

AMERICAN PLANTS



UNIVERSITY OF
CALIFORNIA

VOLUME THREE 1912

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BOTANY OF SOUTHERN CALIFORNIA

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Charles Russell Orcutt, Editor.

San Diego, California.

TO

OLIVE EDDY ORCUTT

Whose rash promise to read whatever the author might write has been
faithfully kept thru many dreary proofs, this volume is inscribed.

Univ. of
California

AMERICAN PLANTS

VOLUME THREE



CHARLES RUSSELL ORCUTT

SAN DIEGO ❖ CALIFORNIA

1910

U. S. NATIONAL
HERBARIUM

AMERICAN PLANTS: Plate 12

5514?
AG
10
BIOLOGY
LIBRARY
6



ZAUSCHNERIA ARIZONICA Davidson
(Courtesy of the So. Cal. Acad. Sci.)



ASTER GREATAI Parish
(Courtesy of the So. Cal. Acad. Sci.)



NO. 1000
SCROPHULARIA

SCROPHULARIA GLABRATA Davidson

(Courtesy of the So. Cal. Acad. Sci.)



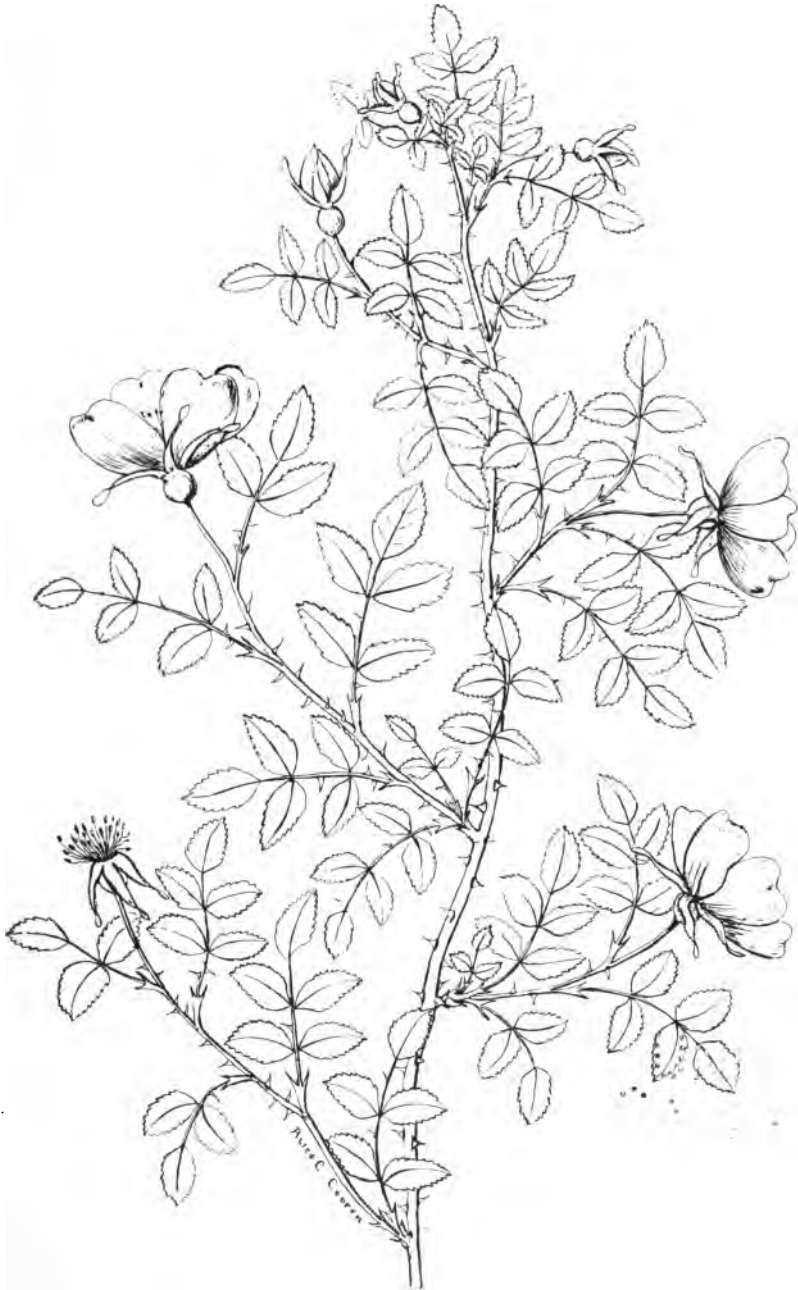
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CALOCHORTUS STRIATUS Parish
(Courtesy of the So. Cal. Acad. Sci.)

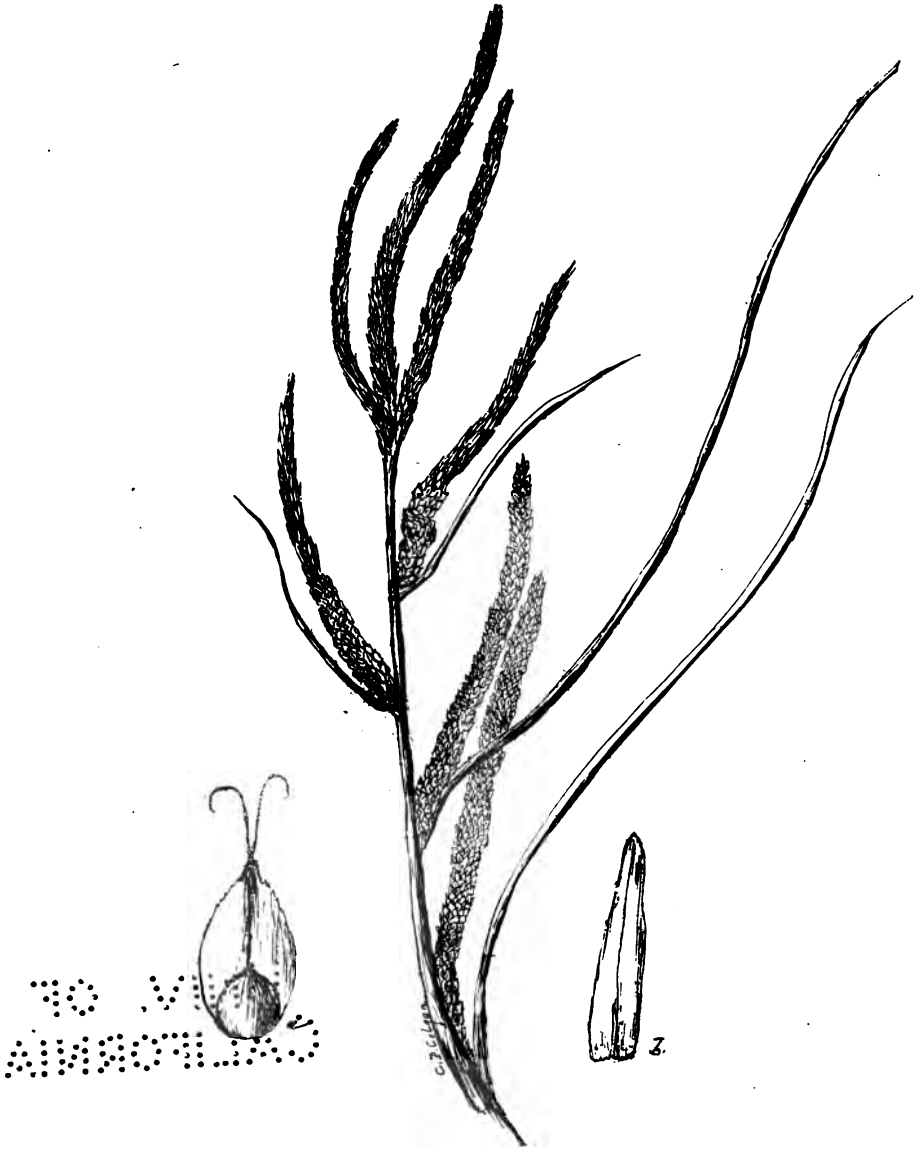


SPHAEROSTIGMA
ERYTHRA

SPHAEROSTIGMA ERYTHRA Davidson
(Courtesy of the So. Cal. Acad. Sci.)



ROSA MOHAVENSIS Parish
(Courtesy of the So. Cal. Acad. Sci.)



CAREX BARBARAE Dewey
(Courtesy of the So. Cal. Acad. Sci.)



CYPERUS LONGISPICATUS Norton

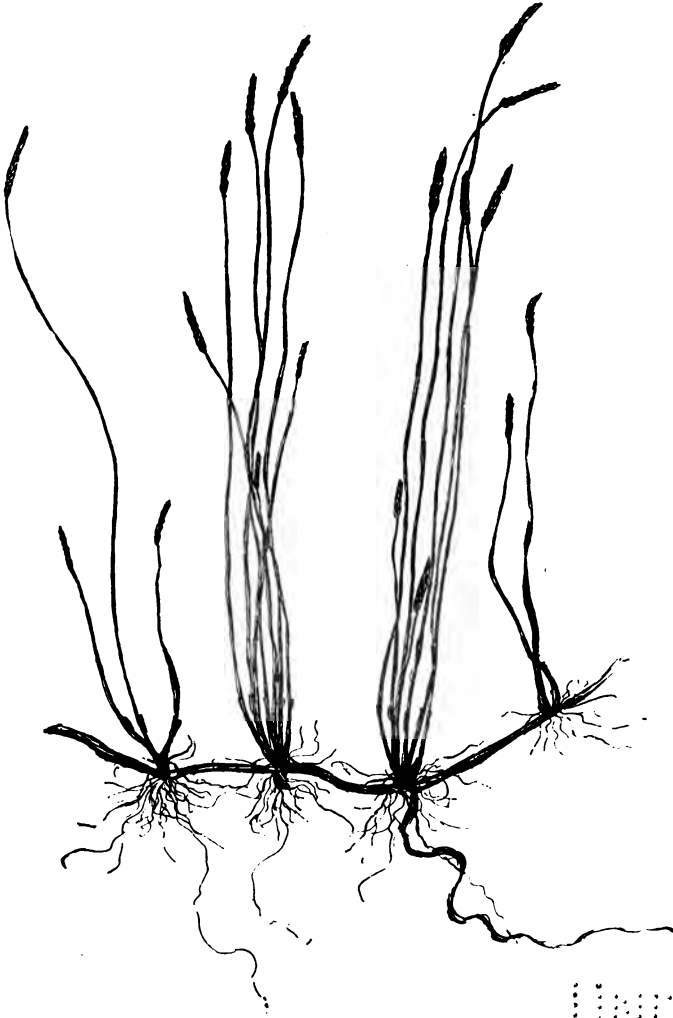
(Courtesy of the So. Cal. Acad. Sci.)



Cham. I. Colpa. del.

