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Hunt Institute was dedicated in 1961 as the Rachel McMasters Miller Hunt Botanical Library, an international center for bibliographical research and service in the interests of botany and horticulture, as well as a center for the study of all aspects of the history of the plant sciences. By 1971 the Library's activities had so diversified that the name was changed to Hunt Institute for Botanical Documentation. Growth in collections and research projects led to the establishment of four programmatic departments: Archives, Art, Bibliography and the Library.

L. Calif. In open places, an annual, erect and slender, with the habit of *V. encelioides*. Whole plant ashy-pubescent with curved and short hairs even to the ciliate-margined and thin bracts which are nerved. Leaves ovate-lanceolate to lanceolate, 3-4 inches long, flat and thin and acuminate and inclined to be lacinate-toothed below and 3-nerved, on a stout and margined petiole about 5 mm. long. Stems branching above cymosely into few elongated rays with one to few heads ~~of~~ which are erect and on pedicels 1-3 inches long. Proper bracts hardly 1 cm. long, oval-oblong, rounded and flat, about eight, green, then comes an inner series with as many or more hyaline ones a little longer, and some of them subtending the few linear and yellow rays which are not over 1 cm long or very short. Ray akenes elliptical, flat, bar hardly smooth, destitute of pappus but with a tuft of hairs at the junction ^{the pilose} of corolla with the akenes. Disk akenes very flat and thin-winged ending in lacerate edges, and with face upwardly pilose and tipped with a distinct crown from which 2 stout, subulate and persistent awns arise as long as the oblongate akene. There are no scales to the pappus but corolla tube constricted below and very pilose there. The awns of *V. encelioides* are evanescent and hairlike when present, and akenes with corky wings, and narrow bracts.

Verbesina pustulata N. Sp. No. 277II. The Laguna, Laguna mts. I. Calif.
Sept 22 1930. A tall herb 3-4 ft. high, growing in clumps. Whole plant even
to the bracts covered with yellow pustules which often end in very slender
and crisped hairs, particularly on the under side of the leaves. Leaves ova-
te, acuminate, about 3 inches long, truncate below and winged on the sto-
ut petiole which is 1 cm. long, velvety below, very veiny, very closely
and sharply serrate with teeth 1 mm. long. Flowers terminal in compound
cymes on filiform peduncles. Bracts soft, narrowly oblong, green but whi-
tened with pubescence, barely acute, thin. Akenes oblong-~~xxxx~~obovate, very
thinly winged above and ending in a lacerate crown. Awns 1-2, stout, 2mm.
long. Crown varying from none to or a ring or a ring to a real terminal wing.
Akenes sparsely pubescent.

Verbesina pustulata N. Sp. No. 277II. La Barranca Guadalajara Mex.
Sept. 22 1930. A tall herb 3-4 ft. high, growing in clu,ps. Whole plant eve-
to the bracts covered with yellow pustules which often end in very slender
and crisped hairs, particularly on the under side of the leaves. Leaves
ovate, acuminate, about 3 inches long, truncate below, and win ged on the p-
petiole which is 6 mm. long and stout. Leaves velvety below, very veiny, ve-
very closely and sharply serrate with teeth 1 mm. long. Heads terminal in
compound cypes on filiform peduncles. Bracts soft, narrowly oblong, green b-
but whitened by pubescence, barely acute, thin. Akenes oblong-obovate, very
thinly winged above and ending in a lacerate crown and with 1-2 stout awns
2 mm. long. Crown varying from none or a ring to a real and terminal wing. Ak-
Akenes sparsely pubescent.

9218

~~*Vernonia canporum* N. (Sp. No. 27698 Frarias at Orizaba Jalisco Nov.
1930.~~

Voreopsis diffusa N. Sp. 27720 La Barranca Guad. 11-17. A widely branch and diffuse annual, 3-4 inches long, with short internodes, and ovate, bipinnate leaves, an inch or two long, thin, with primary segments cuneate, yellow, and ultimate ones triangular and cuspidate, and very short. Heads on filiform peduncles 1-2 inches long scattered among the leaves, apparently radiate, at least with two series of akenes. Outer bracts few and short, the inner elliptical and 4-6 mm long, then gradually passing into the few central ones which are linear. Outer row of akenes ^{light-colored,} rounded, smooth, oblong and rounded at both ends, and without pappus or markings. Inner akenes single or few, black, flattened and inner face concave, smooth, with narrow white wing lacerate, no pappus, oblong 2 mm long as are the others.

This seems to be near to Blake's *C. aggregata*, but inner bracts narrower. *Perezia nervata* N. Sp. No. No. Orendain Jalisco, 11 26. on prairie. Plants 2-3 ft. high, erect and strict, pyramidally branched above, nearly smooth throughout. Leaves thick, narrowly oblong-lanceolate and obscurely toothed acute, tapering into a short and margined petiole. Heads about 1 cm. long dark-colored, with rigid and closely appressed bracts ovate to oblong. Flowers about 10 in a head. Pappus dirty-white exceeding the scales by 3-3.4 mm. Akenes cuneate-linear, 2-3 mm. long round, very strongly 8-nerved and with shining low warts withing the ribs, truncate.

Perezia kuhnioides N. Sp. No. 27693. La Barranca, Guadalajara ^mex. No Nov. 25 1930.. Tall, Strict and smooth, and tufted herb 3-4 ft. high. Leaves bearded, lanceolate-oblong, 2-4 inches long Low-toothed and rather remotely serrate, leathery and rigid. Corymbosely branched above and very slender. Heads many in capitate clusters of half a dozen, 4mm. long to the ^{about} end of the scales. Scales linear, pruinose and acute. Akenes linear, narrowed above in to a distinct neck and with enlarged disk-like tips, 10-ribbed. Pappus nearly white, 4-6 mm. long, copious, a little scabrous above and very fine. Flowers about 10 in a head.

Perezia nitens N. Sp. No. 27798. Guadalajara ^{Mex.} on prairies. 3-4 ft. high, strict, rather racemosely branched, pruinose pubescent throughout and heads or young parts deciduously floccose early. Leaves oblong-Ovate, shortly acuminate, finely and regularly serrate-tipped, veiny, many and appressed, a little reduced above where subtending the inch-long heads. Heads one to few in the axils and with a larger cluster at the tip, all in a linear spike a foot or more long. Scales narrowly linear, all acuminate and the outer ones long-acuminate, and all aculeate-tipped. Heads about 20-flowered, rather wide, . Inner scales about 1 cm. long and twice as long as the linear and barely beaked and densely pubescent akenes with stiff and ascending hairs Stamen tube white and elongated. Corolla tube puberulent. Upper side of leaves shining. This belongs with the *Wrightii* group.

Q 4477

Perezia Wrightii scales ovate to oblong rounded but often apiculate, lacerate the outer inclined to spread, thick, not striate. Akenes scabrous, angled, beaked with broad disk-like crown. Pappus nearly white.

It is evident that *P. Arizona* is not distinct from *Wrightii*.

Perezia Wrightii var. *Arizona* (Gray). *P. Arizona* Gray.

Walp. is certainly mistaken in his identifications of *Perezia*.

