter than the petioles, one-flowered: sepals foliaceous, glabrous, loose, little if at all imbricated, linear-lanceolate, acuminate, conspicuous, nearly or quite as long as the tube of the corolla, 12 to 16^{mm} long, spreading in fruit: corolla broadly funnelform, 15 to 20^{mm} long, with purplish blue lobes and whitish tube: globose capsule glabrous.—Chenate Mountains (Presidio county). Related to *I. trifida* Don. and its allies.
332. **Ipomœa sinuata** Ortega. Pena (Duval county). Calyx shorter than usual.
333. **Ipomœa Texana** Coulter, *n. sp.* Apparently arborescent, glabrous, or minutely puberulent, with coarse branches: leaves thickish, entire or nearly so, sagittate, acuminate, the base with inconspicuous rounded lobes or truncate, 6 to 12^{cm} long, 3.5 to 5^{cm} broad at base, on petioles 3.5 to 7.5^{cm} long: peduncles mostly shorter than the petioles, bearing simple or compound few to several-flowered cymes: sepals short (6 or 7^{mm} long), somewhat coriaceous, minutely pubescent, broad and rounded or two-lobed at apex: corolla pink-purple, pubescent, 5 to 7.5^{cm} long.—Santa Maria (Cameron county.) A member of the arborescent group of Ipomœas, represented by the Mexican *I. murucoides* R. & S., to which our plant is related.
334. **Convolvulus hermannioides** Gray. Santa Maria (Cameron county).
335. **Evolvulus alsinoides** L. Pena (Duval county) and Roma (Starr county).
336. **Evolvulus sericeus** Swartz. Pena (Duval county). Flowers 10 to 12^{mm} in diameter.
337. **Dichondra argentea** Willd. Chenate Mountains (Presidio county).
338. **Cuscuta Californica** Choisy, var. **reflexa** Coulter, *n. var.* Flowers 4 to 5^{mm} long when the lanceolate subulate corolla-lobes are erect, but these soon sharply reflexed and as long as the tube: calyx-lobes acuminate, about equaling the corolla tube: scales somewhat prominent and lacerate: styles about as long as the ovary: corolla marcescent around the two to four-seeded capsule.—Roma (Starr county). *Pringle* 783 (collection of 1886), from Chihuahua, seems also to be a form of this variable species. Our variety has some important points of difference from the species and any published varieties, but it seems to be fairly included in the same specific relationship. If this conclusion is right the range of this Californian and Arizonian polymorphous species is extended through northern Mexico and into southern Texas.
339. **Solanum nigrum** L. Brazos Santiago. A pubescent, rather small, and entire leaved form of this exceedingly polymorphous species,

340. **Solanum triquetrum** Cav. Corpus Christi (Nueces county), Brazos Santiago (Cameron county), Ballinger (Runnels county), and Chenate Mountains (Presidio county).

341. **Solanum tuberosum** L., var. **boreale** Gray. Chenate Mountains (Presidio county).

342. **Nicotiana glauca** Graham. Roma and Rio Grande City (Starr county). Introduced.

343. **Nicotiana repanda** Willd. Corpus Christi (Nueces county), Brazos Santiago (Cameron county), and Chenate Mountains (Presidio county).

344. **Nicotiana trigonophylla** Duval. Chenate Mountains (Presidio county).

345. **Petunia parviflora** Juss. Corpus Christi.

346. **Leucophyllum minus** Gray. Santa Maria (Cameron county).

347. **Leucophyllum Texanum** Benth. Santa Maria (Cameron county).

348. **Stemodia lanata** Ruiz & Pavon. Brazos Santiago. A second species of this tropical genus which has reached our borders. Reported heretofore from south central Mexico (Toluca) and Tampico, at the southern extremity of the northern Gulf State (Tamaulipas) of Mexico, it is now found in the contiguous Gulf county of Texas.

349. **Herpestis chamædryoides** HBK., var. **peduncularis** Gray. Brazos Santiago.

350. **Herpestis Monniera** HBK. Corpus Christi.

351. **Seymeria virgata** Benth. Chenate Mountains (Presidio county). Apparently new to our flora, but collected by Pringle and Parry in northern Mexico.

352. **Castilleia lanata** Gray. Near Pecos City (Pecos county).

353. **Chilopsis saligna** Don. Camp Charlotte Ixion county).

354. **Tecoma stans** Juss. Limpia cañon (Presidio county).

355. **Elytraria bromoides** Ersted. Santa Maria (Cameron county). Confused with the next species, but very distinct. Collected also by Dr. Palmer (no. 2029) in 1879–'80 in northern Mexico.

356. **Elytraria tridentata** Vahl. Chenate Mountains (Presidio county).

357. **Calophanes linearis** Gray. Brazos Santiago (Cameron county), and Chenate Mountains (Presidio county).

358. **Ruellia tuberosa** L. Santa Maria (Cameron county), and Ballinger (Runnels county).

359. **Siphonoglossa Pilosella** Torr. Rio Grande City (Starr county).

360. **Dianthera Americana** L. Devil's River (Val Verde county). A curious form with sessile leaves which are broad at base, and not at all tapering. The same form was collected by the Mexican Boundary Survey (no. 724).

361. **Carlowrightia linearifolia** Gray. Chisos Mountains (Foley county). A very rare plant, not met with since its discovery by Mr. Wright, in 1849 (Gray in Proc. Am. Acad., xxi. 405). The leaves are longer and the bracts shorter than in the type.

362. **Lantana Camara** L. Brazos Santiago.

363. **Lantana macropoda** Torr. Brazos Santiago (Cameron county), Roma and Rio Grande City (Starr county) and Chenate Mountains (Presidio county).

364. **Lippia geminata** HBK. Brazos Santiago.

365. **Lippia lycioides** Steud. Corpus Christi (Nueces county) and Hidalgo (Hidalgo county).

366. **Lippia nodiflora** Michx. Pecos Flats, near Pecos City.

367. **Lippia Wrightii** Gray. Chenate Mountains (Presidio county).

368. **Verbena Aubletia** L. Brazos Santiago.

369. **Verbena ciliata** Benth. Brazos Santiago.

370. **Verbena officinalis** L. Brazos Santiago.

371. **Verbena Wrightii** Gray. Brazos Santiago.

372. **Duranta Plumieri** Jacq. Brazos Santiago.

373. **Mentha piperita** L. Limpia cañon (Presidio county). A hairy form.