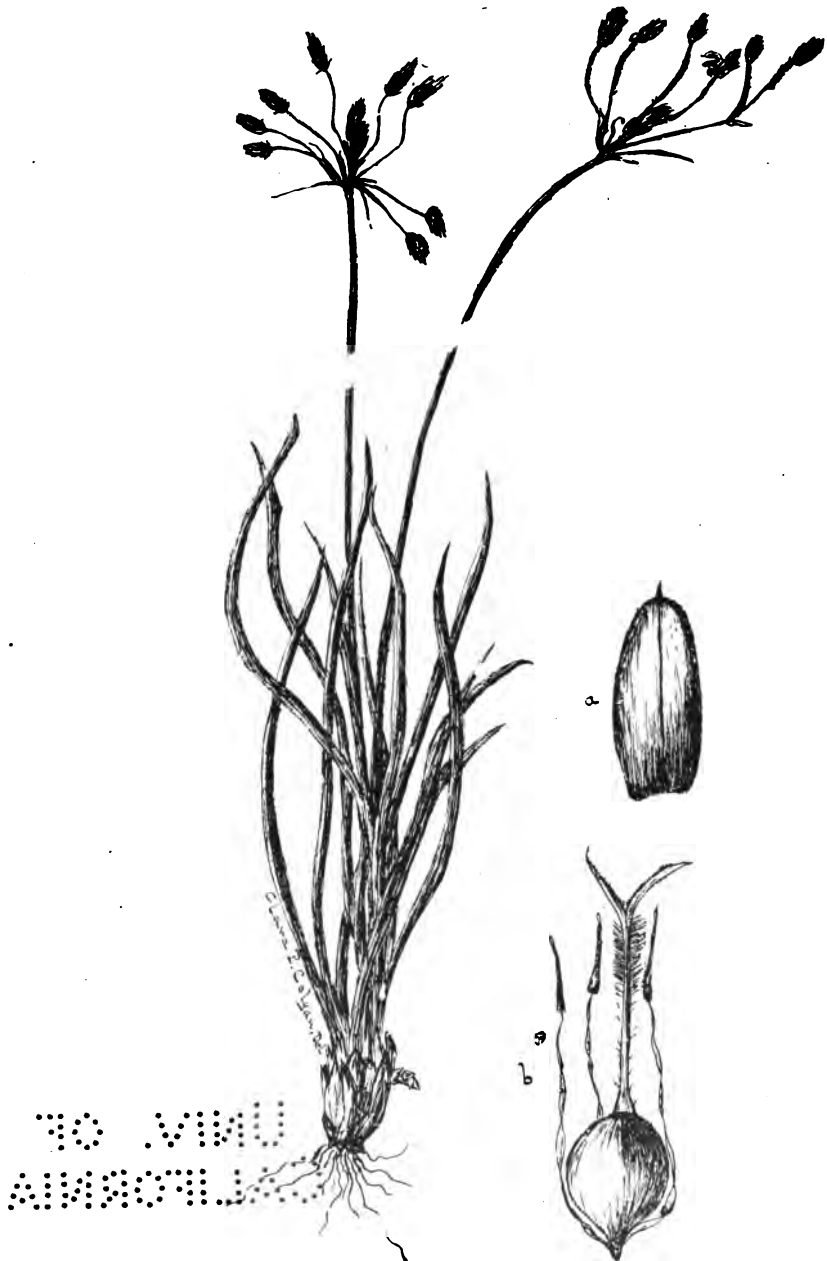
SCHOENUS NIGRICANS

(Courtesy of the So. Cal. Acad. Sci.)



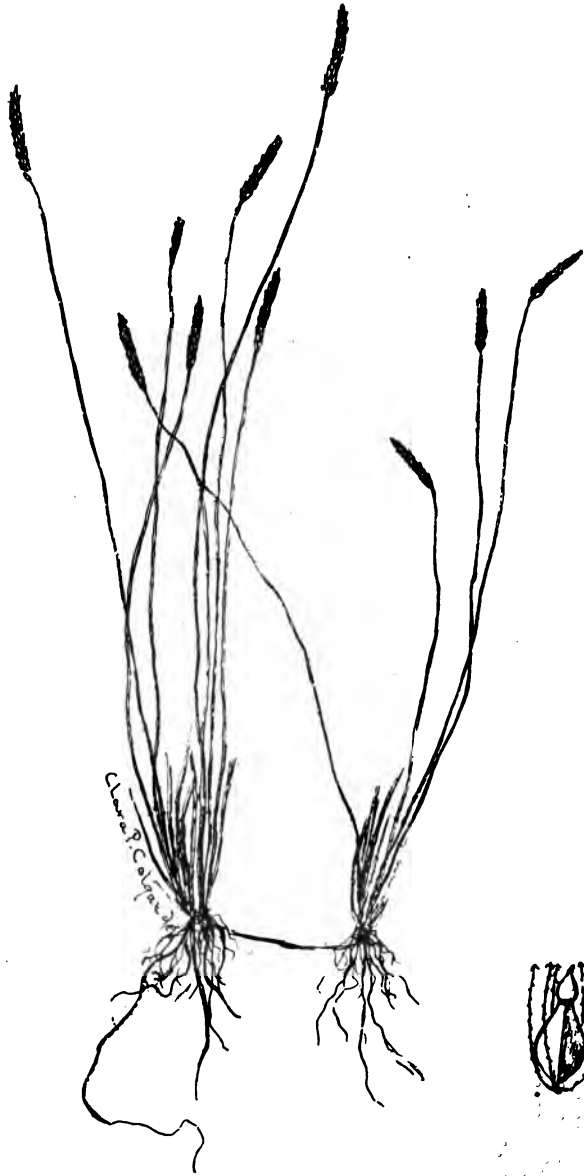
ELEOCHARIS MONTANA
(Courtesy of the So. Cal. Acad. Sci.)

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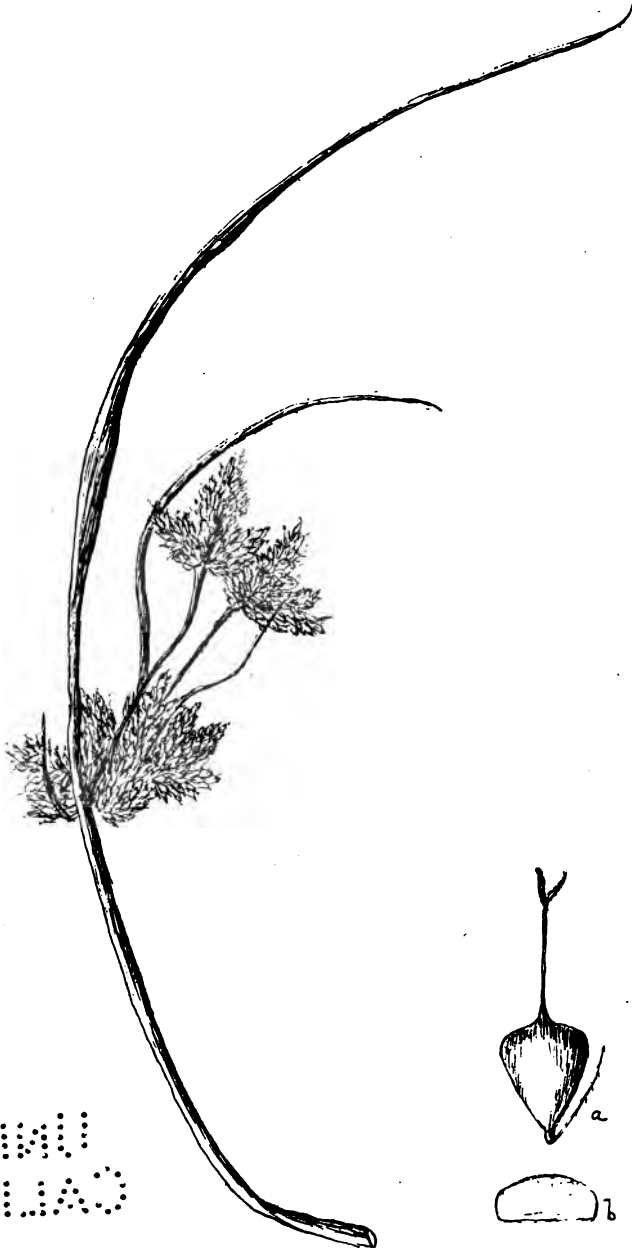
FIMBRISTYLIS THERMALIS

(Courtesy of the So. Cal. Acad. Sci.)



ELEOCHARIS PARISHII

(Courtesy of the So. Cal. Acad. Sci.)



TO THE
ANATOMICAL

SCIRPUS PACIFICUS Britton
(Courtesy of the So. Cal. Acad. Sci.)



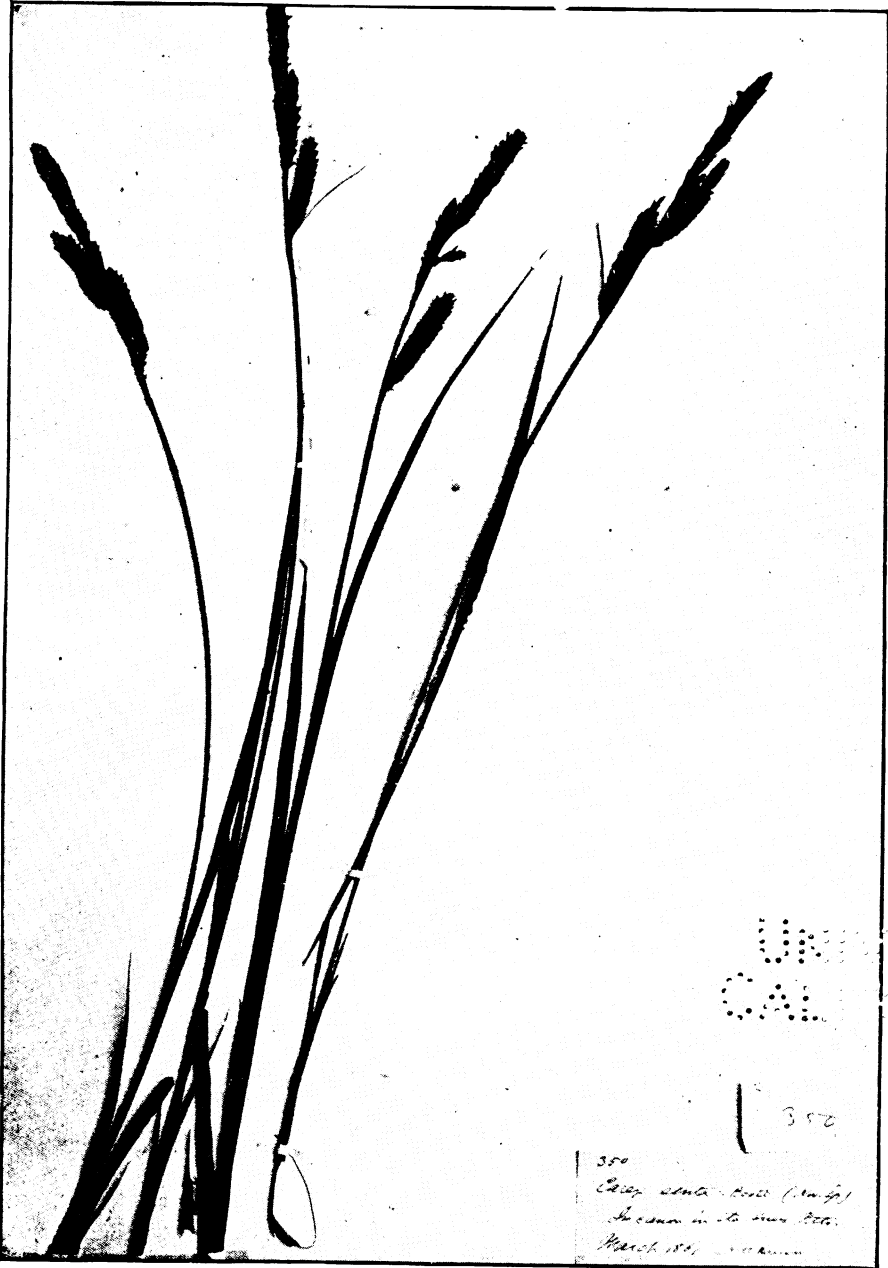
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CALIFORNIA

CAREX QUADRIFIDA CAECA

(Courtesy of the So. Cal. Acad. Sci.)