28693 see my n. n. *Reverend Lem. & Smith's*

very short, truncate, not beaked, scabrous angled. pappus white
Perezia turbinate reverses the usual rule by having the outer scales the narrower, al; striate, acuminate, almost smooth, not lacerate. Akenes long-beaked, angled scabrous with broad disk and pappus rather tawny

drical, not ribbed, scabrous slightly beaked, ending in a white crown from which the pappus comes

27094 *Andean* *confidently striate*
Perezia megacephala scales oblong, acute below but not the inner ones, imbricated. Akenes smooth, deeply 8-ribbed and with now warts between, 1 cm. long. slightly contracted above and below, no disk

Perezia Arizonica has lacerate ovate to lanceolate scales, slightly ribbed and scabrous akenes with wide disk and a triple beaked.

Perezia oxylepis Has lanceolate to linear acuminate not lacerate scales.

Akenes scabrous, somewhat ribbed, a little beaked and with broad disk and traces of a crown

Perezia hebeclada has scabrous and slightly lacerate scales lanceolate to linear-acuminate and acerose. Akenes slightly beaked, slightly ribbed and scabrous

Perezia foliosa has lanceolate; long-acuminate and rather acerose scales, smooth and not lacerate. Akenes slightly ribbed, scabrous, beaked and with broad disk

Perezia Lozani has oblong very blunt and spreading scales thick, lacerate, puberulent. Akenes narrowed at both ends, with prominent disk, scabrous and barely ribbed, tawny pappus

Perezia microcephala has linear, apiculate and scabrous scales, the roughness almost hairy. Akenes about half the usual length, 4-angled, scabrous, truncate and with rather large disk, pappus white as usual

Perezia nana has puberulent striate, acuminate lanceolate scales. Pappus inclined to be tawny, very shortly pubescent akenes ~~not~~ ^{ovate to lacerate} ~~axially~~ ^{slightly} ribbed, short-beaked and with broad disk as if a crown

Perezia runcinata has linear acuminate puberulent scales lacerate. and scabrous long-beaked akenes about 5-angled, and evidently related to nana. root tuberous.

Perezia Thurberi has ovate to lanceolate, scabrous, not lacerate scales, akenes

Melampodium minutiflorum N. Sp. No. 27738. La Barranca, Guadalajara Mex. Nov. 17 1930. Weak and widely spreading glutinous annuals with ~~xxx~~ filiform stems and intricately branched. With innumerable oblong heads 3-4 mm. long and with very minute white rays scarcely visible. Leaves opposite, oblong, rather inclined to be lanceolate, 5mm. to an inch long, soft and thin, on filiform petioles 2-3 mm. long. Involucral scales 2-4, concave, oval, thin, several nerved, glutinous. Ray flowers 2-4 with very broad rays for their length, white and reflexed. Akenes 1-2 mm. long, conspicuously cup-shaped and warty all over the back, not produced at the rounded summit, flat on the inner face and 1-nerved. They are not evidently a continuation of the scale and akene. Inner flowers 2-4, some with hyaline bracts, others without bracts and with linear and abortive ovaries. All flowers deciduous. Plants 1-2 ft. long. Hairs flat and tapering. Pedicels 2-10 mm long it grows with *M. anomalum*.

No. 27727. La Barranca, Guadalajara ex. Nov. 17 1930. *Melampodium anomalum* N. Sp. This has the habit of the above and the leaves the same but nearly sessile, and with the pubescence minutely ashy and not glutinous., and plants nearly smooth. Inflorescence much more open and pedicels 1-2 inches long and 2-bracted. Heads smooth and shining, with 2-3 short and oval and unequal outer bracts passing into the oval, concave hyaline, smooth and nerved scales, 4mm. long which are about 4, then come 2-2-4 fertile flowers without rays, and most of them acuminate into a recurve (not hooded) crown and 2 nerved part forked a little at the tip. Akenes flat or a little convex and oblong, 3-4 mm. long exclusive of the whic is variable from almost nothing to 3 mm. long. Back of akene yellow-warty in three lines, the central one on the thinner side mostly flat and 1-nerved, and minutely pubescent. Inner flowers with 1-3 hyaline, oblong and persistent and empty scales, and 1-3 naked flowers with linear and abortive ovaries. Receptacular scales persistent. This plant is manifestly melampoid but there is no cup-shaped balloon ? in tip of akenes as in *longicornu*.
bottom /

9129

9101

Lagascea decipiens Kuntze. This genus is a puzzling one because of the departure from the usual Composite structure. One is reminded of *Mexianthus* and one species of *Eupatorium* by the individual flowers being rotate-spreading in the head. The difficulty is greatly exaggerated by the bracts which cover the disk and are gamophyllous and inclose a single flower each. The structure of the anther tube is the only thing that seems to make the species an aberrant composite. Were it not for *L. biflora* having two flowers in a bract the problem of relationship would be more difficult.

4837

Xanthisma Texanum ~~xxxx~~ DC. I think this genus is more intimately related to *Grindelia* than to *Aplopappus*. It has the habit of a *Grindelia*.

Amblyolepis setigera DC. There is no doubt that this genus is too near the Hoopesii group of *Helenium*. That is, the *Oxylepis* section or subgenus, but whether this is congeneric with the rest is a question.

Mercurialis glabra N.sp. No No. La Barranca Guad. II-17 1930.

A weakly erect annual, 6 inches high, with leaves and branches nearly opposite. Leaves thin, elliptical, shortly-acuminate at both ends, obscurely crenate, smooth but with short hairs on nerves and margins 1-2 inches long, almost sessile. Stems channelled and inclined to be pubescent in lines. Pods ovate, deeply 3-angled and 3-celled 4 mm. long, splitting to the base at maturity. Seeds 2-3 in each cell, Black at maturity, a little flattened, coarsely rugose at least around the margin, shining, 1.5 mm. wide. This oversteps the genus boundary decidedly but cannot be placed anywhere else., and is manifestly allied to *M. annua* L. The cells are apiculate when open and not blunt and hairy as in *annua*, and the seeds have the few pits very wide and not pavement like as in *annua*.

Cephaliferae 62 = Belutaceae
Cimoniaceae 121 3262-3281
Cyclanthaceae 73 678-683
Cynoglossaceae 83 2365
Cynomoriaceae 226 5858

Erythroxylaceae 135 3954-3955
Guephiliaceae 181 5111

Diapensiaceae 235 4273-4278
Dichapetalaceae 147 4283-4285
Dipterocarpaceae 188 5211-5229

Calumelliaceae 263 7897
Combretaceae 221 5537-5542
Carpocarpaceae 157 4413

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Adoxaceae 272	8526	Burseraceae 140	4136-4154
Alzooaceae 45	2387-2405	Buxaceae 150	4531-4537
Alismaceae 10	70-78	Butomaceae 17	81-84
Amarantaceae 90	2292-2339	Cactaceae 210	5401-5421
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Araliaceae 227	5853-5881	Cappariaceae 105	3082-3121
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Aroideae 24	751- 984-793	Caprifoliaceae 171	8515-8523
Asclepiadaceae 248	6775-6957	Cariaceae 104	4377-4379
Balanophoraceae 74	2185-2168	Cartophyllaceae 83	2419-2507
Balsaminaceae 169	4896-4897	Celastraceae 189	668-4659
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Berberidaceae 64	2558-2566	Ceratophyllaceae 90	2516
Begoniaceae 108	5396-5399	Chenopodiaceae 79	2214-2285
Betulaceae 62	1882-1888	Cistaceae 193	5242-5247
Bignoniaceae 258	7874-7759	Clethraceae 230	6165-
Bixaceae 194	5249	Cneoraceae 197	3986
Bombacaceae 177	5023-5081	Commelynaceae 94	893-1919
Boraginaceae 262	7038-7112	Compositae 280	8730 to end
Bromeliaceae 83	848-892	Coniferae = Pinaceae	20-45
Brunelliaceae 120	3261	Connaraceae 128	3416-3434
		Convolvulaceae 249	6968-7011
		Cornaceae 229	6150-6154
		Crassulaceae 96	3161-3175
		Crossosomataceae 126	3335
		Cruciferae 106	2863-3080
		Cucurbitaceae 215	8548-8643
		Cupuliferae 62	1883-1885
			= Pagaceae