374. **Micromeria Brownei** Benth., var. **pilosiuscula** Gray. Brazos Santiago.
375. **Hedeoma Drummondii** Benth. Pena (Duval county) and Rio Grande City (Starr county).
376. **Hedeoma plicata** Torr. Limpia cañon (Presidio county).
377. **Hedeoma thymoides** Gray. Chenate Mountains (Presidio county) and Chisos Mountains (Foley county).
378. **Poliomintha mollis** Gray. Chenate Mountains (Presidio county).
379. **Salvia angustifolia** Cav., var. **glabra** Gray. Limpia cañon (Presidio county).
380. **Salvia azurea** Lam. Limpia cañon (Presidio county).
381. **Salvia ballotæflora** Benth. Brazos Santiago.
382. **Salvia coccinea** L. Brazos Santiago.
383. **Salvia lanceolata** Willd. Limpia cañon (Presidio county). In some specimens the leaves are nearly entire.
384. **Salvia spicata** R. & S. Ballinger (Runnels county).
385. **Salvia Texana** Torr. Pena (Duval county).
386. **Monarda punctata** L., var. **lasiodonta** Gray. Pena (Duval county).
387. **Scutellaria Drummondii** Benth. Brazos Santiago (Cameron county) and Chisos Mountains (Foley county).
389. **Marrubium vulgare** L. Point Isabel.
390. **Stachys agraria** Cham. & Schlecht. Brazos Santiago.
391. **Stachys Drummondii** Benth. Brazos Santiago.
392. **Tetraclea Coulteri** Gray. Roma (Starr county).
393. **Teucrium Cubense** L. Brazos Santiago.
394. **Teucrium laciniatum** Torr. Pena (Duval county).
395. **Plantago Patagonica** Jacq. Brazos Santiago.
396. **Plantago Virginica** L. Brazos Santiago.
397. **Plantago Virginica** L., var. **longifolia** Gray. Brazos Santiago.
398. **Mirabilis longiflora** L. Limpia cañon (Presidio county).
399. **Mirabilis multiflora** Gray. Pena (Duval county).
400. **Oxybaphus albidus** Sweet. Chenate Mountains (Presidio county).
401. **Oxybaphus angustifolius** Sweet. Limpia cañon (Presidio county).
402. **Oxybaphus nyctagineus** Sweet. Chenate Mountains (Presidio county) and Devil's River (Val Verde county).
403. **Nyctaginia capitata** Chois. Roma (Starr county).
404. **Allionia incarnata** L. Brazos Santiago (Cameron county) and Roma (Starr county).
405. **Boerhaavia anisophylla** Torr. Chenate Mountains (Presidio county).
406. **Boerhaavia gibbosa** Pavon. Bone Spring (Foley county).
407. **Boerhaavia tenuifolia** Gray. Camp Charlotte (Ixion county).
408. **Boerhaavia viscosa** Lag. & Rodr. Pena (Duval county) and Limpia cañon (Presidio county). Varies greatly in amount of pubescence.
409. **Boerhaavia Wrightii** Gray. Chenate Mountains (Presidio county).
410. **Acleisanthes Berlandieri** Gray. Roma (Starr county).
411. **Acleisanthes longiflora** Gray. Roma (Starr county) and Ballinger (Runnels county).
412. **Selinocarpus angustifolius** Gray. Chenate Mountains (Presidio county).
413. **Selinocarpus chenopodioides** Gray. Chenate Mountains (Presidio county).
414. **Selinocarpus diffusus** Gray. Camp Charlotte (Ixion county).
415. **Paronychia dichotoma** Nutt. Chisos Mountains (Foley county).
416. **Celosia paniculata** L. Devil's River (Val Verde county).
417. **Amarantus fimbriatus** Benth. Chisos Mountains (Foley county).
418. **Amarantus Pringlei** Watson. Limpia cañon (Presidio county). This species was found by Mr. Pringle in 1886 growing abundantly on rocky hills of Chihuahua, Mexico. Mr. Nealley now finds it extending northward within our borders on the rocky hills of the Limpia.

419. **Cladothrix lanuginosa** Nutt. "Pecos Flats," near Pecos City.
420. **Gomphrena nitida** Rothrock. Corpus Christi. With rose-tinted heads.
421. **Frœlichia Floridana** Moq. Pena (Duval county).
422. **Frœlichia gracilis** Moq. Pena (Duval county).
423. **Iresine alternifolia** Watson, var. **Texana** Coulter, *n. var.* Leaves small, ovate to lanceolate, 12 to 25mm long, tapering to a short petiole.—Chenate Mountains (Presidio county). This seems clearly the same species as that described by Dr. Watson from the mountains about Guaymas, Mexico, collected by Dr. Palmer. It seems hardly necessary to set up a new species on leaf characters, especially when the leaves of the species are very variable. Apparently the only alternate-leaved *Iresine*.
424. **Atriplex canescens** James. Pecos Flats, near Pecos City.
425. **Salicornia ambigua** Michx. Pecos Flats, near Pecos City.
426. **Suæda suffrutescens** Watson. Pecos Flats, near Pecos City.
427. **Rivina lævis** L. Pena (Duval county).
428. **Eriogonum Abertianum** Torr. Camp Charlotte (Ixion county).
429. **Eriogonum annuum** Nutt. Near Pecos City (Pecos county).
430. **Eriogonum Havardi** Watson. Camp Charlotte (Ixion county). Abundant specimens of a very rare and interesting species.
431. **Eriogonum Jamesii** Benth. Limpia cañon (Presidio county).
432. **Eriogonum longifolium** Nutt. Pena (Duval county).
433. **Eriogonum Nealleyi** Coulter, *n. sp.*, § *Ganysma:* Perennial, the woody caudex branched and leafy: the loosely branching (Ephedra-like) stems, as well as the pedicels and flowers, glabrous and leafless: leaves all at or near the base, more or less broadly spatulate, tapering into a long petiole, villous pubescent on both surfaces, 5 to 7.5cm long (including the petiole): involucres few and long-pedunculate: flowers greenish, occasionally with a pinkish tint: sepals lanceolate to ovate, acute or obtuse, the inner ones usually shorter and broader.—Near Pecos City (Pecos county). A species nearly related to *E. ciliatum* Torr. and *E. atrorubens* Engelm., both of northern Mexico. It differs from *E. ciliatum* in its completely villous leaves and green flowers; from *E. atrorubens* in both these characters as well as the shape of the leaves; and from both in that the leaves are not all radical.
434. **Eriogonum tenellum** Torr. Pena (Duval county).
435. **Eriogonum tenellum** Torr., var. **caulescens** Torr. & Gray. Pena (Duval county).
436. **Eriogonum Wrightii** Torr. Chenate Mountains (Presidio county).
437. **Rumex Berlandieri** Meisn. Brazos Santiago.
438. **Euphorbia acuta** Engelm. Pecos City (Pecos county).
439. **Euphorbia albomarginata** Torr. & Gray. Rio Grande City (Starr county), and Limpia cañon (Presidio county).
440. **Euphorbia campestris** Cham. & Schlecht. Limpia cañon (Presidio county).
441. **Euphorbia chamæsula** Boiss. Chenate Mountains (Presidio county).
442. **Euphorbia commutata** Engelm. Brazos Santiago.
443. **Euphorbia Fendleri** Torr. & Gray. Pena (Duval county).
444. **Euphorbia lata** Engelm. Ballinger (Runnels county), and Camp Charlotte (Ixion county).
445. **Euphorbia marginata** Pursh. Ballinger (Runnels county).
446. **Euphorbia montana** Engelm. Limpia cañon (Presidio county).
447. **Euphorbia polycarpa** Benth. Rio Grande City (Starr county), and Chenate Mountains (Presidio county).
448. **Eupharbia polycarpa** Benth., var. **vestita** Watson. Chenate Mountains (Presidio county).
449. **Euphorbia Vaseyi** Coulter, *n. sp.*, § *Trichcrostigma:* A shrub with straight branches, glabrous or the young branches puberulent: leaves minutely puberulent or glabrate, fascicled upon much reduced wart-like villous branchlets

(from which also arises a solitary long-pedicelled flower), narrowly obovate, tapering to the sessile base, 15 to 30mm long, and 4 to 9mm wide: pedicels mostly somewhat shorter than the leaves, hairy, as are also the involucres: capsules 6mm long, and 9 or 10mm broad, with rounded lobes, smooth or somewhat granulate: seeds round-ovate, very minutely reticulated, 4mm long.—Brazos Santiago. Near *E. misera* Benth., but apparently higher, branches not tortuous, with leaves not round, longer, and not petioled, and capsule much larger.