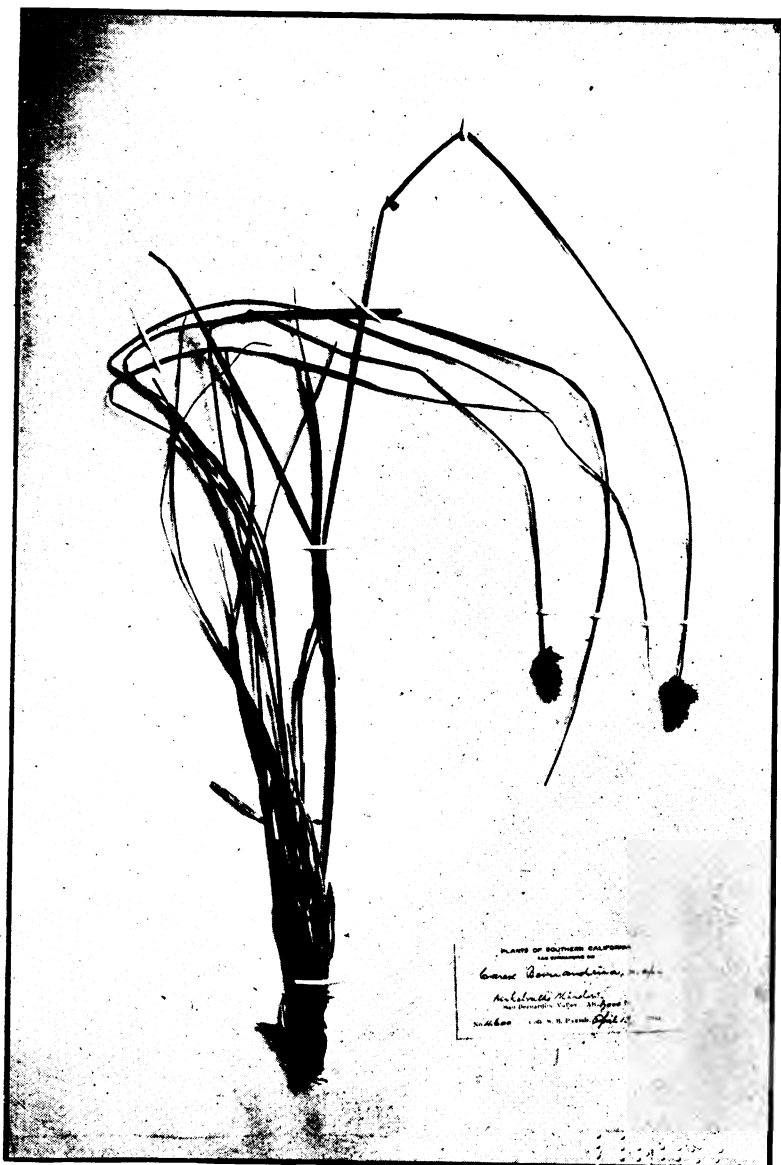


CAREX SPISSA Balley
(Courtesy of the So. Cal. Acad. Sci.)



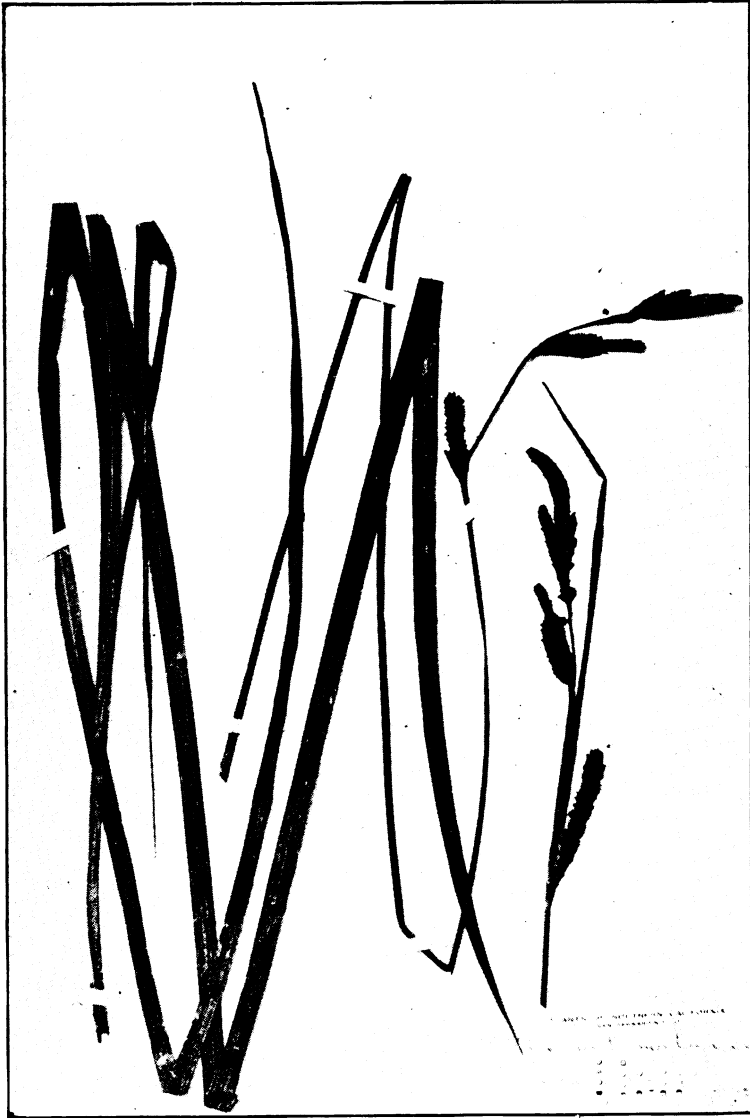
CAREX SENTA Boott

(Courtesy of the So. Cal. Acad. Sci.)

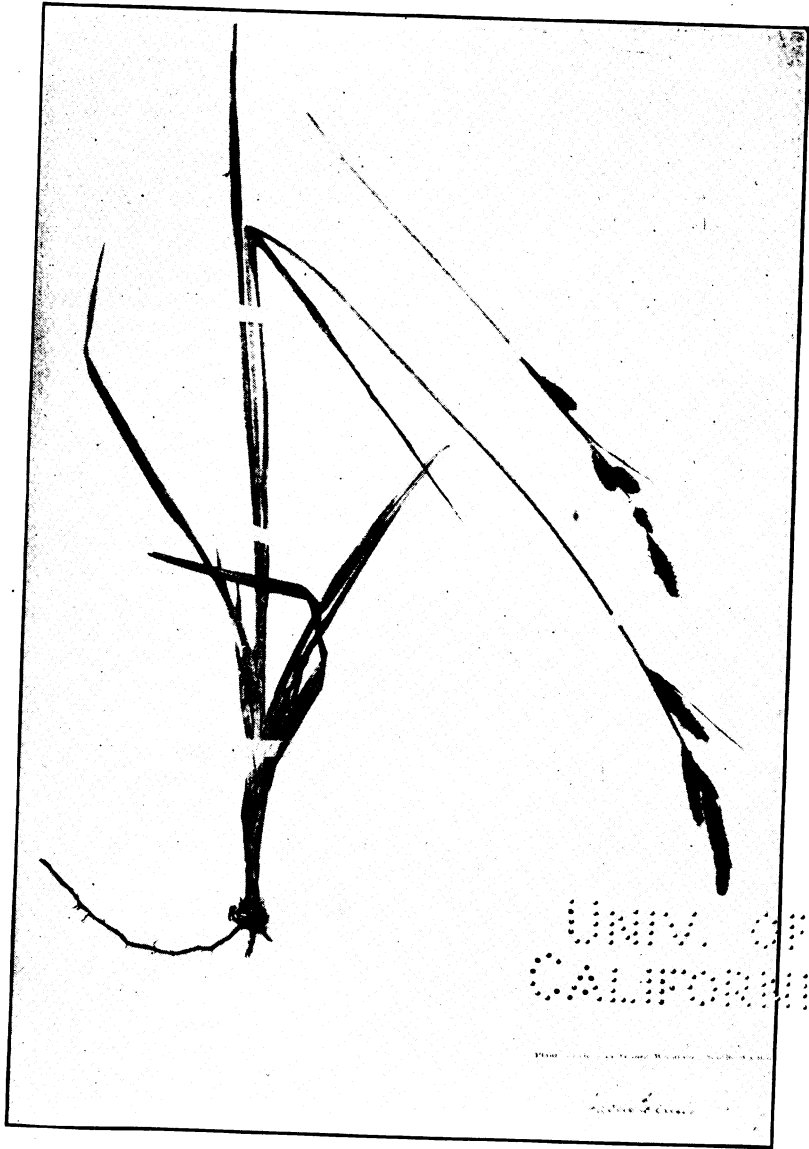


PLANTS OF SOUTHERN CALIFORNIA
AS GATHERED BY
Carex bernardina, n. sp.
Melville H. H. H.
San Bernardino, Calif. 20 June 1911
No. 1000

CAREX BERNARDINA Parish
(Courtesy of the So. Cal. Acad. Sci.)



CAREX AUSTRMONTANA Parish
(Courtesy of the So. Cal. Acad. Sci.)



CAREX JACINTOENSIS Parish
(Courtesy of the So. Cal. Acad. Sci.)



CAREX HASSEI Bailey
(Courtesy of the So. Cal. Acad. Sci.)



CAREX GLOBOSA Boott

(Courtesy of the So. Cal. Acad. Sci.)



70 1111
ANSON

CAREX TRIQUETRA Boott
(Courtesy of the So. Cal. Acad. Sci.)

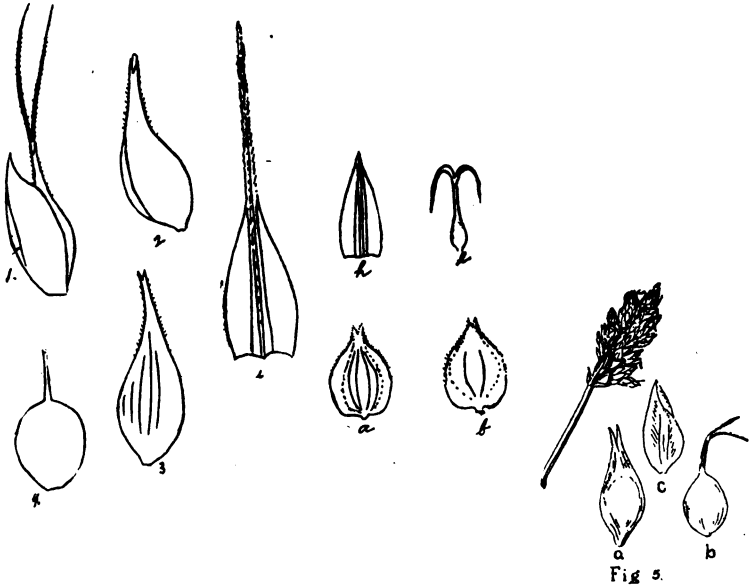


Fig. 7

Fig. 2

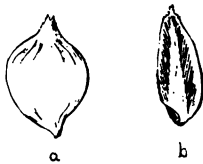


Fig 1



Fig 3



Fig 8



Fig 4.