<i>Lyceadaceae</i> 1 1-9	Gesneriaceae 262 7806-7896
Cyperaceae 26 452-527	Gnetaceae 2 46
<i>Agrellaceae</i> 155 4409-4611	Goodeniaceae 181 8716-
Datiaceae 207 5393-5395	Gramineae 9 142-
Dilleniaceae 180 5098-5110	Guttiferae 113 5168- (Hypericaceae)
Dioscoreaceae 24 1250-1258	
Dipsacaceae 274 8529-8547	
Droseraceae 113 3133-3138	
	Haloragidaceae 135 5834-
Ebenaceae 240 6403-6409	Hepaticae C
Elaeagnaceae 225 5470-5472	Hippocastanaceae 99
<i>Elaeocarpaceae</i> 172 4921-4928	Hippocrateaceae 94
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<i>Ehacridaceae</i> 234 6250-6272	Hydrophyllaceae 159 7022-7037
<i>Equisetaceae</i> F.	
Ericaceae 233- 6179-6295	
<i>Eriocaulaceae</i> 36 828-833 (<i>Restiaceae</i>)	
<i>Escalloniaceae</i> 115 3247- = <i>Sambucaceae</i>	Iridaceae 23 1264-1274
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<i>Fagaceae</i> 63 1889-1893	Juncaceae 19 936-
Filices G	
Flacourtiaceae 199 5278-5383	Koeberliniaceae 117 5253
Fouquieriaceae 192 5241	Krameriaceae 77 3543-
Frankeniaceae 190 5232-5236	
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<i>Scindomaceae</i> 211 5422	Lauraceae 62 2783-2798
Gentianaceae 246 6478-6558	Leguminosae 78 3436-3910
Geraniaceae 130 3924-3934	

Brickellia pulcherrima Rob. is not a *Brickellia* but a *Stevia pulcherrima* Rob.) It has the characteristic akenes of *Stevia*.

Brickellia squamulosa Gray is a *Baccharis squamulosa* (Gray).

Brickellia Cayucensis N. Sp. No. 22818. Cayuca ranch Sierra Giganta L. Calif. Oct. 10 1930. This is near to *B. Coulteri*. Climbing high and widely branched divaricately with slender branches. Leaves cordate-ovate or almost deltoid, 1-1.5 inches long, papillately roughened and unequally crenate-serrate, acute, on petioles 1 cm. long. Stems white-barked. Heads few at the ends of the branches and 1 cm. long, about 10-flowered. Scales smooth, linear and strongly ribbed. Flowers white. Akenes densely hairy. Pappus white.

Brickellia diffusa N. Sp. No. 27821. Guadalajara Mex. Nov. 24 1930. Tall and open branched, 2-3 ft. high. Leaves cordate-ovate, 2 inches long, on very stout petioles 1 cm. long, thick and leathery, shortly acuminate, regularly serrate, covered beneath with densely white areas of wool between the meshes as if stellate-pubescent. Stems divaricately branched and 1-2 ft. long into a very open panicle, and half as long. Ray akenes triquetrous and slightly winged, the awns somewhat shorter

8823

8823 Brickellia megaphylla Jenes. ^{27814 Mexico No. 10-22.}
The leaves are theoretically palmately ^{veins} nerves
with three strong nerves arising from the base, the central one being pinnately
veined, the two lateral ~~veins~~ are 3-5-nerved on the outside only
much as in Eupatorium cellinum. The pubescence is short and flat, but also
evident, the serration of the leaves shows a tendency to be hastate. The
akenes are 10-ribbed. The stigmas are sometimes elongated as in Eupatorium
(see No. 27813). The ribs of Eupatorium scales run right into those of B:

4823

Brickellia Undonis N. Sp. No. 27822 Arroyo Undo Sierra Giganta L. Calif. Oct. 26 1930. Allied to *B. peninsularis* but with heads congested and on pedicels 1 cm. long. Bracts linear and barely acute, not acuminate as in *peninsularis* but leaves about the same but barely half as long and with minutely pustulate pubescence. Stems white-pubescent and not green.

Brickella megaphylla N. Sp. No. 27811. Arroyo Undo, Sierra Giganta L. Calif. Oct. 26 1930. Shrubs 4-6 ft. high and allied to *grandiflora*. Leaves triangular-acuminate, 3 inches long by 2 inches wide, from nearly entire to lacinately toothed, a little cordate, softly pubescent. Petioles 1-2 inches long. Flowers in an ample corymb, on short (2-6 mm. long) pedicels and erect. Bracts about 4-ribbed and 1 cm. long, acute, green. Akenes densely pubescent. This differs from *B. grandiflora* in the pubescent, not nearly smooth and black akenes, shabby habit, and velvety-pubescent and much larger leaves.

Mikania anomala n. sp. No. 27806 Jones. Guadajajara Jalisco Mex. Nov.

26 1930., growing along ditches. Tufted, erect, strict. Leaves opposite, nearly linear, 2-3 inches long by 4 mm. wide, acutish, entire, rather thick. The whole upper part of the plant forms a narrow and compound panicle of innumerable very small and erect ~~flowers~~ heads, each on a filiform pedicel 1-3 mm. long. Upper stems and peduncles woolly-hairy in a narrow line on the inner face. Heads 2 mm. wide, 4 mm. long, smooth, with 2-4 linear. convex and hyaline loose and equal and a little decarinate on the edge. flowers 2-3. Corolla lobes exerted, oblong-linear and longer than the very short, wide and woolly tube. Akenes 3-4, sharply angled, smooth, linear-cuneate and with a minute crown and no pappus, half as long as bracts. This quite unique plant has the corolla of *Mikania*, but the absence of climbing habit, and absence of pappus makes its place confusing.

Eupatorium megaphyllum n/ sp. No. 27808 Jones. La Barranca Guadalajara

Mex. Nov. 17 1930. A tall and coarse plant with square stems, 4-6 feet high

Leaves a foot or more long, lanceolate, sharply acute, with very low-apiculate teeth, abruptly contracted into winged petioles an inch wide, slightly if at all connate, smooth. Flowers in short and axillary ~~clusters~~ and dense panicles. Heads about 1 cm. long, with the narrowly-oblong bracts in about threes, obtuse, striate-nerved and hyaline. Flowers whitish. The heads in compact clusters. This appears near to *E. compactum* but heads larger and with more flowers. Leaves ~~lanceolate~~ ^{lanceolate}.

6518

8799

Stevia serrata Cav. Pappus without bristles. No. 28654, Chiricahua Mts.
Ariz. Sept. 21 1931.