450. **Euphorbia villifera** Scheele. Limpia cañon (Presidio county).

451. **Euphorbia zygophylloides** Boiss. Santa Anna (Coleman county).

452. **Phyllanthus polygonoides** Spreng. Near Pecos City (Pecos county), and Santa Anna (Coleman county).

453. **Croton balsamiferus** Willd. Brazos Santiago. Apparently a form of this species, but with smaller leaves and larger flowers than the Florida specimens.

454. **Croton Cortesianus** HBK. (*C. trichocarpus* Torr.) Santa Maria (Cameron county).

455. **Croton corymbulosus** Engelm. Santa Anna (Coleman county), and Pena (Duval county).

456. **Croton fruticulosus** Torr. Pena (Duval county), and Chenate Mountains (Presidio county).

457. **Croton Lindheimerianus** Scheele. Rio Grande City (Starr county), and Chenate Mountains (Presidio county).

458. **Croton maritimus** Walt. Brazos Santiago.

459. **Croton Neo-Mexicanus** Muell. Ballinger (Runnels county).

460. **Croton suaveolens** Torr. Limpia cañon (Presidio county). The leaves somewhat larger than in the type.

461. **Croton Texensis** Muell. Corpus Christi (Nueces county), and Pena (Duval county).

462. **Croton Torreyanus** Muell. (*C. suaveolens* Torr., var. *oblongifolius* Torr.) Hidalgo (Hidalgo county).

463. **Croton virens** Muell. (*C. muricatus* Nutt.) Chenate Mountains (Presidio county). Dr. Engelmann considered this but a form of *C. Texensis* Muell. (Bot. Wheeler's Report, p. 243.)

464. **Argythamnia humilis** Muell. Rio Grande City (Starr county), Ballinger (Runnels county), and Chisos Mountains (Foley county).

465. **Argythamnia lævis** Muell. Near Pecos City (Pecos county).

466. **Bernardia myricæfolia** Watson. Santa Maria (Cameron county).

467. **Acalypha hederacea** Torr. Rio Grande City (Starr county).

468. **Acalypha Lindheimeri** Muell. Limpia cañon (Presidio county).

469. **Acalypha radians** Torr. Rio Grande City (Starr county).

470. **Tragia urticæfolia** Michx. Rio Grande City (Starr county).

471. **Stillingia angustifolia** Engelm. (*S. sylvatica* L., var. *linearifolia*.) Pena (Duval county), Santa Anna (Coleman county), and Pecos City (Pecos county).

472. **Stillingia Torreyana** Watson. Rio Grande City (Starr county).

473. **Urtica chamædryoides** Pursh. Brazos Santiago.

474. **Quercus hypoleuca** Engelm. Limpia cañon (Presidio county). Leaves narrow, and some of them spinulose-dentate.

475. **Cooperia Drummondii** Herb. Corpus Christi.

476. **Zephyranthes Texana** Herb. Corpus Christi.

477. **Agave maculosa** Hooker. Hidalgo (Hidalgo county).

478. **Agave variegata** Jacobi. Hidalgo (Hidalgo county).

479. **Hesperanthes Torreyi** Watson. Limpia cañon (Presidio county).

480. **Allium Palmeri** Watson. Chenate Mountains (Presidio county).

481. **Heteranthera graminea** Vahl. Santa Maria (Cameron county).

482. Heteranthera limosa Vahl. Limpia cañon (Presidio county).

483. Heteranthera Mexicana Watson. Devil's River (Val Verde county). This species was discovered by Dr. Palmer (no. 1324) in 1879-'80, in Coahuila, Mexico. The present collection extends its known range into southwestern Texas.

484. Commelyna Virginica L. Brazos Santiago.

485. Tinantia anomala Clarke. Pena (Duval county).

486. Tradescantia leiandra Torr. Limpia cañon (Presidio county). Excellent specimens of this rare Texano-Mexican species.

487. Tradescantia leiandra Torr., var. (?) **ovata** Conlter, *n. var.* Like *T. leiandra*, except that the leaves are short and rather broadly ovate (4 to 5^{cm} long, and 2 to 2.75^{cm} broad.—Chenate Mountains (Presidio County). Insufficient flowering material compels the reference of this form as a variety of *T. leiandra*.

The following species of *Juncus* were determined by Mr. F. V. Coville, and represent collections made by Mr. Nealley in 1888 and 1889. It is to be regretted that no more specific locality than "Western Texas" can be given for the collection of 1888, and hence that general locality is intended when that year is given:

488. Juncus acuminatus Michx. 1888.

489. Juncus acuminatus Michx., var. **legitimus** Engelm. 1888.

490. Juncus acuminatus Michx., var. **robustus** Engelm. 1888.

491. Juncus brachycarpus Engelm. 1888.

492. Juncus dichotomus Ell. 1888.

493. Juncus effusus L. 1888.

494. Juncus Elliottii Chapman. 1888.

495. Juncus marginatus Rostk. 1888.

496. Juncus marginatus Rostk., var. **biflorus** Engelm. 1888.

497. Juncus nodosus L., var. **megacephalus** Torr. Ballinger (Runnels county). 1889.

498. Juncus repens Michx. 1888.

499. Juncus scirpoides Lam., var. **macrostemon** Engelm. 1888.

500. Juncus scirpoides Lam., var **polycephalus** Engelm., forma **major** and forma **minor**. 1888.

501. Juncus setaceus Rostk. 1888.

502. Juncus tenuis Willd. 1888.

503. Juncus xiphioides Meyer, var. **montanus** Engelm. Chenate Mountains (Presidio county). 1889.

504. Sagittaria variabilis Engelm. Brazos Santiago.

505. Echinodorus radicans Engelm. Santa Maria (Cameron county).

506. Ruppia maritima L. Brazos Santiago.

The following species of *Cyperaceæ* have been determined by Mr. F. V. Coville and include Mr. Nealley's collection of 1888 and 1889. The year of collection is indicated with each species.

507. Cyperus acuminatus Torr. & Hook. In the vicinity of Sabine Pass (Jefferson county), 1888; Brazos Santiago (Cameron county), 1889.

508. Cyperus aristatus Rottb. Chenate Mountains (Presidio county), 1889.

509. Cyperus articulatus L. In the vicinity of Sabine Pass (Jefferson county), 1888.

510. Cyperus Buckleyi Britton. Chenate Mountains (Presidio county), 1889.

511. Cyperus compressus L. In the vicinity of Sabine Pass (Jefferson county), 1888.

512. Cyperus cyrtolepis Torr. & Hook. In the vicinity of Sabine Pass (Jefferson county), 1888.

513. Cyperus diandrus Torr., var. **capitatus** Britton. In the vicinity of Sabine Pass (Jefferson county), 1888; Chenate Mountains (Presidio county), 1889.

514. Cyperus dissitiflorus Torr. In the vicinity of Sabine Pass (Jefferson county), 1888; Chenate Mountains (Presidio county), and Chisos Mountains (Foley county), 1889.