Fig 6



CAREX SPECIES

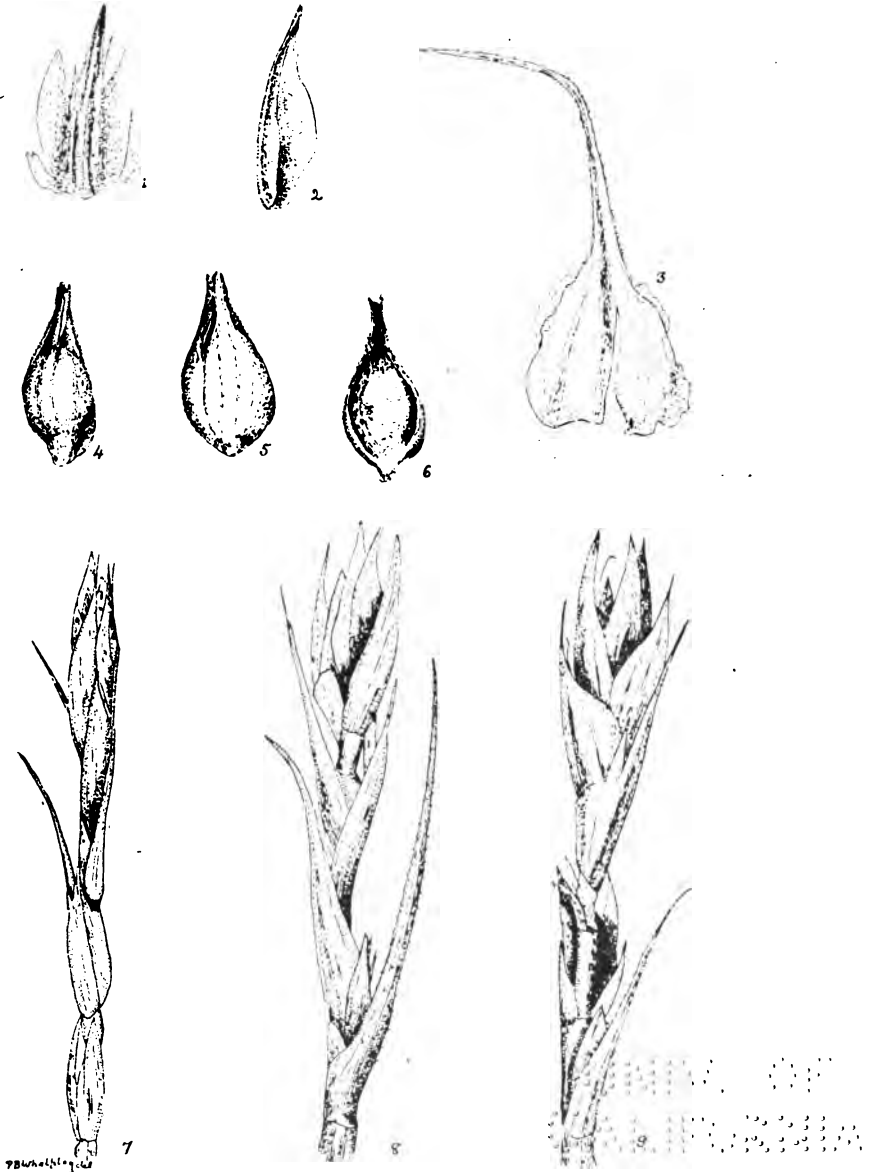
(Courtesy of the So. Cal. Acad. Sci.)

AMERICAN PLANTS: Plate 35

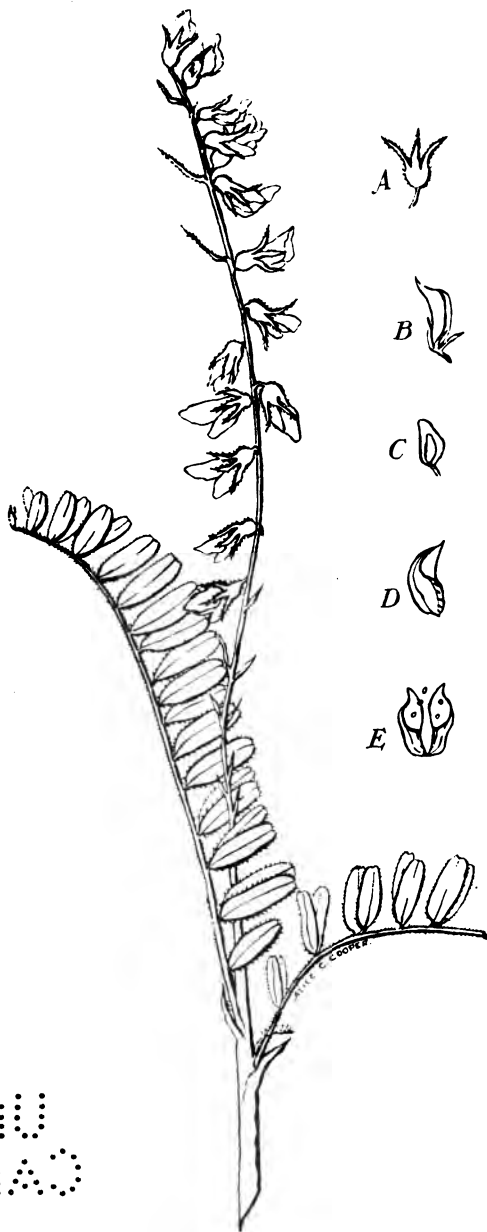


CAREX PRAEGRACILIS W. Boott
(Courtesy of the So. Cal. Acad. Sci.)

AMERICAN PLANTS: Plate 36



CAREX FETA Bailey
(Courtesy of the So. Cal. Acad. Sci.)



NO. 1000
ASTRAGALUS

ASTRAGALUS BRAUNTONII Parish
(Courtesy of the So. Cal. Acad. Sci.)



CYPERUS BROMOIDES Britton
(Courtesy of the So. Cal. Acad. Sci.)



CYPERUS PARISHII Britton
(Courtesy of the So. Cal. Acad. Sci.)

AMERICAN PLANTS

Volume III. Part 3.

Alphabetical Index.

AREES MAGNIFICA

Parish, SCAB 2:155 shows the report of this from Jac to be an error.

Genus **ABRONIA** Jussieu.

ABRONIA CARLETONI Coult et Fish, bot gaz 17:349 (1892). Colo.

ABRONIA FAGONANTHA Helmerl, bot Jahrb 11:87 (1890). Cal.

ABRONIA SUKSDORFII Coult et Fish, bot gaz 17:338 (1892).

Genus **ACALYPHA** Linnaeus.

ACALYPHA ALIENA Br 3:172 (1891). Cal.

ACOMASTYLIS G lfts 1:174.

A: DEPRESSA G lfts 1:174. Wash.

A: GRACILIPES Gifts 1:174 based on *Potentilla* g (Piper, in T cl b xxvii.).

A: ROSSII G lfts 1:174 based on *Geum* R (Seringe, in DC).

A: SERICEA G lfts 1:174 based on *Geum* s.

A: TURBINATA Gifts 1:174 based on *Geum* t (Rydb).

ACAMPTOPAPPUS G 8:634 (1873). = *Aplopappus* Cass fide IK.

A. SHOCKLEYI G 8:208.

A. SPHAROCEPHALUS G 8:634. B 1:304. Da 8.

Arizona; Utah; Mohave; CD. Da 8.

Genus **ACER** Tournefort.

Fls polygamous, clustered or racemose; pet com 5-8 or 0; sta 4-12; lvs simple, palmately lobed.

Genus **ACHILLEA** Linnaeus.

ACHILLEA MILLEFOLIUM Linn.

"Used by the natives in the form of a poultice, for healing indolent ulcers. The fresh plant is also used for staunching blood in recent wounds" (Mrs. Bingham).

A: SUBALPINA Gifts 1:145. Colo.

ADENOSTEGIA Bth. = *Cordylanthus* fide IK.

A: ORCUTTIANA OK. = C: O.

A: ORCUTTIANA P 2:181. = C: O.

A: ORCUTTIANA West, in Engl et Prantl Nat Pfl 4:3 b; 98. = C: O.

Genus **AGAVE** Linnaeus.

Perianth cor-like, funnel-shaped, 6-parted, persistent; sta exserted; anther linear, versatile; sty filiform, exserted; stig 3-angled or 3-lobed; cap coriaceous, 3-lobed, 3-celled, loculicidally 3-valved, many-seeded; sds flat, bk, shining, s^r-tached to central placenta; scape bracted; lvs fleshy, spiny or cartilaginous on margins; fls in simple or panicle spk, bracted.

AGAVE ENGELMANNI Trelease.

AGAVE HORRIDA Lem.

Agave Gilbeyi Hort, Gard Chron (1873) 1306.

AGAVE HUACHUCENSIS Baker.

AGAVE MARGARITAE Brandegee.

Introduced from the islands off Lower California, and one of the handsomest of the smaller growing agaves.

AGAVE MURACANTHA Slm-Dyck.

AGAVE PALMERI Engelm.

Very symmetrical; mountains of southern Arizona and New Mexico.

AGAVE PARRYI Engelm.

AGAVE SCHOTTII Engelm.

AGAVE SCOLYMUS Karw.

AGAVE STRIATA Zucc.

AGAVE TRELEASII Toume.

AGAVE UNIVITTATA Haw.

AGERATUM L, Gen ed 1, 247 (1737).

Receptacle always naked; hds many-fid; inv nearly hemispherical; scales num, imbricated; ak 5-angled; lvs opp, toothed; fls blue on p; pap cup-shaped, truncate or more or less prominently toothed of 5-10 distinct scales.

A. LINEARE Cav, Ic 3:3 t 205. B 1:388 as *Palafoxia linearis*.

AGRIMONIA Tourn ex L, Syst ed 1 (1735).

Per herbs with unequally pinnate lvs, lfy toothed stipules, and sm y fls in lg spiked racemes; fr nodding; cx 5-cleft, tube top-shaped, contracted at throat and armed with hooked bristles; pet 5; sta 5-15 inserted on cx-throat; ak 2, included in the grooved and indurated cx-tube. Agrimony.

A. EUPATORIA L, Sp Pl 448. Er 1:13. B 1:185.

Genus **ALCHEMILLA** Tournefort.

Sm herbs with palmately divided lvs, and minute g'ish fls, in corymbs or clusters; cx 4-6-parted, with as many alt bracts, tube obovate, contracted at throat; pet o; sta 1-4; sty lateral; stig capitate; ak 1-4, included in the persistent cx-tube.

ALLOCARYA Greene, P 1:12. = *Eritrichium* Schrad, fide IK.

Genus **ALLIUM** Linnaeus.

Strong-scented st-less herb with bulbous rts, and a naked scape, ending in an umbel of sm fls, from a 2-3-leaved spathe; fls sometimes changed into bulblets; perianth 6-parted, spreading, persistent; sta 6, inserted on base of perianth; fl subulate, inner ones more or less dilated at base; ova 3-celled; sty filiform; stig entire; cap loculicidally 3-valved; sds anatropous or campylotropous, single or few in each cell, angled, bk, onion.

ALLIUM (Dill) L, Syst ed 1 (1735).

Fls perfect in 2 whorled panicle; sep 3; pet 3, involute in bud, decid; sta 6-12; ova num in a simple whorl; sty sh; ak 1-seeded, 2-3-keeled on back; rts fibrous; lvs mostly oval or cordate, nerved, sh'er than scape; fls w.

A. BEBIVIPES P 4:158.

A. CALIFORNICA Boland Cat 29. B 2: 200 as *Damasonium Californicum*.

A. CALIFORNICUM Michell, in A. DC Mon Pham 3:34.

A: PARVIFLORA Pursh. = *plantago*.

A PLANTAGO L, Sp Pl 342. B 2:200.

Lvs lg-petioled, ovate or oblg, acute, rounded or cordate at base, 3-9-nerved, 2-4' lg; panicle 1-2° lg, large, lax, the

whorled branches and elongated filiform pedicels bracted at base; ak obtuse, 15-20 in a whorl.

Synonymy:—A: *parviflora* et *trivialis* Pursh.

Variety **AQUATICA** Er 1:13.

A: TRIVIALIS Pursh. = *plantago*.

A: VALIDUM P 3:115.

ALOTTIS Raf, Fl Tell 3:21. Gifts 1:94.

A: DIVARICATA Gifts 1:94. Tenn.

A: MESOCHORA Gifts 1:94. Ind; Mich; Ia.

A: OCCIDENTALIS Gifts 1:94 based on *Amarella* o (Gifts 1:53).

A: FOLIOSA Gifts 1:94. Ohio.

ALOPECURUS GENICULATUS L. Ab. SCAB 1:89, not typical. = *californicus*.

Genus **AMARANTUS** Tournefort.

AMARANTHUS DEFLEXUS L. sp pl 222, So Eu. Parish, SCAB 2:81, LA Co.

AMARELLA Gilbert, Fl Lituan 1:36 (1781). = *Gentiana* fide IK. Gifts 1:53.

A: ACUTA Raf, Fl Tell 3:21. = G: *Amarella* fide IK.

A: BREVICULIS Raf lc

A: GRACILIS Raf lc. = G: *Amarella* fide IK.

A: QUADRIFIDA Gilib, Fl Lituan 1:36. = G: *campestris* fide IK.