Stevia micrantha Lag. Pappus with 2 long bristles. No. 28653. Chiricahua
Mts. Ariz. Sept. 21 1931.

Stevia dissecta N. Sp. No. 27800, Orendain, Jalisco, Nov. 27 1930. Slender and erect and strict and sparingly branched above racemosely but with with ultimate clusters cymose. Whole plant ashy-woolly except the base of scales. Stems 1-2 mm. thick. Primary leaves very deeply 3-5-toothed and lanceolate, subtending linear and revolute fascicles and inch long. Pappus scales very short and margined. Heads about 6 mm. long, and 4 mm. wide, Green. Scales linear, 3-nerved, acute, hairy above, in about 4 series. Akenes strongly angled?, linear, ~~black~~ black, 2-3 mm. long, and half as long as the rather tawny and slightly plumose and very fine and five pappus scales which are capillary above the 1/2 mm. long and triangular scales base. Flowers purple and very short.

8799

Vernonia floccosa n. sp. No. 277700 Jones. La Barranca, Guadalajara Mex. Nov. 23 1930. Plants tall, erect, and rigid, with striate-angled stems, 4-4-6 ft. high, and corymbosely branched above. Stems smooth below, upper stems floccose. Lower side of leaves and the heads densely-white-woolly. Leaves lanceolate, leathery, venose and corrugated, about sessile, 2-3 inches long, sharply low-serrulate. Heads nearly sessile in small clusters on the ends of the long common peduncle (4-6 inches long), which are leafy bracted at tip. Heads hemispherical, 1 cm. long, with closely appressed oval-ovate, apiculate scales buried in wool, the longest about as long as the pappus which is made up of many flat and filiform scales enlarging above, and with a second series of similar and acute ones 2-3 mm. long. Akenes densely setose-pubescent and very short. The plants resemble *V. Leopoldiana* considerably. Grows on prairies.

Eclipta pusilla n. sp. No. 27739 Jones. Arroyo Undo, Sierra Giganta Mt. L. Salif. In waste places. Oct. 26 1930. Plants low, 3-5 inches high, erect and corymbosely branched, and with heads cymosely arranged on peduncles 2 inches or less long and erect. Leaves elliptical-lanceolate, obtusish, entire, 1 inch long, on short petioles, ashy and minutely punctate as if glutinous. Involucre a single piece but 5-toothed and with edges hyaline and lacerate, also ashy with tangled hairs. Heads globose-ovate, 7 mm. wide and with golden-yellow rays nearly as long. Ray akenes somewhat flattened and very flat-warty especially on the back, truncate and without pappus. Disk flowers large and embraced by the hyaline and hooded bracts as long as the flowers which are long-hairy on the midrib and hooded and lacerate at tip. ^{Disk} ~~Ray~~ akenes not developed but ray akenes dominating the head. An insignificant plant.

8751

Vernonia viarum n. sp. Serial number 288 Jones. Chiquilistlan, Jalisco, May 30

1892. Identified by B. L. Robinson as V. Deppeana but erroneously evidently.
A shrub
~~shrub~~ with rather compact and cone-like panicles of many heads on short and divaricate pedicels. Whole plant rough and grayish with minute pubescence. Leaves elliptical-lanceolate and shortly acuminate, about 3 inches long by an inch wide nearly sessile on a stout petiole and rounded to truncate below, entire. Heads nearly globose, about 1/4 inch long, Greenish, the scales flat, oval ~~shaped~~ acutish, a little lacerate on the margins, in about 4 ~~series~~ ranks and successive-ly shorter, slightly shorter than the white pappus.

8741

Vernonia camporum N. Sp. No. 27696 On prairies near Orendain Jalisco
Mex. Nov. 27 1930. growing with *Cacalia*, etc. Strict and tufted herbs, 2-
2-3 ft. high, with simple stems, drying black. heads small, 4-6 mm. long
and 4 mm. wide. The slightly tawny pappus 2-3 mm. long, black with tips
narrowly oblong bracts a little floccose and the outer ones scarious-tip-
ped. Akenes tapering from the truncate tip and about 9-ribbed. Leaves nearl
sessile, lanceolate, leathery, 3 inches long by 1-2 cm. wide, more evenly
low-
serrate, roughened on the edge and punctate, ascending and many.

4741

9246

Galinsoga Ruiz & Pav. Whether there is more than one species in the U.S. is to be determined. The flowers, rays are white and very short. The pappus is of several oblong scales variously lacerate and pointed. My species *exaristata* is without pappus, otherwise as in *parviflora*. My species *sphaeroccephala* has linear or very narrow leaves and is the form from Arizona & New Mexico, by various collectors, and by myself from the Sierra Madres Mx

Lobelia Loretensis n. sp. No. 27279 Jones, Growing in wet places at Premier Agua, Sierra Giganta mts. Oct. 26 1930. This is allied to *L. splendens*, is 2-3 ft. high, erect and strict, very leafy with imbricated leaves linear-lanceolate., closely and finely apinulose-serrate, smooth, about 4 inches long by a half inch wide., veiny. almost sessile. Flowers at first yellowish with red stripes, then cardinal, 1.5 inches long, with narrow and nearly linear lobes about as long as the tube. Calyx tube 2-3 mm. long, and a little shorter than the triangular-subulate and green lobes. This differs from *L. splendens* in the serration of the leaves, short and linear corolla lobes and short calyx. There are forms approaching this from Texas, but with very long and linear calyx lobes, these collected by Lindheimer.

8692

8882+

Lobelia amabilis N. Sp. The Laguna "Laguna mts. L. Calif. 9-22. An erect and about 2 ft. high. slender annual with short internodes and many thin leaves. Basal leaves much reduced, ovate, about an inch long, triangulat-acute, cuneate into a slightly margined petiole nearly as long as blade, laciniately and rather coarsely few-toothed. Middle leaves the largest, lanceolate-acuminate, about 3 inches long and with slender petiole $1/3$ to $1/2$ as long as blade, more deeply and irregularly ~~xxxx~~ cut-toothed. Uppermost leaves nearly linear. Whole plant up to the smooth inflorescence sparsely strigose-hairy. Plants inclined to be cymosely branched above, but inflorescence of 1-3 racemes 1-2 ft. long. Flowers brilliant-purple, about 1 cm. long, white-striped below, with the 3 lower petals broadly ovate and about 4 mm. long, the two upper ones linear and short. Calyx boat-shaped and split nearly to base, about 5 mm. long, all the lobes linear and 3 mm. long, the lower remote from the upper, flowers slightly spurred. Pedicels an inch long and filiform, ascending. Fruit not seen. A very graceful and pretty and delicate plant.

Evol

4694 *Lobelia*
 narrow, The green calyx split almost to the base and the upper 2 lobes flaring at right angles and subulate and 1 mm. long, the remaining half of calyx about 1.5 mm. wide and truncate at tip and with the 3 lobes like the tooth but not flaring and shorter, the whole 3 mm. long. Corolla deep-purple, about twice as long as the smooth calyx, very shortly spurred below. Pedicels with minute linear bracts. This in a genera; way resemble *L. Xalapensis*. Common.