515. Cyperus echinatus Britton. In the vicinity of Sabine Pass (Jefferson county), 1888.

516. Cyperus erythrorhizos Muhl. In the vicinity of Sabine Pass (Jefferson county), 1888

517. Cyperus esculentus L. In the vicinity of Sabine Pass (Jefferson county), 1888.

518. Cyperus esculentus L., var. **angustispicatus** Britton. In the vicinity of Sabine Pass (Jefferson county), 1888.

519. Cyperus esculentus L., var. **macrostachyus** Boeck. In the vicinity of Sabine Pass (Jefferson county), 1888.

520. Cyperus Fendlerianus Boeck. 1889, with no station.

521. Cyperus ferax Richard. 1889, with no station.

522. Cyperus giganteus Vahl. Brazos Santiago, 1889.

523. Cyperus Haspan L. In the vicinity of Sabine Pass (Jefferson county), 1888.

524. Cyperus Luzulæ Rottb., var. **umbellatus** Britton. In the vicinity of Sabine Pass (Jefferson county), 1888.

524a. Cyperus, *n. sp.?* Intermediate between *C. speciosus* and *C. oxycarioides*, distinct in appearance from both, but with few technical characters to distinguish it from the former. Rio Grande City (Starr county), 1889.

525. Cyperus ovularis Torr. In the vicinity of Sabine Pass (Jefferson county), 1888.

526. Cyperus oxycarioides Britton. In the vicinity of Sabine Pass (Jefferson county), 1888; Brazos Santiago (Cameron county), 1889.

527. Cyperus polystachyus Rottb., var. **leptostachyus** Boeck. In the vicinity of Sabine Pass (Jefferson county), 1888.

528. Cyperus reflexus Vahl. In the vicinity of Sabine Pass (Jefferson county), 1888.

529. Cyperus refractus Engelm. In the vicinity of Sabine Pass (Jefferson county), 1888; Brazos Santiago (Cameron county), 1889.

530. Cyperus rotundus L. In the vicinity of Sabine Pass (Jefferson county), 1888; Brazos Santiago (Cameron county), 1889.

531. Cyperus Rusbyi Britton. Chenate Mountains (Presidio county), 1889.

532. Cyperus Schweinitzii Torr. 1889, with no station.

533. Cyperus speciosus Vahl. Pena (Duval county), 1889.

534. Cyperus strigosus L., var. **compositus** Britton. In the vicinity of Sabine Pass (Jefferson county), 1888.

535. Cyperus strigosus L., var. **gracilis** Britton. In the vicinity of Sabine Pass (Jefferson county), 1888.

536. Cyperus Surinamensis Rottb. In the vicinity of Sabine Pass (Jefferson county), 1888.

537. Cyperus Torreyi Britton. In the vicinity of Sabine Pass (Jefferson county) 1888; Brazos Santiago (Cameron county), 1889.

538. Cyperus uniflorus Torr. & Hook. In the vicinity of Sabine Pass (Jefferson county), 1888; Brazos Santiago (Cameron county), Rio Grande City (Starr county), and Chisos Mountain (Foley county), 1889.

539. Cyperus uniflorus Torr. & Hook., var. **pumilus** Britton. 1889, with no station.

540. Kyllingia brevifolia Rottb. In the vicinity of Sabine Pass (Jefferson county), 1888.

541. Kyllingia cæspitosa Nees. In the vicinity of Sabine Pass (Jefferson county), 1888.

542. Eleocharis acicularis R. & S. Brazos Santiago, 1889.

543. Eleocharis capitata R. Br. Pena (Duval County), 1889.

544. Eleocharis montana R. & S. Point Isabel and Brazos Santiago.

545. Eleocharis palustris R. & S. Point Isabel, 1889.

546. Dichromena cephalotes Britton. In the vicinity of Sabine Pass (Jefferson county), 1888.

547. Dichromena latifolia Baldwin. In the vicinity of Sabine Pass (Jefferson county), 1888.

548. Fimbristylis autumnalis R. & S. In the vicinity of Sabine Pass (Jefferson county), 1888.

549. Fimbristylis capillaris Gr. Chenate Mountains (Presidio county), 1889.

550. Fimbristylis castanea Vahl. In the vicinity of Sabine Pass (Jefferson county), 1888.

551. Fimbristylis laxa Vahl. In the vicinity of Sabine Pass (Jefferson county), 1888.

552. Fimbristylis spadicea Vahl. (the type?) In the vicinity of Sabine Pass (Jefferson county), 1888.

553. Scirpus carinatus Gray. In the vicinity of Sabine Pass (Jefferson county), 1888.

554. Scirpus pungens Vahl. Pena (Duval county), 1889.

555. Fuirena squarrosa Mx., var. **breviseta** Coville. In the vicinity of Sabine Pass (Jefferson county), 1888.

556. Fuirena squarrosa Mx., var. **hispida** Chapm. In the vicinity of Sabine Pass (Jefferson county), 1888.

557. Hemicarpha micrantha Britton. (*H. subsquarrosa* Nees.) Chenate Mountains (Presidio county), 1889.

558. Rhynchospora caduca Ell. Near Sabine Pass, 1888.

559. Rhynchospora corniculata Gr. Near Sabine Pass, 1888.

560. Rhynchospora cymosa Nutt. Form. Near Sabine Pass, 1888.

561. Rhynchospora Elliottii Dietr. Near Sabine Pass, 1888.

562. Rhynchospora glomerata Vahl., var. **paniculata** Chapm. Near Sabine Pass, 1888.

563. Rhynchospora inexpansa Vahl. Near Sabine Pass, 1888.

564. Rhynchospora patula Gr. Near Sabine Pass, 1888.

565. Rhynchospora plumosa Ell. Near Sabine Pass, 1888.

566. Rhynchospora plumosa Ell., var. **intermedia** Chapm. Near Sabine Pass, 1888.

567. Rhynchospora pusilla Chapm. Near Sabine Pass, 1888.

568. Rhynchospora rariflora Ell. Near Sabine Pass, 1888.

569. Scleria oligantha Ell. Near Sabine Pass, 1888.

The following grasses have been determined by Dr. George Vasey, and include the collections made in southern and southwestern Texas by Mr. Nealley during the three seasons of 1887, 1888, and 1889. For the plants of the first two seasons no specific locality can be given, so that when no station is mentioned the general range of "southern and southwestern Texas" is intended, and the date of collection is either 1887 or 1888. The collection of 1889 may be recognized by having the stations specified, at least within a county. Special attention was given to the collection of grasses, so that the following list is a very complete one:

570. Tripsacum dactyloides L.

571. Tripsacum monostachyum Willd. Ballinger (Runnels county).

572. Imperata Hookeri Rupt.

573. Erianthus brevibarbis Michx.

574. Erianthus saccharoides Michx.

575. **Erianthus strictus** Baldwin.
576. **Rottbœllia cylindrica** Chapman.
577. **Hemarthria fasciculata** Kunth. Limpia cañon (Presidio county).
578. **Manisuris granularis** Swartz. Introduced.
579. **Trachypogon polymorphus** Hack.
580. **Elionurus barbiculmis** Hack. (*E. candidus* Torr.) Chenate Mountains (Presidio county).
581. **Elionurus tripsacoides** HBK. (*E. Nuttallii* Vasey.)
582. **Elionurus tripsacoides** HBK., var. **ciliaris** Hack. (*E. ciliaris* HBK.)
583. **Andropogon argyræus** Schult.
584. **Andropogon cirrhatus** Hack. Limpia cañon (Presidio county).
585. **Andropogon Elliottii** Chapm.
586. **Andropogon Hallii** Hack. Pena (Duval county) and Santa Anna (Coleman county).
587. **Andropogon hirtiflorus** Kunth. Chenate Mountains (Presidio county).
588. **Andropogon macrourus** Michx.
589. **Andropogon provincialis** Lam. (*A. furcatus* Muhl.).
590. **Andropogon saccharoides** Swartz, var. **submuticus** Vasey. Corpus Christi (Nueces county).
591. **Andropogon saccharoides** Swartz, var. **Torreyanus** Hack. Chenate Mountains (Presidio county).
592. **Andropogon scoparius** Michx.
593. **Andropogon tener** Kunth. Point Isabel.
594. **Andropogon Virginicus** Linn.
595. **Andropogon Wrightii** Hack.
596. **Sorghum Halapense** Pers. Introduced.
597. **Chrysopogon avenaceum** Benth.
598. **Chrysopogon nutans** Benth.
599. **Heteropogon contortus** R. & S. Chenate Mountains (Presidio county).
600. **Hilaria cenchroides** HBK., var. **Texana** Vasey, *n. var.* Differs from the type in its taller and more slender culm, longer leaves, longer more slender spike, with 7 to 9 narrower more distant spikelets.—Pena (Duval county). Possibly a distinct species.
601. **Hilaria Jamesii** Benth.
602. **Hilaria mutica** Benth. Pena (Duval county).
603. **Tragus racemosus** Hall. Introduced.
604. **Paspalum Buckleyanum** Vasey. Corpus Christi (Nueces county).
605. **Paspalum ciliatifolium** Muhl.
606. **Paspalum distichum** L. Corpus Christi (Nueces county).
607. **Paspalum Drummondii** Vasey.
608. **Paspalum Floridanum** Michx.
609. **Paspalum Floridanum** Michx., var. **glabratum** Engelm.
610. **Paspalum fluitans** Kunth.
611. **Paspalum furcatum** Flugge (*P. Digitaria* Chapman).
612. **Paspalum læve** Michx. Santa Maria (Cameron county).
613. **Paspalum læve** Michx., var. **angustifolium** Vasey (*P. angustifolium* Le Conte).
614. **Paspalum lentiferum** Lam. (*P. præcox* Walt.).
614a. **Paspalum lividum** Trin. Point Isabel.
615. **Paspalum monostachyum** Vasey.
616. **Paspalum platycaule** Poir.
617. **Paspalum plicatulum** Michx.
618. **Paspalum pubiflorum** Rupt. (*P. Hallii* V. & S.).
619. **Paspalum pubiflorum** Rupt., var. **glaucum** Scribner.
620. **Paspalum setaceum** Michx. Pena (Duval county).

621. **Paspalum vaginatum** Swartz. Near the coast.
622. **Paspalum virgatum** L., var. **pubiflorum** Vasey.
623. **Paspalum Walterianum** Schult.
624. **Eriochloa polystachya** HBK. Brazos Santiago (Cameron county) and Chenate Mountains (Presidio county).
625. **Eriochloa punctata** Hamil.
626. **Eriochloa sericea** Munro. Ballinger (Runnels county).
627. **Panicum agrostoides** Muhl.
628. **Panicum anceps** Michx.
629. **Panicum angustifolium** Ell.
630. **Panicum autumnale** Bosc.
631. **Panicum barbinode** Trin. Probably introduced.
632. **Panicum bulbosum** HBK. Ballinger (Runnels county) and Chenate Mountains (Presidio county).
633. **Panicum capillare** L.
634. **Panicum capillarioides** Vasey, *n. sp.* With the general habit of *P. capillare*, 30 to 45^{cm} high: panicle not as full, with fewer less divided and more rigid branches: spikelets twice as large, 5^{mm} long: first glume one-third as large as the second, three to five nerved: second and third glumes equal, as long as the spikelet, about fifteen-nerved, lance-oblong, smooth: palet of the sterile flower small (1 to 1.5^{mm} long): perfect flower less than 2^{mm} long, smooth and shining.—Point Isabel.
635. **Panicum ciliatissimum** Buckl. Hidalgo (Hidalgo county).
636. **Panicum colonum** L.
637. **Panicum commutatum** Schultz. (*P. nervosum* Ell).
638. **Panicum consanguineum** Kunth.
639. **Panicum Crus-galli** L.
640. **Panicum depauperatum** Muhl.
641. **Panicum dichotomum** L.
642. **Panicum diffusum** Swartz. Point Isabel. An addition to our flora.
643. **Panicum fasciculatum** Swartz.
644. **Panicum filiforme** L.
645. **Panicum gymnocarpum** Ell.
646. **Panicum Hallii** V. & S. Point Isabel.
647. **Panicum Havardii** Vasey.
648. **Panicum hians** Ell.
649. **Panicum lachnanthum** Torr. Point Isabel and Corpus Christi.
650. **Panicum latifolium** L.
651. **Panicum laxiflorum** Lam.
652. **Panicum microcarpon** Muhl.
653. **Panicum neuranthum** Griseb.
654. **Panicum nitidum** Lam.
655. **Panicum obtusum** HBK.
656. **Panicum paspaloides** Pers.
657. **Panicum pedicellatum** Vasey.
658. **Panicum platyphyllum** Munro.
659. **Panicum proliferum** Lam.
660. **Panicum prostratum** Lam.
661. **Panicum reticulatum** Torr.
662. **Panicum Reverchoni** Vasey.
663. **Panicum sanguinale** L.
664. **Panicum scabriusculum** Ell. ?
665. **Panicum scoparium** Lam.
666. **Panicum sparsiflorum** Vasey (*P. angustifolium* Chapman, not Ell.)
667. **Panicum sphærocarpon** Ell.