A: QUINTQUEIDA Gilib lc. = G: *Amarella* fide IK.

A: RUGOSA Raf, Fl Tell 3:21.

A: VULGARIS Raf, lc 20. = G: *campestris* fide IK.

A: AURICULATA Gifts 1:53 (Pall, Fl Ross 2: t 92 f 1).

A: PLEBEIA Gifts 1:53 (Cham in Bunge, Gent).

A: HETEROSEPALA Gifts 1:53 (E. St. Louis ac tr 2:215 t 8).

A: WRIGHTII Gifts 1:53 (G, Syn Fl 2:118).

A: TENUIS Gifts 1:53 (Griseb Gent 250).

A: STRICTIFLORA Gifts 1:53 (Rydb, Fl Mont 309).

A: ANISOSEPALA Gifts 1:53 (P 3:309).

A: WISLIZENI Gifts 1:53 (E. St L ac tr 2:215).

A: ARCTOPHELA Gifts 1:53 (Griseb Gent 250).

A: AMARILLOIDES Gifts 1:53 (Michx Fl 1:175).

A: OCCIDENTALIS Gifts 1:53 (G, man, ed 1, 359).

A: PROFINQUA Gifts 1:53 (Rich App 734).

A: DISTEGIA Gifts 1:53 (P 4:182).

A: MICROCALYX Gifts 1:53 (Lemmon).

A: COPELANDI Greene.

"*Gentiana* Copelandi, Greene, in Baker distr of 1903, n 3849. Erect, sparingly branching, 2-8' hi, floriferous thruout, only sparsely leafy, the internodes 1-2' lg and lvs sm, the lowest cuneate-obovate, obtuse, nerveless, $\frac{1}{2}$ - $\frac{3}{4}$ ' lg, the upper oblg-linear and obtuse to linear and acute: fls large for the genus, $\frac{3}{4}$ ' lg, many on lg naked slender pedicels of 1-2'; cx cleft far below middle into 5 unequal lance-linear erect seg, the longest 4 times the length of turbinate tube: setaceous crown of the p cor conspicuous, the longer setae nearly equalling cor."—Gifts 1:53. On Mt. Eddy, Siskiyou Co, Cal, at 6000', 6 S 1903, E: B:

Copeland. Remarkable for the large and com lg peduncled fls.

A: CALIFORNICA Greene.

"Erect, strict and simple but for some sh axy fig branches, 1-2° hi, rather naked-looking, the internodes in large plants $2\frac{1}{2}$ or 3' lg, terete, tho with frequent traces of sharp angles: lvs ovate-lanceolate on the st, $1\frac{1}{2}$ ' lg, sessile by a subcordate base, acutish, conspicuously 1-nerved, the basel ones smaller, spatulate-obovate, obtuse: fls both few and sm for so large a plant; seldom more than $\frac{1}{2}$ ' lg; cx sh, deeply cleft into oblg lanceolate acute lobes, the sinuses acute: limb of cor of acutish seg $\frac{1}{2}$ as lg as tube; crown of copious setae. Sierra Nevada in Plumas and Butte Cos, Cal, Mrs. Austin."—Gifts 1:54.

A: LEMBERTI Greene.

"Very slender, only 6' hi, com much branched from base, all the branches floriferous thruout: Cauline lvs lanceolate, obtuse or only acutish, $\frac{3}{4}$ ' lg, the internodes not much lg'er, obtusely angled: cor hardly $\frac{1}{2}$ ' lg, cx sh, very deeply cleft into oblg-linear acute lobes, the sinuses acute: cor-seg lg, acute; crown of delicate setae not inconspicuous. Yosemite valley, Cal, J: B: Lember, 1893."—Gifts 1:54.

A: MACOUNII Gifts 1:54. Vancouver Isl.

A: CONFERTA Gifts 1:55. Assiniboia.

A: SCOPULOERUM Gifts 1:55. Colo-Mont.

A: REVOLUTA Gifts 1:55. NM.

A: COBRENSIS Gifts 1:56. NM.

Genus **AMBROSIA** Tournefort.

AMBROSIA BIFINNATIFIDA Greene.

Man 187. = *Franseria* b (Nutt) fide IK.

A: CHAMISSONIS Greene, Man 188. = *Franseria* C (Less) fide IK.

Genus **AMELANCHIER** Medicus.

AMELANCHIER GLABRA Greene, Fl Fr 52. = *alnifolia* fide IK.

A: PALLIDA Greene, Fl Fr 52. = *Alnifolia* fide IK.

A: FRINGLEI Koehne, in *Wissenschaften Progr Falk Realgymnas 25*. = *alnifolia*? fide IK.

A: UTAHENSIS Koehne, lc. = *alnifolia*? fide IK.

Genus **AMSINCKIA** Lehm.

AMSINCKIA CAMPESTRIS Greene.

"Stoutish, 1-2° hi, the sh and rather dense spikes aggregated at summit of st: pubescence strigose-hirsute rather than hispid: lvs all linear-oblancoelate: sep sh hardly twice as lg as the nutlets, ovate-lanceolate, not ferruginous: cor inconspicuous, its throat nearly closed by folds: nutlets very dark brown, irregularly-transverse rugose and more or less echinate-muricate. At Byron Spring, and near Bethany. Mr, Ap."—Greene. Man 263.

ANDROMEDA L Syst ed 1 (1735).

Shrubs with alt lvs and fls in lateral and terminal racemes or clusters, nodding: cx deeply 5-parted, valvate in early bud: cor 5-toothed, sta 10; anthers opening by a terminal pore: cap 5-celled, 5-valved, many-seeded: sds pendulous or spreading.

ANDROMEDA ARBOREA Linnaeus.See *Oxydendrum arboreum*.**A. BRACTEOSA** DC Prodr 7:607. B 1: 453 as *Arctostaphylos tomentosa*.**A. CUPRESSINA** Hook, Fl Bor Am 2:38. B 1:456 as *Cassiope Mertensiana*.**A. MERTENSIANA** Bong, Veg Ins Sitcha 152 t 5. B 1:456 as *Cassiope M.***A. POLIFOLIA** P 3:81.**A. VENULOSA** DC, Prodr 7:607. B 1: 453 as *Arctostaphylos pungens*.**Genus ANISOCOMA** Torrey & Gray.**ANISOCOMA ACAULE** T. & G.

Sierra Co; Mohave! Nevada.

ANOTTITES Gifts 1:97.

"Per herbs of low stature growing singly or in tufts, or forming extensive colonies by means of connected lg horizontal rt-stocks. Lfy sts com freely dichotomous, fls scattered or else in lfy-bracted cymes; the whole habit, inf, and sm w fls those of *Aisine* (or *Stellaria*). Pet bifid, appendages o. Cap subcrustaceous. = ex 5-toothed. Sds sm, num.

A. MENZIESII Gifts 1:98 based on *Silena M* (Hook Fl 1:30 t 33).**A. LATIFOLIA** Gifts 1:98, in woods at Yale, BC.**A. VISCOSA** Gifts 1:98, Wash.**A. ALGINOIDES** Gifts 1:99, Idaho.**A. COSTATA** Gifts 1:100.

"Low, stoutish, rather rigidly ascending, much branched and with sh internodes twice exceeded by the firm light-g ascending foliage; st with hirtellous and gland-tipped hairs intermixed, none retrorse; lvs oval to ovate-elliptic, faintly feather-veined, scabro-puberulent above, almost hirtellous beneath, minutely and closely hispid-ciliolate; inf terminal and contracted, pedicels less than $\frac{1}{2}$ lg; cx-tube 10-ribbed; teeth ovate-deltoid, acute or acuminate; lobes of pet broad, each with a lateral tooth." —Gifts 1:100. Extreme northern Cal, and adjacent Ore.

A. DOREII Gifts 1:101 based on *Silena D* (K 3:44 f 12). Nev.**A. JONESII** Gifts 1:102. Ut, Colo, Wyo.**A. BAKERI** Gifts 1:102, Colo.**A. DISCUBENS** Gifts 1:103, Colo.**A. DIFFUSA** Gifts 1:99. Modoc Co, Cal.

"Low, diffusely branched from base, rather rigid, the plant 5 or 6' hi, 7-10 in breadth, not depressed, internodes sh'er than lvs, the latter broadly oblanceolate to elliptical, acute, spreading, bright g and glab or merely scaberulous above, beneath rough with sh retrorse hairs, these more num on midvein and margin; lower internodes rather densely retrorse-pubescent, all from middle pts of plant upwards as densely glandular-hirtellous only; lfy bracts of copious inf not sm, elliptic-lanceolate, surpassed by filiform pedicels; mature cx turbinate, tube 10-angled; teeth deltoid, acute." —Gifts 1:99.

A. NODOSA Gifts 1:100. Wash.**A. MACILENTA** Gifts 1:100. Ore, Id.**A. HALOPHILA** Gifts 1:100. Ore.**A. ELIPTICA** Gifts 1:103. Colo.**A. VILLOSULA** Gifts 1:104. Wyo.**A. TENEBRIMA** Gifts 1:104. Assiniboia.**A. DEBILIS** Gifts 1:104. Assiniboia.**A. TERREICHAULIS** Gifts 1:105. Alberta.**Genus ANTENNARIA** Gaertn.

Per downy or woolly herbs, with alt entire lvs and corymbose rarely single lvs; has many-rid, dioec, discoid; cor of sterile fls 5-cleft, or pist fls filiform: inv-scales imbricated, scarious, colored: receptacle convex or flat; ak nearly terete; pap a single row of capillary bristles, which in stam fls are thickened at apex.

A. FORMOSA Gifts 1:145. Colo.**A. LALLOQUATEA** Gifts 1:145. NM.**ANTENNARIUM NEVINIANUM** Orcutt,w (1891) 208. = *Nevinianum* G.**A. WATSONI** Vasey & Rose, U S Nat Mu pr 11:533. Cal.**APHYLLON UNIFLORUM**

Variety **OCCIDENTALE** Greene, Man 285:—"scapes few, oft 1 only, slender, 1-5' hi, from an almost subterranean sh crown: cx-lobes subulate, longer than tube: cor $\frac{1}{2}$ - $\frac{3}{4}$ ' lg, deep blue-p. Wooded stony hills. Ap."

APLECTEUM T.

Sep and pet alike, linear-oblig, erect; lip spurless, sh-clawed, 3-lobed and 3-ripped at throat: column straightish, cylindrical: anth lid-like, slightly lateral: pollen-masses 4; rt tuberos, proliferous, very glutinous within, first bearing a large plated and petioled lf, which is persistent thru the winter, and afterwards a 3-sheathed scape, with a raceme of y'ish fls at summit.

A. HYEMALE T. Compend 322; Fl NY 2:270 t 127. B 2:133. *Cymbidium hemale* Willd.

Synonymy.—*Corallorhiza h* of Ell. *Limodorum trifidum* Michx. *Cymbidium h* of Willd.

APOCYNUM**A. ANDREWSII** Gifts 1:57. Conn.**A. CALOPELLUM** Gifts 1:57. Nev.**APOCYNUM CARDIOPHYLLUM** Greene

"Sm and rather slender, only 3 or 10' hi, very erect, branching from near base, st and lower face of lvs very blau, the whole plant glab; lvs sh petioled and all deflexed, mostly about 1' lg, at base subcordate or occasionally only truncate, at apex very obtuse, mucronate, dark-g and pale-veiny above; fls rather many, terminal and from axils of upper lvs, of large size but in sm clusters: sep sh, ovate, acuminate, of about $\frac{1}{2}$ the length of the large, deeply flesh-colored cor, these broad-cylindric, about 1-3d' lg, their at length spreading lobes very sh and obtuse; fr?" —Gifts 1:79. Hackett's Meadows, Tulare Co, Cal.

A. DIVERGENS Gifts 1:56. Conn.**A. MYLIANTHUM** Gifts 1:59. Nev.**A. OCCIDENTALE** Gifts 1:58. Nev.**A. PALUSCE** Greene.