6178 *Stemmadenia rugosa* N. Sp. 27317 La Barranca Guad. II-27 1930. A shrub 6-10 feet high, with slender branches, entirely smooth. Leaves oblong-lanceolate-acuminate, subcordate below, 3-6 inches long, on petioles nearly as long, entire, 1-2 inches wide. Flowers in terminal cymes, white, about 3 cm. long and nearly as wide, with short tube barely longer than the calyx. Calyx lobes about oval and rounded, 1 cm. long. lobes of the corolla finely wrinkled when dry, connected by a very thin membrane. Fruit not seen. Growing in rocky places.

Dec 85 '16 +
Viburnum deltoideum N. Sp. 27306 Cabo 9 14 1930. A shrub about 6 ft. high, openly branched and slender. Leaves ovate to deltoid-ovate, triangular-acute at both ends, low-crenate, smooth or ashy, on slender petioles half as long as blade and not margined. Flowers 1 cm. wide, white, with tube as long. Calyx lobes linear-suvulate, 1 cm. long. Umbels mostly sessile. Fruit not seen.

Spermacoce Jaliscensis n. sp. No. 27118 Jones Orendain Jalisco. Nov. 27 1930.
This grows in tufts in prairies, 1.5 ft. high and erect, and strict and rather woody below. Stems somewhat branched above the middle, smooth as are the linear leaves which are also revolute, strongly ribbed, fascicled, acuminate at both ends and about sessile and 2 inches long by 3 mm. wide, and entire. with few or no sepals in the axils. Stipules sheathing, truncate and with few setae. Inflorescence corymbose, with few cymosely arranged heads. Peduncles 1-2 inches long, strict, angled, fistulose at tip and winged there, mostly with a cluster of ordinary leaves subtending the half-inch heads. Calyx lobes green, linear, rigid, acerose, smooth. Calyx tube hairy. Flowers minute. Common. Certain reviewers seem to be at sea about what species I consider new among those about which I have written notes. I have never considered it necessary to give the authors of well known species when I publish notes on them. I take it for granted that those whose opinion is worth considering know without being told what I consider new. It has always been my method to put N.Sp. or New Gen. after all that I consider new, so that there will be no mistaking what I consider new. May be I should show more consideration for the ignorance of reviewers than I do. But it is my opinion that if they would be less hasty than they are there would be less occasion to find fault. Reviewers seem to be selected more because they will uphold certain botanical fads than because they know anything.

S 475

7148

Bouchea flabelliformis N. Sp. No 27439 Triunfo L. Calif. 10-6 1930.

Erect and simple annuals much like *B. dissecta* Wat. and with the same ashy puberulence. Stems simple, channeled, a foot or two long, terminating in a bractless raceme 4-6 inches long. Leaves opposite, oval-ovate, cuneate into the filiform petiole which is half as long as blade, the whole 2-4 inches long. Leaves dissected nearly half way to the midrib into 7-12 oblong and apiculate lobes about 1 cm. long. Occasional lobes are again cut. Flowers 1 cm. long. Calyx tube linear, clavate, the ^{exserted} serrulate teeth about 1 mm. long. Corolla nearly as long as the calyx tube, rather labiate and 4 mm. wide at tip, blue. Fruit twice as wide as in *B. dissecta*, and somewhat less exserted.

Spermacoce jaliscensis N. Sp. No. 27118. Orendain Jalisco, Mex. Nov. 27 30
This grows on prairies in tufts, 1.5 ft. high, strictly erect, and shrubby
at base, branching somewhat above the middle. Stems smooth. Leaves smooth,
linear, revolute, strongly ribbed, fascicled, acuminate at both ends, nearly
sessile, entire, 2 inches long by 3 mm. wide., with few or no setae in the
axils. The sheathing stipules truncate and with few setae. Inflorescence
corymbose and with few cymosely arranged heads. Peduncles 1-3 inches long,
strict, angled, fistulose at tip and winged there, mostly with a cluster of
ordinary leaves subtending the half inch heads. Calyx lobes green, linear,
rigid, accrescent, smooth. Calyx tube hairy. flowers minute. common.

8475'

8473 *Eppreria lagunensis* N. Sp. 27124 The Laguna Laguna mts. L. Calif. 9-22

Tufted woody herbs growing under live oaks, about 2 ft. high, many-stemmed from the crown of the vertical root. The stems simple, with about 4 pairs of leaves. Stems asperulous with very short white hairs apparently from an enlarged base. Leaves narrowly lanceolate-linear, acuminate at both ends, particularly toward tip, entire, with margins revolute, opposite, white below and green above, somewhat aspidulous with scattered hairs but surface appearing as if covered with flat granules. Flowers in dense terminal heads, rarely a second head developing in the next lower axil. Flowers dark-purple, 5 mm. long with slender tube and ovate lobes about 1 mm. long and equaled by the oblong anthers, tube slightly longer than and at length acerose the triangular-subulate and hispid calyx lobes. Fruit immature.

8474 *Houstonia peninsularis* Brandg. This species is an openly branched shrub with leaves in fours mostly. The flowers vary much in length from an inch half an inch long. The lobes of the corolla are about 4 mm. long and widely spreading, for another 4 mm. in length the corolla tube is enlarged above below the lobes, then rather abruptly contracted to the very slender tube.

Plantago Patagonica. I failt to see any good reason to split this species up
into various ones on technical characters.

Q 8/16

My No. 2339I of my 1927 collection is not *Crusea villosa* as given, but is *C. I parviflora* H. & A. It was got at Acaponeta. *C. Palmdri* and *villosa* are closely related.

8378

8098 *Beloperone intermedia* N. Sp. 27436 Cayuca ranch Sgerra Gig. 10-23. A shrub 3-4 ft. high, and openly branched, slender, and leafy. Stems minutely-white-pubescent which condition extends to the petioles and calyx. No glandulosity. Leaves about an inch long, entire, veiny but thin, smooth except for a little pubescence on lower veins, obtusely-ovate to oval-ovate and abruptly cuneate into the short petiole. Flowers single in the upper axils, and single in the cluster of fascicled leaves, its variable bract mostly spatulate and rarely over 1 cm. long, about 2 inches long, red, cleft down about $\frac{1}{3}$. Calyx 2-3 mm. long, its lobes oblong-ovate to lanceolate, and ashy. Anther ~~xxxxx~~ cells equal, not parallel, but the lower white-spurred. Technically this should be a *Siphonoglossa*. Seeds rugose. This would seem to be a depauperate *Californica*, but its whole habit is different. the seeds those of *Purpusii*, color of flowers much redder and corolla tube barely 2 mm. wide, and inflorescence very different. There is no sign of viscosity anywhere.

796' Ruellia megacantha N. Sp. 27387 La Barranca Guad. II-25, growing on steep slopes. a very slender and openly branched shrub, 4-6 ft. high, with leaves inclined to be clustered at the ends of twigs. Young leaves rather shaggy with dense, flattened white hairs, but without glandularity, becoming almost smooth in age. leaves 2-3 inches long by 1.5 inches wide, thin, not closely feather-veined, elliptical-ovate, shortly acuminate at both ends, on a petiole not over 1 cm. long. Flowers blue, 2-2.5 inches long, about 1.5 inches wide, puberulent, with rounded lobes $3/4$ inch long widely spreading, tube 1-2 cm. long, then funnel-form for as long. Calyx lobes hardly 1 cm. long, narrow, about as long as the oblong-obovate fruit which is almost sessile. Flowers about three in a leafy cluster at the ends of the twigs as in Californica. Calyx lobes with two of them filiform, the others wider. This plant is evidently related to Californica but without the pubescence, flowers twice as large and leaves relatively more acuminate below. A showy plant.