668. **Panicum stenodes** Griseb.
669. **Panicum subspicatum** Vasey. Hidalgo (Hidalgo county).
670. **Panicum Texanum** Buckley.
671. **Panicum virgatum** L. Ballinger (Runnels county).
672. **Panicum viscidum** Ell.
673. **Oplismenus setarius** R. & S.
674. **Setaria caudata** R. & S. Pena (Duval county).
675. **Setaria caudata** R. & S., var. **pauciseta** Vasey. Pena (Duval county)
676. **Setaria glauca** P. Br., var. **flava** Vasey.
677. **Setaria glauca** P. Br., var. **lævigata** Chapm.
678. **Setaria imberbis** R. & S.
679. **Setaria setosa** Beauv.
680. **Cenchrus echinatus** L.
681. **Cenchrus myosuroides** HBK. Chenate Mountains (Presidio county).
682. **Cenchrus tribuloides** L.
683. **Stenotaphrum Americanum** Schkr.
684. **Zizania aquatica** L.
685. **Zizania miliacea** Michx. (*Zizaniopsis* Doell.).
686. **Leersia hexandra** Swartz.
687. **Leersia monandra** Swartz.
688. **Leersia oryzoides** Swartz.
689. **Leersia Virginica** Willd.
690. **Phalaris intermedia** Bosc.
691. **Phalaris intermedia** Bosc., var. **angusta** Chapm.
692. **Aristida Arizonica** Vasey. Santa Anna (Coleman county).
693. **Aristida desmantha** Tr. & Rupt.
694. **Aristida dichotoma** L.
695. **Aristida dispersa** Trin. Chenate Mountains (Presidio county).
696. **Aristida gracilis** Ell.
697. **Aristida Havardii** Vasey.
698. **Aristida Humboldtiana** Trin.
699. **Aristida oligantha** Michx.
700. **Aristida palustris** Vasey.
701. **Aristida purpurascens** Poir., var. **minor** Vasey.
702. **Aristida purpurea** Nutt. Point Isabel.
703. **Aristida purpurea** Nutt., var. **Berlandieri** Trin.
704. **Aristida purpurea** Nutt., var. **Hookeri** Trin.
705. **Aristida purpurea** Nutt., var. **micrantha** Vasey. Pena (Duval county).
706. **Aristida Reverchoni** Vasey.
707. **Aristida Schiediana** Trin. Limpia cañon (Presidio county).
708. **Aristida Schiediana** Trin., var. **minor** Vasey. Limpia cañon (Presidio county).
709. **Aristida stricta**, var. **Nealleyi** Vasey, *n. var.* Culms cespitose, slender, erect, wiry, unbranched, 45^{cm} high: leaves erect, setaceous, 5 to 15^{cm} long, pungently pointed: panicle spike-like, very narrow, 10 to 15^{cm} long, two or three spikelets at each joint, one sessile, one or two short-pedicelled, appressed: spikelets about 8^{mm} long: lower empty glumes rather shorter than upper: upper one nearly equal to the flowering glume or to the furcation: flowering glume about 8^{mm} long beside the awns, scabrous, the short stipe pubescent: awns nearly equal, 10 to 12^{mm} long.—Chenate Mountains (Presidio county). Shorter and less rigid than the type.
710. **Stipa flexuosa** Vasey. Chenate Mountains (Presidio county).
711. **Stipa pennata**, var. **Neo-Mexicana** Thurber.
712. **Stipa setigera** Presl. Point Isabel.
713. **Stipa tenuissima** Trin.

714. Stipa viridula Trin., var. **robusta** Vasey, *n. var.* Culms densely tufted, 12 to 15[dm] high, stout, leafy: lower sheaths loose and broad, longer than the internodes; blades flat and wide or involute above, often 6[dm] long, scabrous: panicle dense and large, erect, 25 to 40[cm] long: empty glumes 10[mm] long, three to five nerved, callus short, densely hairy.—Chenate Mountains (Presidio county). Ranges from Colorado to Mexico.

715. Oryzopsis fimbriata Vasey.

716. Oryzopsis membranacea Pursh (*O. cuspidata* Benth.).

717. Oryzopsis micrantha Thurber?

718. Muhlenbergia arenicola Buckley.

719. Muhlenbergia Berlandieri Trin.

720. Muhlenbergia Buckleyana Scribner, *n. sp.* This is *M. Texana* Buckley (Proc. Phila. Acad., 1862), a name antedated by *M. Texana* Thurber. Pena (Duval county).

721. Muhlenbergia capillaris Kunth.

722. Muhlenbergia diffusa Schreb.

723. Muhlenbergia distichophylla Kunth.

724. Muhlenbergia gracilis Trin.

725. Muhlenbergia gracillima Torr.

726. Muhlenbergia Lemmoni Scribner, *n. sp.* Culms much branched below, slender, erect or decumbent, 30 to 45[cm] high: leaves 2.5 to 7.5[cm] long, 2[mm] wide, acuminate: panicle spike-like, 5 to 12.5[cm] long, interrupted below, the upper branches sessile, the lower pedicelled and subdivided, sometimes 2.5 to 5[cm] long, erect: spikelets about 3[mm] long without the awns: empty glumes ovate-lanceolate, awn-pointed, nearly equal and but little shorter than the flowering glume, which is hairy below and with an awn half or as long as itself.—Ballinger (Runnels County): also in New Mexico, Arizona, and Mexico. A member of a very variable group, resembling *M. sylvatica*.

727. Muhlenbergia monticola Buckley. Ballinger (Runnels county).

728. Muhlenbergia setifolia Vasey.

729. Muhlenbergia Texana Thurber.

730. Muhlenbergia tricholepis Torr.

731. Muhlenbergia trichopodes Chapman. Ballinger (Runnels county).

732. Muhlenbergia virescens Trin.

733. Muhlenbergia Wrightii Vasey.

734. Lycurus phleoides HBK.

735. Alopecurus aristulatus Michx.

736. Sporobolus airoides Torr.

737. Sporobolus argutus Kunth, var. **Arkansanus** Vasey. Point Isabel.

738. Sporobolus asper Kunth. Santa Anna (Coleman county).

739. Sporobolus asper Kunth, var. **Hookeri** Vasey. Santa Anna (Coleman county).

740. Sporobolus asperifolius Thurber. Pena (Duval county).

741. Sporobolus asperifolius Thurb., var. **brevifolius** Vasey. Pena (Duval county).

742. Sporobolus Buckleyi Vasey. Point Isabel.

743. Sporobolus confusus Vasey (*S. ramulosus* of authors). Limpia cañon (Presidio county).

744. Sporobolus cryptandrus Gray. Pena (Duval county) and Screw Bean (Presidio county).

745. Sporobolus cryptandrus Gray, var. **flexuosus** Thurber.

746. Sporobolus cryptandrus Gray, var. **robustus** Vasey, *n. var.* Culms erect, 6 to 9[dm] high, stout, simple or with a few erect branches: leaves erect, rigid, scabrous on the margins, 15 to 30[cm] long, 6[mm] wide, attenuate; sheaths smooth, except the ciliate margins and hairy ligule; upper sheath long and

inclosing the base of the panicle, which is often 3^{dm} long, strict, dense, pyramidal, the lower sessile branches gradually longer, the lowest 5^{cm} long.—The flowers do not differ from the type. A remarkably robust variety.