Related to *A. cannabinum*, stouter, 3-4' hi, somewhat dichotomous; lvs of main st 3 or 4' lg, 2-2 $\frac{1}{2}$ ' in breadth, oval, obtuse, only the sm'er and subelliptic rameal ones cuspidate-mucronate, all vivid g and w-venulose above, paler and sparsely pubescent beneath, with sh curved hairs; cymes many-rid and dense, especially the terminal one, which is far surpassed by all the others; branches of the cymes, the pedicels, and oft the cx pubescent; sep lanceolate, acute, of more

than half the length of the sm cor, this y'ish w. oft tinged with flesh-color."—Gifts 1:58. Frequent in the salt marshes of Suisun bay, Cal.

APOCYNUM PUMILUM Greene.
"Com pubescent, stoutish, seldom 1° hi, with spreading branches from the base: lowest lvs subreniform to round-ovate, the others cordate-ovate and oval, com ¾; seldom more than 1' lg: fl solitary in upper axils, and in sh cymose clusters at the ends of the branches: cor subcylindric, 3-4" lg; oblg-lanceolate seg little spreading. Com in the Mt Diablo range and northward. Referred as a var: of A: androsaemifolium hitherto, but wholly distinct in size and form of cor, as well as in other particulars."—Greene, Man 240.

A: TOMENTELLUM Gifts 1:58. Nev.
A: VESTITUM Greene.

"Allied to A: cannabinum, but dwarfish, rather widely branching, and densely soft-pubescent throat: lvs all ovate-lanceolate, 1-2' lg: cymes ample and compound: cor cylindric, about twice the length of the lanceolate-subulate exlobes, its seg a third the length of the tube, little spreading. Hills west of Napa valley, in dry soil. Jl."—Greene, Man 240.

AQUILEGIA PAUCIFLORA Greene.
"Scar-fid and an ally of A: truncata, but subcaulescent, little exceeding 1° hi, only the subligneous and fibrous-coated caudex lf, the nearly naked and very erect pedunculiform st. bearing from 1-5 fls near the summit: lvs of half the height of fl-stalk or less, pale and minutely hirtellous beneath, very dark-g and glab above, the pedicels and spurs glandular-pubescent: fl 1½' lg from tip to tip of spurs and anth; sep oval, obtuse, spreading or reflexed, not equalling spurs; blade of pet distinct but sh; fil puberulent."—Gifts 1:76. Hackett's Meadows, Tulare Co, Cal.

ARABIS VIRGINICA Trelease. Ab, SCAB 1:89, Inglewood, LA Co.
Synonymy: A: Ludoviciana C A Meyer.
Arbutus Menziesii Pursh.

A beautiful tree, sometimes 100 ft high, with w fls and orange-colored fr.

ARGOPYRON PARISHII
Variety **LAEVE** Scrib & Sm. Ab, SCAB 1:89, Ballona creek near Mesmer, LA Co.
ARCTOSTAPHYLUS ARGUTA Zucc.
Variety **DIVERSIFOLIA** Parry.
ARCTOSTAPHYLUS OPPOSITIFOLIA P
ARCTOSTAPHYLUS PARRYANA Lmn.
ARCTOSTAPHYLUS PRINGLEI Parry.

"Young branches, including the petioles and margins of the leaves, copiously ciliate-pubescent, with mixed glandular hairs leaves short, petiolate, glaucous, minutely net-veined, with conspicuous mid-nerve, ovate to broadly subcordate, abruptly short mucronate; inflorescence closely paniculate from a thickened base, intermixed with bud-scales, indicating a late flowering period. racemose branches slender, thickly covered, as well as the bracts, pedicels and calyx, with ciliate and glandular hairs, bracts lanceolate membranous, petaloid, deciduous, bracteoles linear nearly ½ as long, pedicels slender, divaricate, 4-5 times as long as the bracts,

calyx ciliate-glandular, corolla smooth, broadly urceolate; ovary and fr. glandular, hispid, nutlets irregularly coalescent, 5-7-celled."—Parry. Bull. Cal. Acad. Sci. II. 494 (Nov. 2, 1887).

ARTEMISIA

Aromatic herbs or shrubs: lvs alt, pinnately divided; hds sm, in paniced spk or racemes, few or many-fid, discoid; central fls perfect, 5-toothed (sometimes abortive), marginal ones pist, 3-toothed: inv-scales imbricated, mostly with scarious margins: receptacle convex, naked or villous: ak obovoid: pap o.

ASTER
A: OBTUSOPHYLLUS Gifts 1:146. Colo.
A: WOOTONII Gifts 1:146 based on A: hesperius var: Wootonii Greene, T cl b 25:119. Colo, NM.

A: LONCHOPHYLLUS Gifts 1:146. Colo.
A: GRISEUS Gifts 1:147. Colo.
ASTER SCENOMENSIS Greene.

"Slender, decumbent at base, 1-1½° hi, glabrous and glaucescent, only the lf-margins scabrous-ciliolate: lvs mainly radical, nar'ly lanceolate, tapering to a lg petiole, this with a dilated and strongly ciliate basal part: hds rather few in a terminal corymbose panicle; inv ¼! hi, broad-campanulate to broad-obconic, the well imbricated bracts nar'ly oblanceolate, acute; rays p'ish, rather nar, ¼' lg. In open plains of the Sonoma valley, in low subsaline ground. S. O."—Greene, Man 180.

ASTER LENTUS Greene.
"Erect, slender, 4-6° hi, slightly succulent, glab except a slight pubescence under the hds, and a delicately serrulate-scabrous margin to the lvs: lowest lvs 3-5' lg, lanceolate-linear, slightly falcate, those of the fl'g branches straight and half-clasping at the sessile base: panicle loose and ample, oft 3° lg, the branches loosely racemose: hds 4-5" hi; inv oblg; bracts linear, acute, appressed, g-herbaceous and somewhat succulent almost throat: rays many, ¾' lg, light p. Plentiful along tidal streams in western part of the Suisun marsh; the largest and most beautiful of the Californian sp. O-N."—Greene, Man 180.

ASTER GREATAI Parish.
"Sts erect or assurgent, 4-17 dm hi, glab, or above sparsely hirtellous: lvs thin, ovate, oblg-lanceolate, or lanceolate, 6-15 cm lg, the scabrid margins few-toothed, and the base clasping, the uppermost com reduced to linear or linear-lanceolate bracts; hds (5 mm hi by 10 mm wide) in an ample panicle; inv-scales loosely imbricated in a few series, lanceolate, g. minutely ciliate; rays 30-40, light p, nar, acute, 5-10 mm lg; ak hirsuta. Acton, Dr. Hasse, Canyons of the San Gabriel mts, near Pasadena; McClatchie, S 1892; L. A. Greata, S 1900 (type); Mr. and Mrs. Groat, S 1900. A handsome sp of the vulgaris section, and near A: Fremonti G. The recognition of it is due to Mr. Greata's notes and excellent specimens, and it fittingly may connect his name with the flora of which he is so earnest a student."—Parish, SCAB 1:15 f 2 (31 Ja 1902).

ASTRAGALUS BEAUMONTII Parish, S

Cab 2:26 t 1 fd.
ASTRAGALUS PARISHII G. Ab. SCAB
 1:89. Chetsworth Park, LA Co.
AUDIBERTIA MEARNSII Britton, NY
 ac tr 8:71 et T cl b 16:202. Ar.
AUDIBERTIELLA Brig in Herb Boiss
 b 2:73 (Audibertia Bth). 1894.
A: CAPITATA Brig, lc.
A: CLEVELANDII Brig, lc.
A: DORRI Brig, lc.
A: GRANDIFLORA Brig, lc.
A: HUMILIS Brig, lc.
A: INCANA Brig, lc.
A: NIVEA Brig, lc.
A: PALMERI Brig, lc.
A: POLYSTACHYA Brig, lc.
A: STACHYOIDES Brig, lc.
A: VASEYI Brig, lc.

All based on sp of Audibertia of the same names.

BAERIA CLEVELANDI A. Gray.

Genus **BATIS** P. Browne.

BATIS MARITIMA Linn.

Abrams, Fl LA 135, San Pedro and Redondo.

SD! WI.

BATRACHIUM.

B: BAKERI Gifts 1:95. Near Stanford University, Cal.

"Ann in Cal ponds and pools that go dry in summer: st 1' lg or more, nearly naked below, lower nodes remote, marked by a solitary simple lance-linear lf or phyllode; proper foliage rather sparse and sm, the submerged lvs with sh nar-linear widely divergent on almost divaricate seg not collapsing when withdrawn from water, the uppermost (perhaps also submersed) with truly filiform or capillary seg, these also rather firm, hardly collapsing; stipules of the uppermost broad, appressed-pubescent: fls very sm; carpels 12-20 in a depressed-globose hd: sty linear but sh.

B: FEDUNCULARE Gifts 1:95.

"Stout and low ann, spreading beneath the water in slow streams of the Cal coast range: all internodes sh and whole plant copiously lfy with a capillary-dissected foliage quite exceeding internodes and not collapsing; ped very stout, of half the diam of the stout branches that bear them, about 1' lg, falcate-curved in fr; pet of sm fls remarkably lg oblg; carpels sm, glab, sharply keeled and rugulose, tipped with a slender-subulate sty and forming a depressed-globose hd of about 12-20 in each."

—Gifts 1:95. Lake Co, Cal.
BEERMUDIANA Tourn. = *Sisyrinchium* L.

B: BELLA Greene, Man 308.

B: CALIFORNICA Greene, Man 308.

BIDENS COGNATA G. fls 1:149. NM.
BILDERDYKIA Dumortier, Flora Belgica 18 (1827). = *Polygonum* fide IK.
 Tiniaria Small, Gifts 1:23.

B: CILINDRIS Gifts 1:23, based on P: c (Michx Fl 1:241).

B: CONVOLVULUS Dum, lc. = P: C fide IK, Gifts 1:23.

B: CRISTATA Gifts 1:23, based on P: c (E & G, Pl Lindh 51).

B: DUMETORUM Dum, lc. = P: d fide IK. Gifts 1:23.

B: PTEROCARPA Gifts 1:23 based on P: p (Wall, Cat n 1690).

B: SCANDENS Gifts 1:23, based on P: s (L, sp pl 522).

BISTORTA Caesalpio de Plantis 167 (1583). Gifts 1:17.

B: AFFINIS Gifts 1:21 based on *Polygonum* a (Don, Prodr 70). Asia.

B: AMERICANA Raf, Fl Tell 3:12 based on *Polygonum bistortoides* Pursh. Gifts 1:18.

B: AMPLEXICAULIS Gifts 1:21 based on *Polygonum* a (Don, Prodr 70). Asia.

B: BERNADINA Gifts 1:18 based on *Polygonum Bernardinum* P: 5:193.

B: BULBIFERA Gifts 1:21 based on *Polygonum* b (Royle, L sc tr 18:94). Asia.

B: CALOPHYLLA Gifts 1:19. Colo.

B: CEPHALOPHORA Gifts 1:18 based on *Polygonum cephalophorum* P: 5:198.

B: CONFUSA Gifts 1:21 based on *Polygonum* c (Meisn, in Wall Pl as Rar 3:53). Asia.

B: GLASTIFOLIA Gifts 1:18 based on *Polygonum glastifolium* P: 5:199.

B: JENUNA Gifts 1:18 based on *Polygonum jejunum* P: 5:198.

B: LEPTOPHYLLA Gifts 1:20.

B: LILACINA Gifts 1:18. Colo.

B: LINEARIFOLIA Gifts 1:18 based on *Polygonum linearifolium* P: 5:197.

B: LITTOREALIS Gifts 1:19. Ark.

B: MACOUNII Gifts 1:18 based on *Polygonum* M (Small, in Macoun Pl Pribil 570).

B: MAJOR Tragus (1552). Gifts 1:18.