7646 *Coldenia Loretensis* N. Sp. 27394 mts. east of Loreto L. Calif. 10-17.44
prostrate shrub, white-hoary, with zig-zag stems and many clusters of leaves
on very short branches. Leaves deltoid-ovate, the blade about 4 mm. long,
triangular-acute, with revolute and rather erose margins, leathery, strongly
1-nerved and sometimes with two more less evident ones, strongly strigose to
the conspicuously widened petiole 3 mm. long, which is densely white-strigose.
Flowers white, about as long as the leaves. The plants form mats on the ground
2-3 feet diameter, in clayey soil. manifestly related to Johnston's cuspidata
but much less congested and with different leaves.

- 7046 *Coldenia Loretensis* N. Sp. 27393 Loreto L Calif. 10-16. A prostrate and woody plant with mats a foot in diameter. Whole plant densely white-strigose-hispid, particularly dense on the petioles. Leaves with blade about 3mm. long, on a stout petiole half as long, rigid, with revolute margins, entire, only the midrib evident and impressed, acute, ovate, clustered at the ends of short twigs. Flowers white, about as long as leaves, with calyx segments hardly visible. Bark of the stems exfoliating.
- Diospyros Texana* 27430 Primavera Agua Sierra Gig. L. Calif. 10-20
filipes
- Specularia ~~retundifolia~~* N. Sp. 27322n Orendain Jalisco 11-27, growing in waste places. Plants weak and creeping and rooting at the joints, probably perennial, but very weak and frail. The green stems conspicuously ribbed and racemously branched above, and six inches long. Leaves cordate to cordate-ovate and acute, coarsely few-toothed, about 1 cm. long, smooth, sessile. Flowers single in the upper axils, on filiform peduncles an inch long. Calyx 5-cleft to the base, the lobes linear and about 2 mm. long. The ovate capsule about as long as the calyx and 2-valved to the base. Flowers deep-blue with a yellow throat. In general aspect this is nearest to *S. biflora*, but calyx very different. This may be a *Wahlenbergia*.
- Lipia Greggii* ? 22581 New Years Mine Sonora, 10-28-1926
- Lobelia tenuissima* N. Sp. 27428. The Laguna Laguna mts. L. Calif. 9-22 in open woods. An erect and very slender annual, sometimes branched below into very slender stems terminating in a very long 6 inches or less long. Proper stems below the peduncles and leaves appearing under the lens as very-shortly-setose-hairy. Leaves many, from ovate-cordate to lanceolate and acuminate, and cuneate below, coarsely spinulose-toothed, 1-2 inches long, on slender but short petioles, reduced above but absent on the general peduncle whose upper half is racemously flowered on one side, and with the capillary pedicels 1/2-1 inch long and ascending. floeers 5 mm. long,

244^{1/2}

Drymaria Fendleri var. *perennis* n. var. Stems a foot or two long, perenn
Leaves reniform, triangulat-acute, wavy on the margins, on petioles 2-3
long Flowers puberulent. Sepals 3-5-nerved pungently acute. No. 27050
The Laguna Laguna mts. L. Cal. 9-23.

Drymaria Barrancae N. Sp. La Barranca Guad. II-17 No/27051a. growing with
D. ^lBasianus Jones. A weak and widely spreading annual with capillary stem
Leaves reniform, pointless inclined to be deltoid at base, on capillary
petioles half to a third the length, sparsely long-hairy as is the whole
plant. Flowers single in open cymes on pedicels not over an inch long.
Sepals oblong-ovate, pointless, narrowly hyaline-margined. Petals very
narrow about as long as sepals.

Drymaria Basiana Jones No. 27051 La Barranca Guad. II-21

Stellaria lagunensis N. Sp. 27049 The Laguna Lag. mts. L. Cal. 9-22.

Weakly erect from running filiform roots, widely branched from the base,
a foot or two long, the upper half floriferous in the axils and the flowers
and puberulent
ers on one side of the stems on capillary pedicels 102 inches long, and
ascending. Sepals about 4 mm. long, ovate-lanceolate, green longer than
than petals and shorter than the capsules. Seeds black, shining, lenticular
rather sharp edged, obliquely reniform, 1/2 mm. wide. Leaves linear, an
inch long. Stipules absent or reduced to hairs.

Ipomoea Acaponetensis n. sp. No. 23247 Jones. Acaponeta Nayarit Mex.

March 3 1927. A free climber, and tall. Leaves large, inclined to be tripartite and with a broad sinus, softly and velvety pilose, 4 inches long, sinuate-toothed and very broad. Internodes long. Flowers many in cymes, on pedicels 1-2 inches long, about an inch long, with tube half the whole and then campanulate and with ~~the~~ short lobes. Calyx lobes ending in filiform tips 1 cm. long. Pods globose-ovate, 7 mm. long. Seeds black.

7003

6943 *Gonolobus retundus* N. Sp. No. 2 76076 Pomona Herb. Mound Valley Sierra Ma
Madres Chi. 9-26-1903 7000 ft. alt. Prostrate spreading filiform stems
nearly simple and 1-2 ft. long. Internodes short so that the leaves over
lap. leaves cordate-oval .5 to 1.5 inches long, very obtuse, veiny, 7-
nerved at the base, smooth except for strigose hairs on the veins and
stems. Pods smooth, about 3 inches long by an inch wide in the middle,

6944 *Gonol.* triangular-acuminate at tip and less so below and sessile.

Flowers not seen. Plants growing on prairies. Petioles about 1 cm. long.

Serjania Papilio N. Sp. 27327 La Barranca Guad. II-19. Growing on bushes
like *Clematis*. Stems variously angled but not evidently sulcate nor stri-
ate but ^{white-}woolly-pubescent in lines. Leaves pinnate, of 5 leaflets, the laterals
almost sessile, the terminal one cuneate into a short petiolule
leaflets ovate to oval, 1.5-2 inches long, biserrate rather deeply and irreg-
ularly, shortly and abruptly acuminate, rather thick, white-woolly
below and nearly smooth above, strongly venose on both sides, the termi-
nal one winged on the petiolule. Peduncles stout, the longest 4-5 inches
long and with a very stout coil at the end. Flowers white, rather many on
a short rachis and nearly sessile, 3 mm. long open, the spatulate petals
and filaments sparsely hairy throughout. Filaments recurved at tip. An-
thers elliptical and puberulent. fruit about an inch long by 1.5 inches
wide, cordate, with each wing 12 mm. wide, striate-veined and shining but
minutely woolly, produced a little (imm. wide) around the tip of the cell.
cells slightly flattened, but nearly globose, 3 mm. wide, not inflated.
This would seem near to *S. venicosa*.