747. **Sporobolus cryptandrus** Gray, var. **strictus** Scribner.
748. **Sporobolus depauperatus** Scribner.
749. **Sporobolus Indicus** R. Br. Santa Maria (Cameron county).
750. **Sporobolus junceus** Kunth.
751. **Sporobolus minor** Vasey.
752. **Sporobolus Nealleyi** Vasey, *n. sp.* Culm 12.5 to 20^{cm} high, from strong-rooting rhizomes: leaves 2.5 to 3.5^{cm} long, divaricate, rigid, involute; ligule villous: panicle 2.5 to 3.5^{cm} long, branches few (7 to 10), alternate, short, erect-spreading: spikelets 1.5^{mm} long: upper empty glume equaling the flowering glume; lower one-half as long.—Brazos Santiago.
753. **Sporobolus purpurascens** Hamil.
754. **Sporobolus repens** Presl. Chenate Mountains (Presidio county).
755. **Sporobolus Texanus** Vasey, *n. sp.* Culms about 3^{dm} high, rather rigid below, the upper half occupied by the capillary-branched panicle: leaves linear-lanceolate, 2.5 to 7.5^{cm} long, rigid, acuminate, light green, scabrous above; the sheaths clothed with loose white hairs: panicle half the length of the plant, sheathed at the base, diffusely branched, resembling *S. asperifolius*, but with upper empty glume quite as long as the flowering one, the lower about half as long, both acute.—Screw Bean (Presidio county).
756. **Sporobolus tricholepis** Torr. Chenate Mountains and Limpia cañon (Presidio county).
757. **Sporobolus Virginicus** Kunth.
758. **Sporobolus Wrightii** Vasey.
759. **Epicampes macroura** Benth.
760. **Epicampes rigens** Benth.
761. **Polypogon Monspeliensis** Desf.
762. **Thurberia Arkansana** Benth. Point Isabel.
763. **Agrostis arachnoides** Ell.
764. **Agrostis exarata** Trin.
765. **Agrostis scabra** Willd. Chenate Mountains (Presidio county).
766. **Agrostis verticillata** Vill. Chenate Mountains (Presidio county).
767. **Trisetum Hallii** Scribner, *n. sp.* Very near *T. interruptum*, but with a denser panicle, the empty glumes broader and obtusish, and the flowing glumes with shorter teeth.
768. **Trisetum interruptum** Buckley.
769. **Danthonia spicata** P. Br.
770. **Cynodon Dactylon** Pers. Introduced.
771. **Spartina cynosuroides** Willd.
772. **Spartina gracilis** Trin.
773. **Spartina juncea** Willd.
774. **Spartina stricta** Roth.
775. **Chloris alba** Presl. (*C. elegans* HBK.).
776. **Chloris ciliata** Swartz. Point Isabel.
777. **Chloris cucullata** Bisch. Point Isabel.
778. **Chloris Swartziana** Doell.
779. **Chloris verticillata** Nutt. Point Isabel.
780. **Trichloris pluriflora** Fourn. Point Isabel.
781. **Trichloris verticillata** Fourn.
782. **Gymnopogon racemosus** P. Br.
783. **Schedonnardus Texanus** Steudel. Santa Anna (Coleman county).
784. **Bouteloua aristidoides** Thurber. Chenate Mountains (Presidio county).

785. Bouteloua breviseta Vasey, *n. sp.* Culms ascending from a decumbent rooting rhizome, almost woody below, 15 to 30^{cm} high, leafy below: leaves rigid, involute, spreading, pungent, 2.5 to 5^{cm} long, smooth or sparsely ciliate-fringed; ligule ciliate: spikes one to three, distant when more than one, 2.5 to 3.5^{cm} long, closely flowered, very narrow: spikelets 4^{mm} long or less, including the awns: empty glumes unequal, 2 to 2.5^{mm} long, the upper one pungently pointed: flowering glume about 3^{mm} long, including the awns, oblong, three-nerved, three-lobed near the apex, and with three short awns, more or less pubescent on the back: palet nearly as long, narrower, two-nerved: imperfect flower of three short awns on a short pedicel which is hairy tufted at top.—Screw Bean (Presidio county). Apparently growing in sand.

786. Bouteloua bromoides Vasey (*B. Humboldtiana* Kunth). Rio Grande City (Starr county).

787. Bouteloua Burkei Scribner. Ballinger (Runnels county).

788. Bouteloua eriopoda Torr. Devil's River (Val Verde county).

789. Bouteloua Havardii Vasey. Chenate Mountains (Presidio county).

790. Bouteloua hirsuta Lag.

791. Bouteloua hirsuta Lag., var. **major** Vasey.

792. Bouteloua hirsuta Lag., var. **minor** Vasey. Pena (Duval county).

793. Bouteloua oligostachya Torr. Screw Bean (Presidio county).

794. Bouteloua oligostachya Torr., var. **major** Vasey.

795. Bouteloua polystachya Torr. Pena (Duval county).

796. Bouteloua racemosa Lag. Ballinger (Runnels county).

797. Bouteloua ramosa Scribner. Chenate Mountains (Presidio county).

798. Bouteloua stricta Vasey.

799. Bouteloua Texana Watson. Point Isabel.

800. Bouteloua trifida Thurber. Pena (Duval county).

801. Eleusine Ægyptiaca Pers. Introduced.

802. Eleusine Indica Gærtn. Introduced.

803. Leptochloa Domingensis Link. Hidalgo (Hidalgo county).

804. Leptochloa mucronata Kunth.

805. Leptochloa Nealleyi Vasey.

806. Buchloe dactyloides Engelm.

807. Pappophorum apertum Munro. Rio Grande City (Starr county).

808. Pappophorum laguroideum Schrad. Rio Grande City (Starr county).

809. Pappophorum Wrightii Watson. Chenate Mountains (Presidio county).

810. Cottea pappophoroides Kunth.

811. Cathestechum erectum Vasey & Hackel.

812. Scleropogon Karwinskianus Benth. Pena (Duval county).

813. Monanthochloe littoralis Engelm.

814. Munroa squarrosa Torr.

815. Arundo Donax L. Probably introduced, but wild on the Rio Grande.

816. Phragmites communis Trin.

817. Triodia acuminata Vasey. Santa Anna (Coleman county) and Chenate Mountains (Presidio county).

818. Triodia albescens Vasey.

819. Triodia ambigua Vasey. Point Isabel.

820. Triodia avenacea HBK.?

821. Triodia cuprea Jacq. Point Isabel.

822. Triodia eragrostoides Vasey & Scribner, *n. sp.* Culms 6 to 9^{dm} high, leafy: sheaths longer than the internodes, roughish; ligule short, ciliate-toothed: blade flat, 2 to 3^{dm} long, scabrous, acuminate: panicle large and spreading, 3^{dm} long, the branches slender, rather distant, single or in twos, the lower ones 12.5 to 15^{cm} long, lax-flowered: spikelets short-pediceled, alternate, and

mostly single, five to nine flowered, 5mm long: empty glumes nearly equal, lanceolate-acuminate, one-nerved: flowering glumes 2 to 2.5mm long, three-nerved, oblong, obtuse, emarginate, short-cuspidate, the lateral nerves and midrib pubescent below: palet one-fourth shorter, obtuse, and denticulate.—Florida (*Blodgett*), Texas (*Buckley, Nealley, Reverchon*). A beautiful species, having the aspect of an *Eragrostis*. There are several forms of this verging toward *T. ambigua*.

823. **Triodia grandiflora** Vasey, *n. sp.* Culms 3 to 5dm high: leaves narrow, rigid, plane or conduplicate, 5 to 10cm long, lower with the sheaths softly pubescent: panicle oblong, dense, 3.5 to 6cm long, branches appressed: spikelets 8 to 10mm long: empty glumes unequal, lanceolate, the upper 8mm long, one-nerved, the lower rather shorter, three-nerved: flowering glumes 7 to 8mm long, acute, apex two-lobed, lobes acute, the fissure less than 2mm long, awn about 2mm long, the lateral nerves densely ciliate the entire length, and the midrib below: palet narrow, a third as long as its glume, pubescent on the nerves, abruptly acute. —Chenate Mountains (Presidio county); collected also in Arizona and Chihuahua by Pringle. This has been distributed as *T. avenacea* HBK., but it does not agree with the description and figure given. The spikelets and flowers are larger than in any other *Triodia*.

824. **Triodia mutica** Vasey. (*T. trinerviglumis* Mun.) Ballinger (Runnels county).