Synonymy.—**B:** *vugaris* Hill, Brit Herbal 488 (1756) et **B:** *officinalis* Raf, Fl Tell 3:12 (1836) fide Gifts 1:18.

B: OPHIOGLOSSA Gifts 1:19. Ark.

B: OKYPHYLLA Gifts 1:21 based on *Polygonum* o (Wall, Cat n 1715). Asia.

B: PEPUSILLA Gifts 1:21 based on *Polygonum* p. (Hook f, Ic Pl 1490). Asia.

B: FLUMOSA Gifts 1:18 based on P: p (Small).

BISTORTA SCABERULA Greene.

"Tall and with large foliage, but rt unknown: basal lvs upright, 1' lg, oblg blade little lg'er than the stoutish petiole, mostly obtuse at base, over 1' wide, thinnish, neither revolute nor crisped, of a vivid g above, the veins there inconspicuous, beneath paler and glaucescent, midvein broad, neither flattened nor striate, veins and veinlets, especially the latter, muriculate-scaberulous: st stoutish, 2' hl, glab, striate, the sheaths 1½' lg, bearing each a sessile acute lf about as lg: spikes barely in fl and ovoid, scarcely ¾' lg."—Gifts 1:77. Hackett's Meadows, Tulare Co, Cal.

B: SCOPULINA Gifts 1:20. Colo.

B: SPHAEROSTACHYA Gifts 1:21 based on *Polygonum* s (Meisn, Monogr 53). Asia.

B: SPECIOSA Gifts 1:21 based on *Polygonum* s (Meisn, Monogr 66). Asia.

B: STENOPHYLLA Gifts 1:21 based on *Polygonum* s (Meisn, Monogr 52). Asia.

B: VACCINIIFOLIA Gifts 1:21 based on *Polygonum* v (Wall, Cat n 1695). Asia.

B: VIVIPARA S. F. Gray (1821). Gifts 1:18.

B: VULCANICA Gifts 1:18 based on

Polygonum vulcanicum P 5:198.
BLANNOSPERMA CALIFORNICUM T. & G.

Upper Sacramento to SD.
BLEPHARIPAPPUS Hook.
B. MEMOROSUS Greene.
 "Rather slender, sparingly branched above, 1-2° hi, hispidulous; foliage and hds much as in *gallardoides*, but rays pale y below the middle, w above it: pap sh, the bristles oft scarcely surpassing their copious brownish villous hairs. A beautiful sp of shaded slopes on Tamalpais, Mt Diablo and the Berkeley hills, My-Je."—Greene, Man 200.
BOISDUVALIA Spach. = *Oenothera* fide IK.
B. BIPARTITA Greene, Er 3:119 (1895). Cal.
B. STRICTA Greene, Fl Fr 225 (1891). CNH 4:106. Trellease, Mo bot gard r 5:117. = *Oe. Torreyi* Watfide IK.

Genus BOUTELOUA Lagasca.

Lag in Var Clenc 2(4):134 (1805).
B. ARISLIDOIDES Griseb, Fl Brit WI 537, in obs. Mex. B 2:291.
B. OLIGOSTACHYA Torr, ex G Man ed 2, 553, et Pac Ry R 4:155. B 2:291. Torr, Pac Ry R 4:366 t 10. B 2:291.
BOUTELOUA POLYSTACHYA Torr.
Chondrosium polystachyum Bth Bot Sulph 56.
 CD (Or 1468; 2064, near Ft Yuma). Texas B. PUMILA Buckl, in Phil ac pr 1862: 93. B 2:291 as *B. polystachya*.
BOUTELOUA RACEMOSA Lag.
 Baja mts (Or 671). N. Y.

BRACHYACTIS.
B. EYBELDA Gifts 1:147, Colo.
BRANDEGEA PARVIFLORA Wat ex Rese, CNH 5:120. Parish, SCAB 2:81.
 Type locality: West canyon, Palm Springs, CD, not "near Sber" fide Parish.
BROMUS CARINATUS
 Variety **CALIFORNICUS** Shear, Ab, SCA b 1:87, fruiting along irrigating ditches, LA Co.

BROMUS PORTERI Nash, T cl b 22:512 (1895).
BURRIELIA MICROGLOSSA H. & A.
 CD: SF.

CALAIS FLURISETA Greene.
CALANDRINIA BREWERI Wat 11:124. Parish, SCAB 8:7. Sber mts.
CALLICARPA AMERICANA Linnaea.

CALLISTERIS Gifts 1:159.
C. AGGREGATA Gifts 1:159 based on *Cantua a* (Pursh, Fl 1:147). Rocky mts.
C. COLLINA Gifts 1:159. Colo.
C. LEUCENTHA Gifts, 1:159. Colo.
C. ATTENUATA Gifts 1:160. Colo.
C. FORMOSISSIMA Gifts 1:160. NM.
C. FLAVIDA Gifts 1:160. Colo.
C. TEXANA Gifts 1:160. Tex.
C. ARIZONICA Gifts 1:160. Ar.
C. BRIDGESII Gifts 1:160 based on *Gilea aggregata* Bridgesii G. Cal.
C. FULCHELLA Gifts 1:160 based on *Gilia pulchella* Dougl. Ore; Wash; Id.

Genus CALLITRICHE Linnaeus.

The only genus in Callitrichaceae.
CALOCHORTUS COLLINUS Lemmon, Er 3:49. Cal.
C. MADRENSIS Wat 23:283. Mex.
CALOCHORTUS STRIATUS Parish,

SCAB 1:101 t 8, 103, 104, 1:122 fd.

Genus CALYCOSERIS A. Gray.

CALYCOSERIS PARRYI A. Gray.
 CD: Nevada; Utah.
CARDAMINE OLIGOSPERMA Nutt, T & G, Fl 1:85.
 Parish, SCAB 8:7, Monica mts.
CASTANOPSIS CHERSOPHYLLA Parish, Z 4:346, non A. DC. Ab, SCAB 1:89 as *sempervirens*.
CASTANOPSIS SEMPERVIRENS Dudley, N A Fauna No 16 (1899), based on *Castanea S*, K 1:71. Ab, SCAB 1:83, San Antonio mts, LA Co, above 8000°.
CASTILLEJA CALIFORNICA Ab, SCA b 1:68 fd.

Type locality: Big Tejunja Wash, LA Co.

CASTILLEJA CULBERTSONII Greene.
 "Slender subalpine per, sts not tufted, each from its own very slender horizontal rstock, erect, 4-6° hi, both st and sm narly lanceolate acuminate entire lvs minutely and sparingly hirtellous: spike sh but fls rather large; bracts trifid, the lowest g and leaf-like, the others r-p; cx villous, unequally cleft, teeth sh'er than tube; galea of cor prominent, but sh'er than tube."—Gifts 1:78. Crabtree Meadow, Tulare Co, Cal, 11000°, near Mt Whitney.

CASTILLEJA MARTINI Ab, SCA b 1:69 fd.

Type locality: Wilson's Peak, LA Co.
CASTILLEJA TRISECTA Greene.

"Sts tufted on a tap-rt, erect, simple, 1° hi, loseiy lfy, the whole herbage sparsely pubescent and somewhat clammy, light-g; lvs about 1½° lg, of a broadly linear or quadrate undivided portion, terminated by 2 narly linear unequal seg, the middle one largest; spike lax, its trifid bracts scar: cx deeply cleft on the upper side, the 4 sh subequal lobes scar; cor with only the lg straight ascending galea exerted."—Gifts 1:78. Hackett's Meadows, Tulare Co, Cal. 8600°.

CEANOTHEUS.

C. PUBERULUS Greene.
 "Nearest C: *Nevadensis*, the lvs as large, more oval and obtuse, finely and oft even silky pubescent on both faces, most so on veins beneath, these far less prominent than in C: *Nevadensis* K."—Gifts 1:66. Sber mts.

C. MYRIANTHEUS Gifts 1:67. Ar.
C. MOGULLONICUS Gifts 1:67. NM.
C. FEDUNCULARIS Gifts 1:67. Ore.
C. ANDERSONI Parry, Dav ac pr 5:172. Greene, Fl Fr 81. S Cruz mts, Cal. Gifts 1:66 as *integerrimus* H & A (not of Am authors).

C. INTEGERRIMUS H & A, bot Beech 329 (1838-40). Gifts 1:66 excludes Am authors and cites C: *Andersoni* as a synonym, referring C: J of Am authors to C: *nevadensis* K, and C: *macrothyrsus*.

"Lvs thin, narly oblq or oblq-elliptic, very obtuse, delicately pinnate-veined, glab."—Gifts 1:66.
CEANOTHEUS JEPSONI Greene.
 "Low bush, rigidly erect and intricately branching, 2-4° hi, the branches and branchlets sh and very stout, di-

variccate, puberulent when young: lvs $\frac{3}{4}$ ' lg, hard-coriaceous, oblg, obtuse, or even truncate at both ends, the whole margin coarsely and saliently spinose-toothed: fl in sh-peduncled simple clusters at the ends of all the branchlets, large, dark blue, varying to w: fr large, prominently 3-horned. Open hills in Marin Co. near San Geronimo, and northward. Confused with *C.*: divergens by Parry."
—Greene, Man 78 (1894).

C: MACROTHYRSUS Greene.

"*C.*: thyrsiflorus, var: macrothyrsus, T. Wilkes exp 263; *C.*: integerrimus of recent writers and collectors, not Hook & Arn. Growing parts silvery-silky, the mature foliage thin, pubescent on both faces: lvs ovate to oval and oblg-oval, acute or obtusish, com subcordate, notably velvety, not emphatically triple-veined, the largest 3' lg, com entire but those on vigorous shoots lightly serrate, the scattered pubescence marking both faces, but veins beneath villous: thyrsus 6-8' lg, sh-ped, ped with but few and scarcely reduced lvs."—Gfts 1:68. Umpqua valley, Ore. Chico, Cal.

C: NEVADENSIS K 2:152.

"Lvs firm, oval, obtuse or acutish, obtuse at base but not subcordate, 1-1 $\frac{1}{2}$ ' lg, veins beneath w and prominent, the lowest lateral pair lg and nearly parallel with midvein, both faces appearing glab; a very fine pubescence on petioles and along veins beneath."—Gfts 1:66. "Chiefly of the Sierra Nevada, Cal, and at middle elevations;"***
Cur 1:133 et B 1:102 as integerrimus.

CEREOCARPUS Bth, Voy Sulph 28 t 16 (1844).

C. INVOLUTUS P 1:290, San Bartolome bay, Baja.

CEREOCARPUS LEDIFOLIUS Nutt. Ab, SCAB 1:89, Mt San Antonio, LA Co, 9000°.

CHAETALIA.

C: ALSOPHILA Gifts 1:158. NM.

C: CONFINIS Gifts 1:158. Ar.

CHEIRANTHUS SUPPITESCENS Ab, SCAB 2:41 fd.

CELOSIS ELEGANS HBK, Nov Gen et sp 1:166. Parish, SCAB 8:7, Riverside.

CERYTOSIS.

C: ASPRELLA Gifts 1:150. Colo.

C: COMPACTA Gifts 1:61. Colo.

CERYTHAMNUS.

C: ASPER Greene.

"Resembling *C.*: vulcanicus, the stouter, the wooliness of sts more loose and w; lvs as nar but firmer, rather strongly glandular-scabrous under a lens, this indument extending to the outer bracts of inv: hds subsessile, forming a more strictly thyrsoid infl, most 10 or 12-fld; bracts oblg-linear, slender-pointed, none with woolly margin: cor and ak as in *C.*: vulcanicus."—Gfts 1:80. Inyo Co, Cal. Cov as Bigelovia Bolandri.

C: VULCANICUS Greene.