Parsonsia purpureocalycis N. Sp. 27418 Mts. east of Loreto, on mesas.
Oct. 17. Plants allied to *P. micropetala* and *ternata* apparently. Rather tall and slender, probably shrubby below, 3-4 ft. high and erect. Rough-pubescent throughout, to even strigose on the young parts and calyx with white and ascending hairs, the larger ones with pustulate base surrounded by a circular row of cells, the raised nerves of the leaves composed of several parallel cells. Lower leaves lanceolate, sessile, about 3 inches long, entire, acute, pinninerved, and with nerves impressed above and raised below, shining though minutely roughened, not glandular, reduced above. Branches racemose and ascending. Flowers rather racemose above not truly axillary, ascending on stout pedicels about 4 mm. long. Pods oblong, 1 cm. long, truncate, papery-walled. Seeds flat, smooth, purple-mottled, about 2 mm. wide, round but truncate to a little cordate at both ends. Calyx 2 inches long by about 4 mm. wide, not

6691 *Parsonsia*
spurred below but truncate, a little wider below, black-purple except at base. Calyx lobes deltoid, very hairy. Petals deep-orange, a little exserted

6691 *Parsonsia* P. Br. Hist. Jam. 199 t. 21 1756. On page 1014 of his *Shrubs and Trees of Mexico* Standley gives the author of this genus as Adanson Fam. 2 234 1763. If Standley had taken the time to look up his reference he would have found that Adanson in the place cited distinctly states that Brown was the author and gives the citation. *Parsonsia* antedates *Cuphea* only by position.

16691 ~~Gungak~~ *Parsonsia discersa* N. Sp. 27398 La Barrancae Guad. II-25. This is allied to *Cunea Cuarnavacana* Rose and *glandulosa* Jones. Annual, erect, widely branched above into filiform branchlets, long-hairy black-glandular throughout. Leaves very thin, elliptical-lanceolate-acuminate, about 3 inches long, minutely crenulate, truncate to cuneate into a short petiole, many, upper internodes short. Flowers few in racemose clusters, about an inch long, conspicuously spurred and strongly green-striped calyx black-hairy on the stripes. Petals bluish-purple, oblanceolate, long-clawed, nearly an inch long. Seeds rounded-oval, 3mm. wide, strongly margined, dark and mostly mottled, flat. Peduncles 3/4 inch long and ascending, flowers rather reflexed. This is a showy species. In fields.

Bumelia cuneifolia n. sp. No. 27850 Jones, gathered at Arroyo Undo L. Calif near Loreto, in the Sierra Giganta mts. Oct. 26 1930.

Leaves fascicled in knots, and with single flowers among them on pedice
cels 1 cm. long. Leaves 1-2 inches long, spatulate with rounded tip and
slightly petioled, appearing as if amooth, but minutely puberulent, gray,
with veins scarcely visible. Thorns few and short. This would be taken for
B. reticulata Brandeggee but the leaves very different. A low and rigid shru
with dark bark.

6374

4004

Spermolepis divaricata (Walt.) Raf Neesg. 2 1829. I note two blunders in Coulter and Rose's Monograph of the Umbelliferae, on this species page 87. *Spermolepis* is feminine and not masculine. In addition they give Britton as the authority ofr for this combination instead of Rafinesque. This was the type of the genus *Spermolepis*. They make the same blunder on *S. echinata* on the next page.

Apium depressum N. Sp. No. 82793 Pomona Coll. Herb. Lake near San Miguel Jacatecas Mexico, May 6 1892. Marcus H. Jones. A depressed appaernt winter annua s few inches gigh either stemless and with the leaves and peduncles congested at the root, or with sort and decumbent stems and long peduncles. leaves tri-pinnate, and with final segments linear and strongly 3-nerved 4-6 mm. long. Fruit oblately round, being rather truncate at the end, the two seeds appearing as half oval and with equal corky ribs and smooth, about 1 mm. long. Manifestly allied to *A. repens*.

Neracaria decumbens ~~Walt.~~

This is a plant growing singly from a fleshy root $1\frac{1}{2}$ inch or less in diameter at the top which tapers gradually downward, at least 6 inches long. ^{old} Leaf petioles at crown none or very few and papery, the earliest leaves are reduced to a sheath an inch long with or without minute leaflets at tip. At fruiting time the stem of the plant is not over an inch long and ^{old} root but the root does not reach the surface so that the stem really only reaches the surface where it branches out flat on the ground the first peduncle being leafless and 1-4 inches long and prostrate or a little ascending and with the past usually vertical. In fruit the peduncles seem to strengthen and become at least ascending. At the same point from which the first peduncle arises is a large usually green sheath like the first leaves but not white like them, it generally has from 3-8 incised or cut leaflets at the apex but always short and small, from the axil of this leaf arise one to two other peduncles always centrifugally with similar leaf-bracts in the middle, these are occasionally again two-branched or rarely with three branches all but one having a leaf-bract in the middle, one would suppose that this kind of development would lead to an indefinite growth but none of my plants even in fruit are over 4 inches long. There are no stem leaves other than these leaf-bracts, but the root leaves are often half a dozen, 3 inches or less long with proper petiole shorter than the sheath and with about 6 pairs of distinct ovate to lanceolate leaflets with a cuneate generally sessile base, these leaflets are never over $1\frac{1}{3}$ inch long are doubly serrate (irregularly) and toward the apex of the leaf pass into variously cut and lobed divisions, the leaves are nearly prostrate and the teeth are always callus-tipped. The flowers are yellow; involucre always absent except in one case (one head) where the leaf-bract is present as a linear bract as long as the pedicels, the place of an involucre is taken by the ring of short woolly hairs which is found at the base of all the leaf-bracts on the stem. The fruit is broadly ovate would be oval if it were not a little contracted at the apex, 3-4 mm. long, with broad rounded corky ribs widest in the middle and shallow, most of the flowers are abortive and sterile with age. It grows in the wet soil under trees near springs.

close to the foot of this mountain, near the creek and 200 yards from
Terra de Pils in the Papaya Mts. Jalisco and about 55 miles
southeast of Sayula, at 7800 feet alt. May 30 1899. The plant
grew singly along with *Peperomia* and *Peperomia*.

and 1 cm. or less long, almost cylindrical in cross-section, and smooth. The roots are like the type in being fleshy-woody and coarse and large and vertical. It has the same almost capillary rays much elongated, and the involucre is wanting as a rule, but some times is represented by a short leaf, mostly of 3 leaflets. The flowers are always yellow. It is likely that it was accidental that the type flowers were purple as is so common in the Umbelliferae. The whole habit and general appearance of the plant is like *Osmorrhiza*, and grows in the shade of pines and live oaks at Laguna, 6000 feet alt. in the Upper Temperate life zone. Sept. 22 1930. The specimens of typical *Brandegei* got by me on the eastern slope of the ^{were} *Lagunas* in 1928 ~~xxxxx~~very coarse and large and grew in damp places in the open in the upper part of the Tropical life zone, below the live oaks. One would hesitatingly make a new species of this plant got in 1930, but its variations show it cannot be separated from the typical form.

Arracacia Tapalpa H. sp. A low plant with the habit of *Tauschia nudicaulis* and about the same height, and widely spreading like it, with similar leaf sheaths on the upper leaves (inflated and without unwinged petiole), and with the same number (3-4 pairs) of leaflets, but leaflets rather narrowly-ovate, and incised ^{acute,} instead of oval-ovate and minutely crenate and obtuse, about 1/2 inch long. Flowers yellow as in *nudicaulis*. Umbels simple as in *nudicaulis*, without involucre or sometimes with a leaf-like one. Rays hardly 1 cm. long, rather few. Involucels of several linear and blunt bracts as long as the pedicels and green. Fruit broadly oval-ovate, 5 mm. long and 4 mm. wide, acutish, much rounded and with thick, corky and raised ribs. The following is a copy of my field notes on it as

Deweya, Velaea, Arracacia, ~~and~~ Tauschia, and Drudeophytum.