825. **Triodia Nealleyi** Vasey. Chenate Mountains (Presidio county).

826. **Triodia pulchella** Vasey. Chenate Mountains (Presidio county).

827. **Triodia purpurea** Vasey.

828. **Triodia stricta** Vasey.

829. **Triodia Texana** Vasey. Point Isabel.

830. **Diplachne dubia** Benth.

831. **Diplachne fascicularis** P. Br.

832. **Diplachne imbricata** Thurber. Point Isabel.

833. **Diplachne Reverchoni** Vasey.

834. **Diplachne rigida** Vasey.

835. **Eragrostis campestris** Trin (*E. nitida* Chapman).

836. **Eragrostis capillaris** Vasey. Pena (Duval county).

837. **Eragrostis conferta** Trin.

838. **Eragrostis curtipedicellata** Buckl. Hidalgo (Hidalgo county).

839. **Eragrostis lugens** Nees.

840. **Eragrostis major** Host.

841. **Eragrostis Neo-Mexicana** Vasey.

842. **Eragrostis oxylepis** Torr. Point Isabel.

843. **Eragrostis pectinacea** Gray.

844. **Eragrostis Purshii** Schrad. Pena (Duval county).

845. **Eragrostis Purshii** Schrad., var. **diffusa** Vasey (*E. diffusa* Buckl.).

846. **Eragrostis reptans** Nees. Point Isabel.

847. **Eragrostis tenuis** Gray.

848. **Eragrostis tenuis** Gray, var. **Texensis** Vasey, *n. var.* Culm rigid, erect, 75 to 90cm high, leafy, simple: sheaths striate, smoothish or silky-hairy above and at the throat; blade rather rigid, nearly as long as the culm, scabrous and with a few scattered hairs on the upper surface, smooth below, upper sheath inclosing the base of the panicle, which is half the length of the plant, the branches erect-spreading: spikelets three to five-flowered, acute: empty glumes lanceolate, acute, longer than the lowest flowering glume.—Collected by both Reverchon and Nealley.

849. **Eatonia obtusata** Gray.

850. **Eatonia Pennsylvanica** Gray.

851. **Kœleria cristata** Pers.

852. **Melica diffusa** Pursh.
853. **Uniola gracilis** Michx.
854. **Uniola latifolia** Michx.
855. **Uniola paniculata** L. Point Isabel.
856. **Distichlis maritima** Raf. Chenate Mountains (Presidio county).
857. **Poa Bigelovii** Vasey & Scribner.
858. **Poa flexuosa** Muhl.
859. **Poa Texana** Vasey, *n. sp.* Dioecious (?): rhizome stout, throwing out long stolons which take root at the joints, and from which the leafy culms arise to the height of 15 to 40^{cm}: lower sheaths loose, as long as the internodes or longer; blade 7.5 to 15^{cm} long: panicle narrow, 2.5 to 7.5^{cm} long, the upper part of a few simple sessile spikelets, the lower part with a few few-flowered short appressed branches: spikelets large (10 to 12^{mm}), seven to nine-flowered, compressed, smooth: empty glume, ovate, obtuse: flowering glumes oblong-ovate, three-nerved, 4 to 6^{mm} long, smooth except on the keel.—The specimens are all male.
860. **Glyceria fluitans** R. Br.
861. **Glyceria nervata** Trin.
862. **Festuca nutans** Willd.
863. **Festuca ovina** L.
864. **Festuca sciurea** Nutt.
865. **Festuca tenella** Willd.
866. **Bromus ciliatus** L. Chenate Mountains (Presidio county).
867. **Bromus Kalmii** Gray.
868. **Bromus secalinus** L. Introduced.
869. **Bromus unioloides** Willd.
870. **Lolium perenne** L. Introduced.
871. **Agropyrum glaucum** R. & S.
872. **Hordeum jubatum** L.
873. **Hordeum maritimum** With. Introduced.
874. **Hordeum pratense** Huds.
875. **Hordeum pusillum** Nutt.
876. **Elymus Canadensis** L.
877. **Elymus Canadensis** L., var. **glabriflorus** Vasey.
878. **Elymus Canadensis** L., var. **minor** Vasey. Santa Anna (Coleman county).
879. **Elymus Sitanion** Schultz. Chenate Mountains (Presidio county).
880. **Elymus striatus** Willd. ?
881. **Elymus Virginicus** L.
882. **Elymus Virginicus** L., var. **minor** Vasey.
883. **Asprella hystrix** Willd.
884. **Juniperus occidentalis** Hook. Chisos Mountains (Foley county).
885. **Juniperus pachyphlœa** Torr. Chisos Mountains (Foley county). It is almost impossible to distinguish this species from *J. Mexicana*, and it is very probable that the two should be merged, representing a type which extends over the North Mexican plateau, and into the high lands of Arizona, New Mexico, and western Texas.

The following species were determined by Henry E. Seaton:

886. **Selaginella cuspidata** Link. Chenate Mountains (Presidio county).
887. **Selaginella lepidophylla** Spring. Chenate Mountains (Presidio county).
888. **Selaginella rupestris** Spring. Chenate Mountains (Presidio county).
889. **Gymnogramme hispida** Mett. Chenate Mountains (Presidio county).
890. **Gymnogramme triangularis** Kaulf. Chenate Mountains (Presidio county).
891. **Notholæna ferruginea** Hook. Limpia cañon (Presidio county).
892. **Notholæna Grayi** Dav. Chenate Mountains and Limpia cañon (Presidio county).

893. **Notholæna Hookeri** Eaton. Limpia cañon (Presidio county).

894. **Notholæna Nealleyi** Seaton, *n. sp.* Rhizome slender, with narrow black scales: stipe terete, reddish-black, 2.5^{cm} long: frond oblong-lanceolate, contracted below, tripinnatifid, 10 to 12^{cm} long, 3.5^{cm} wide, upper surface (especially when young) white-granular dotted, lower densely coated with a white powder but becoming less so with age: rhachises, like the stipe, white granular and conspicuously clothed with rigid brown hairs: pinnæ sessile, nearly opposite, triangular-ovate or ovate-lanceolate, pinnately divided into four to six pairs of sessile pinnatifid obtuse and oblong pinnules, confluent at the apex; margins unchanged but sometimes becoming reflexed: sori brown and copious, in a continuous marginal line.—Chenate Mountains (Presidio county). Most nearly resembling *N. Grayi* Dav.

895. **Notholæna sinuata** Kaulf. Chenate Mountains (Presidio county).

896. **Cheilanthes Eatoni** Baker. Limpia cañon and Chenate Mountains (Presidio county).

897. **Cheilanthes microphylla** Swartz. Limpia cañon (Presidio county).

898. **Cheilanthes tomentosa** Link. Chenate Mountains (Presidio county).

899. **Cheilanthes Wrightii** Hook. Limpia cañon (Presidio county).

900. **Pellæa aspera** Baker. Chenate Mountains (Presidio county).

901. **Pellæa flexuosa** Link. Limpia cañon (Presidio county). These specimens were collected under two numbers, one being typical *P. flexuosa* and the other not typical, but nearer this species than anything else, the rhachises being but little flexuose, if any, and the pinnules mucronulate.

902. Pellæa **ternifolia** Link. Limpia cañon (Presidio county).

903. **Asplenium parvulum** Mart. & Gale. Chenate Mountains (Presidio county).