Rose takes up the older Velaea for Deweya in his first revision of the Umbelliferae. In his second revision ^H he restores Deweya and restricts it to the type species ^Darguta. He then creates the genus ^DDrudeophytum for the other species of Deweya, and apparently without any good reason. McBride has merged all the species and genera in Tauschia embracing all the genera named above. That the genera ~~are~~ closely related is evident, but their real relationship in the family is not attempted. A close study of Arracacia Brandegi in the Laguna mountains Lower California this summer shows very clearly that the genus is most related to Osmorrhiza. The absence of mature fruit prevents a final study of the species of Arracacia and Tauschia, but so far as I can go there is a distinct difference between Arracacia and Tauschia in the ribs of the fruit. I am inclined to think that Deweya [Drudeophytum] is congeneric with Tauschia. It may be that some species of Arracacia must be relegated to Tauschia to clear up the genus but I propose to retain Arracacia. This genus as I understand it has thin leaves spinulose on the margins, and corky and raised ribs on the fruit, and the fruit is a ^{single} most cylindrical in cross-section, the commissure being very narrow and with a single ^{single} oil tube in the intervals (2 in all), and without angles at junction of commissure with face. Tauschia has a tendency to have leathery leaves and is without raised and corky ribs. Drudeophytum has no standing. Deweya arguta certainly reminds one of the species of Cymopterus with leathery leaves (Purpureus group).

Arracacia Brandegei var. sylvatica n. var. Typical Brandegei is a plant of the tropical hills of Madgalena island and goes up to the upper limit of that life zone in the Laguna mountains. The plants are coarse and tall, 3 feet or more in height, with hollow and inflated stems and very large and coarse leaves mostly in a rosette at the base, with ovate leaflets cordate to rounded at base and 2-3 inches long, and finely spinulose-serrate, but thin. Flowers described as purple. The variety has stems often as slender as in Osmorrhiza and either erect or decumbent and widely spreading. The basal leaves are ternate and with divisions pinnate into 1-3 pairs of long-acuminate leaflets cuneate at base and inclined to be doubly spinulose-serrate, and 1-3 inches long. The fruit is oval-ovate to linear-elliptic

Gymnopterus purpurascens Jones Cont.

5883

There is a technicality on which this species can stand, rather than on the name proposed by Rose for it. I find that in the place of publication of the supposed type the name was *Gymnopterys montanus* var. *purpurascens* Gray. There therefore never was a var. *purpurascens* published by Gray, so my name is not a synonym and must stand on the description as published.

Oenothera *Berlandieri*

This species seems to me to be a well defined one as it grows. Its nearest relative is *speciosa*. Prof. Munz thinks that *Berlandieri* is only a good variety of *speciosa*. My reasons for keeping up *Berlandieri* is that its root system is strikingly specific. It is like that of the white barked *Oenothera*s of Utah, grows from underground rootstocks which spread as much as 20 feet and which put up single shoots at intervals of a foot or so. The normal flowers are pink, rarely do we see albinos. *Berlandieri* is common from Laredo south and east at least as far as San Antonio. It prefers sandy soil but not sand dunes. *Oenothera speciosa* is scarce in the range of *Berlandieri* which is exclusively Tropical. But it is found occasionally. It is a winter annual, and rarely seems to persist over a longer time. The flowers are normally white, though often tinged with purple, and they usually grow pinkish with age. It is the most common species in the live oaks of the Edwards Plateau, covering many square miles. (Lower Temperate life zone). In one place near Kingsville Texas I saw it growing on a clayey soil and it seemed to be perennial there but with only a single root, as usual. So far as I know this genus has a definite root system for every species. There seems to be no other character that can keep *Berlandieri* and *speciosa* apart. But this to my mind is sufficient.

4478

a According to Bacigalupi Cont Gray. Herb. 95 21 My *Cuphea Wrightii* Gray is
petala ^{Bae.}
var. ~~nematophylla~~ N. Var. [^] Bowie Ariz. Sept. 21 1884 No. 35 is the type. To this
also he refers my No. 24989 from Ramsey Canon Huachuca mts. Ariz. Sept 28 1929
This latter was distributed by me as *C. Palmeri*.

Cereus pecten-aboriginum Watson. So far as I can see this is only a form of ~~macgregoriae~~ ^{Pringlei} ~~Salm Dyck~~. The description of the flowers tallies with *Pringlei* and the pods seem to be a form which is found everywhere with fasciated areoles, and generally without seeds. The *Cereus* near Guadalajara seems to have rather less number of ribs than the typical form. It is hardly probable that there can be two species with the peculiar pods of *Pringlei*. I think ~~on~~ that the ripe pods of *Pringlei* are edible when you get the mass of spines off, but this is hardly worth the effort. *Cereus Thurberi* has the fruit of *gummosus* but only half as large. *Goldingham* ^{noted} that the flowers are nearly always on the south side of the trunks. They are black-purple outside. *Cereus gummosus* varies greatly close to the sea. When within reach of the sea spray the clumps are much lower and the branches shorter and more tangled. At Loreto on the road to the next town north and a few miles from the shore I have seen decumbent trunks 20 feet long rooting at the joints. The Mexicans call it *petaiya agria* because of the grief it causes in trying to get through it. You seldom see any clumps over 6 to 8 feet high. The flowers come out all summer, and fruit is to be found at any time. The flowers more closely resemble the night blooming *Cereus* than any other species. Within they are pure white, but the outside is often bluish or purplish. The flowers are about 5 inches long and when in full bloom the petals spread at tip to 90 degrees. They are open in the morning, probably opening at night.

5401

Cereus Pringlei Watson. This species was described from one of the islands in Guaymas bay where it occurs in vast quantities. It is very common all through the peninsula to the Cape. Goldman in his report does not seem to know any real distinction between *Cereus Calvus*, *Pringlei*, titan or pecten-aboriginum, at any rate he mixes them up beyond redemption. So far as I can find there is but one species. Watson indicates that *Cereus macrogonus* Salm-Dyck may be the same. In that case *macrogonus* antedates *Pringlei* Watson. Watson was not aware of the peculiar character of *C. Pringlei* being the same as in pecten-aboriginum. If the fruit is the same in all the so-called species, as it seems to be there is no escape from combining all the species as *Cereus macrogonus* Salm-Dyck.

There is a kind of fasciation in the Cactaceae, particularly in *Cereus* which results in elongated spines and congested areoles. This is what the Mexicans call Viejo, old man. This is the most pronounced in *C. Schottii*, but it also occurs on ~~*Rigida*~~ *Pringlei* and *Thurberi*. Then for some unknown reason the opposite condition occurs, absence of all spines except in special regions of vigorous growth. This results in the form *calvus* which I think deserves varietal recognition. This is the form of *Pringlei* that abounds at Loreto and the Sierra Giganta. The trees are often 50 feet high and very massive, and with many branches, I have counted 27 on a single tree.

~~*macrogonus Pringlei*~~
Cereus macrogonus var. *calvus* (Wats.) Britt. & Rose. Rose
Pachycereus Br. & Ro

I do not see how there can be any doubt about the identity of *C. Pringlei*. The flowers are characteristic, being a black-purple outside and white within, and short and stout as in *C. giganteus*. Of course there was no reason for the erection of the genus *Carnegiea* except to put that old business pirate Carnegie on the back.