"Shrub allied to *C.*: Parryi of Colo, more slender, lvs very narly linear and very acute, indistinctly 3-nerved thru-out, glab, or when young obscurely glandular and viscid; hds forming a nar thyrsiform panicle, hd a little more than $\frac{1}{2}$ ' hl, nar, mostly 5-fld, its bracts about 10, thin, lanceolate-subulate, slen-

der pointed, outermost more herbaceous, and woolly on margin at base: cor rather deeply cleft, teeth always erect: pap copious, ak silky-villous."—Gfts 1:80. On Volcano creek, above Volcano Falls, at 8000°, Tulare Co, Cal.

Genus **CICUTA** Linnaeus.

CICUTA BOLANDERI S. Wats.

Wat 11:139. B 1:261. Da 7. C & R Rev Umb 130. P 2:6. A 1:276d.

Greene, Pitt 2:6. Suisun Bay, Cal. "Doubtless this is the largest of the Cicutas, seldom less than 6' hl, oft nearly 10; the st not rarely 2' thick below."

C. BULBIFERA L, sp pl 255. P 2:9, Eastern and middle states of Am. to west of the Great Lakes.

C. CALIFORNICA G 7:344. P 1:271, 272, cites Helosciadium? Californicum H & A as a synonym. B 1:261. P 2:10.

CICUTA MACULATA Linn.

L, sp pl 256. A 1:267. B 1:260. P 1:271. 2:9, Eastern and middle states of Am. to west of Great Lakes.

SBer (Parish 975). Through the U. S.

CICUTA OCCIDENTALIS Greene.

L, syst ed (1735). A 1:267d. P 1:271. 2:1-11.

Abrams, Fl LA 265. Frequent in marshes toward the coast.

CICCAEA Tourn ex L, syst ed 1 (1735).

C. ALPINA var. intermedia Wat. Bot King 113 = Pacifica fide B 1:234.

C. PACIFICA Aschers & Magnus in bot zeit. 29:392 S. Ber foothills (Parish 1158). B 1:234.

CITRABEKILUM Mill Gard Dict ed 6 1:6 (1752).

C. FLABELLIFORME Wat. Br 2:197, Comonadu, Baja.

CINNA L, sp pl 5 (1753).

C. ARUNDINACEA L, sp pl 5. B 2:276.

C. LATIFOLIA Griseb, Ledel Fl Ross 4:435. B 2:276 as arundinacea var. pendula.

C. MACROURA Kunth Rev Gram 1:67. B 2:276 = Epicampes m fide IK.

C. PENDULA Trin in Mem Ac Petersb sr 6, 6(2):280. B 2:276 as arundinacea var. pendula.

C. PURSHII Kunth, Rev Gram 1:67. B 2:279 as Calamagrostis Canadensis.

CINTRACTIA.

C. KRUGIANA M 1:20.

CIRSIIUM (Tourn) Adams Fam 2:116 (1763) = Cnicus fide IK.

C. ACAULE Weber ex Wigg, Prim Fl Hols 59. B 1:418 as Cnicus occidentalis.

C. BREVIFOLIUM Nutt. Am. Phil sc tr, ns, 7:421. B 1:418 as Cnicus undulatus.

C. CALIFORNICUM G Pac Ry R 4:112. B 1:420 as Cnicus C. A 1:198 as Carduus C.

C. COULTERI Harv & Gray, pl Fendl 110=Cnicus occidentalis fide.

C. DOUGLASII D C 6:643=Cnicus undulatus fide B 1:418.

C. EDULE Nutt, Am Phil sc tr, ns 7:420 =Cnicus edulis fide B 1:420.

C. OCHROCENTRUM G Pl Fendl 110=Cnicus undulatus var. ochrocentrus fide B 1:419.

C. REMOTIFOLIUM DC 5:655=Cnicus fide Ik. B 1:420 as Cnicus carlinoides var. Americanus G.

C. SCARIOSUM Nutt, lc, 420=Cnicus s, fide B 1:421.
C. STENOLEPIDUM Nutt, lc, 419=Cnicus remotifolius fide B 1:420.
C. UNDULATUM Spreng syst 3:374=Cnicus u, fide B 1:418.

GENUS CLADIUM P. Br. Per herbs with stout rtstocks, stout tall leafy sts and elongated channeled lvs: spkts sm com clustered in terminal corymbs, panicles or cymes: Scales mostly about 5, closely imbricated, brown, the lower empty, the terminal one fertile and 1-2 below it stem: Perianth o: Sta 2-3: Sty 2-3-cleft, somewhat dilated at the base, continuous with the ova: ak ovate or oblong-ovate, smooth, acute with the obscure persistent base of the sty.
 P Br. Hist Jamaica 114 (1756).

CLADIUM MARISCUS R Br Prod 236. B 2:224.
 Variety **CALIFORNICUM** S. Watson. B 2:224. Da 18.

Sts in rather dense tussocks, stout, 18-24 dm hi; lvs =ing the st; panicle diffuse, drooping; spikelets in clusters of 2-3, narrowly oblong, 4-6 mm lg; lower scales ovate, acutish or acute, upper lanceolate, acute or acuminate, light brown; ak brown, ovate, attenuate above.

Watson, Bot Cal 2:224. "Swamp near San Gabriel (Brewer) and in southern Nevada (Wheeler)."

Abrams, Fl LA 73, questions the Gabriel locality.

C. EFFUSUM Wat. Cat. Pl Wheeler 18. B 2:224 as mariscus var. Californicum.
CLADOTHAMNUS Bong. Veg Sitcha 37 t 1 (1833).

C. PYROLIFLORUS Bong. lc P 3:75.

Genus **CLADOTHRIX** Nuttall.

D C 13 (2):359 (1849).
C. CRYPTANTHA Wat 26 :125. Parish Z 5:113, CD (Parry n. 274, 1881—not from "Colton").

C. LANUGINOSA Nutt lc. Ark. Tex. CD; B 2:43.

C. OBLONGIFOLIA Wat 17:376. S Ber Co (Parish).

C. SUPPEDITICOSA B 2:43.

CLARKIA Pursh Fl 1:t11 (1814)

Erect ann with brittle sts and alt lvs: fls showy, in terminal racemes (nodding in the bud): ex-tube above the ova obconical or much prolonged and almost filiform, its lobes reflexed in fl or remaining united and turned to one side: pet 4, p or rose-color, with claws, the limb entire or lobed: sta typically 8, those opp the pet oft sterile and rudimentary, or 0: ova 4-celled; sty elongated, stlg with 4 broad lobes: cap linear, or alternate above, straight or somewhat curved, coriaceous, somewhat 4-angled, 4-valved; sds num, angled or margined.

C. BREWERI P 1:141 based on Eucharidium; Brewer G.

C. CONCINNA P 1:140 based on Eucharidium cinnamum. & M. Par 242 t.

C. EISENIANA k 7:94. B 2:448 et Cur 1:137 as Elegans.

CLARKIA ELEGANS Dougl.
 Dougl, bot reg t 1575. Greene, Cal, ac

b 2:398 Cruz. Br 1:210 Rose. Cov 4:103. Ab 266. B 1:232. 2:448. Da 6. Par 234.

Glab or somewhat puberulent, glau, 3-15 dm hi, simple or somewhat branched, rather stout and rigid; lvs broadly ovate to linear, repand-dentate; pet entire, the rhomboidal limb about equaling the linear claw; fl all perfect, with a densely hairy scale on each side at base; cap 1-2 cm lg, stout, sessile, 4-angled, somewhat curved, oft hairy.

C. GAUROIDES Dougl, ex Sweet Brit Fl Gard sr 2, t 379 = rhomboidea fide B 1:232.

C. PULCHELLA Pursh Fl 1:t11. B 1:231.
CLARKIA RHOMBOIDES Dougl.

Dougl, Hook Fl 1:214. Jepson, Er 1:12. B 1:232. Da 6; Z 2:16. Ab 266. Ha 96. Baja mts! Wash.

C. SAXEANA P 1:140.

C. XANTHANA G. Boston sc nat hist pr 7:145. B 1:232. S Ber (Parish 952), mts.

Genus **CLAYTONIA** Linnaeus.

Gronov ex L Gen ed 1, 339 (1737).

C. ALSINOIDES Sims bot mag t 1309=Sibirica fide B 1:76.

C. AMBIGUA Wat 17:365. A 1:158.

C. AQUATICA Nutt in T & G Fl 1:201=Chamissonis fide B 1:76.

C. AROICA Adam in Mem sc nat Mosc 5:94 (1817). B 1:77.

C. ASSARIFOLIA Bong Veg Sitcha 136. B 1:76 as Sibirica.

C. BULSIFERA G 12:54. B 2:436.

C. CAROLINIANA Mich. Fl 1:160.

C. CALIFORNICA Herb Petrop ex Loud Herb Brit suppl 2:621.

CLAYTONIA CHAMISSONIS Esch.
 Cham in Linnaea 6:562. B 1:76. B 2:161.

C. CUBENSIS Bonp in Mus Par ann 7:82 t 26. B 1:75 as perfoliata.

C. DICHOTOMA Nutt, T & G Fl 1:202. B 1:76. 2:436.

C. DIFFUSA Nutt, lc. B 1:76. 2:436.

CLAYTONIA EXIGUA T. & G.

T & G Fl 1:200. B 1:76. 2:435. Z 2:161.

C. FILICAULIS Dougl. Hook Fl 1:224 t 72. B 1:76 as parvifolia.

C. FLAGELLARIS Bong. Veg Sitcha 136. B 1:76 as Chamissonis.

C. GYPSOPHILOIDES F & M, Ind Sem Hart Petrop 2:33. B 1:75 as perfoliata.

C. LANCEOLATA Pursh Fl 1:175 t 3. B 1:77 as chiefly Caroliniana var sessiliflora T.

C. LINEARIS Dougl. Hook Fl 1:224 t 71. B 1:76.

C. MEGAREHIZA Parry, ex Wat, Bib Index 1:118. B 1:77, Rocky mts.

C. NEVADENSIS Wat. B 1:77. 2:436.

CLAYTONIA PARVIFLORA Dougl.
 Dougl. Hook Fl 1:225 t 73. B 1:75 as perfoliata var parviflora.

C. PARVIFLORA Moc ex DC 3:361. B 7:76. Z 2:161.

CLAYTONIA PERFOLIATA Don.
 Don. bot mag t 1336. Greene, Cal ac b

2:392 Cruz. Br 1:208. Rosa, Cruz. B 1:75. Da 3. Z 2:120. 161. A 1:164 as Montia p.

C. SARBMENTOSA C A Meyer in Nou mem sc nat Mosc 7:137 t 3. B 1:77.

CLAYTONIA SPATHULATA Dougl.
 Hook Fl 1:226 t 74. B 1:75 as perfoliata.

Da 3. A 1:164 as Montia Spathulata.

C. SIBERICA L, sp pl 1:204. Asia. B 1:76.

C. STOLONIFERA C A Meyer lc 139. B 1:76 as Chamissonis.
C. TENUIFOLIA T & G Fl 1:201. B 1:76 as perfoliata var. exiqua.
C. TRIHYLLA Wat 10:345. B 1:77. 2:436. Z 2:161.
C. UMBELLATA Wat bot King 43 t 6. B 1:77.
C. UNALASCENSIS Rtsch. Hort Gorenk ed 2. 62. B 1:76 as Sibirica.
CLEISTOYUCCA.
C. ARBORESCENS based on *Yucca arborescens*. Par 48.
CLEMATIS Dill. ex L, Gen ed 1, 163 (1737). A 1:147d.
C. BAKERI P 4:147.
C. DACTYOTA P 5:133.
C. DOUGLASII Hook Fl 1:1 t 1. Ckl W 5:5. P 4:147.
C. BOSEA. Ckl W 5:5.
C. DRUMMONDII T & G Fl 1:9. B 1:3.
C. HIRSUTISSIMA P 4:147.
C. LASIANTELA Nutt. ex T & G Fl 1:9. Da 1. Par 92. A 1:147d. B 1:3. Ab 154.
C. LIGUSTICIFOLIA Nutt. T & G Fl 1:9. Greene, Cal ac b 2:383 Cruz. Br 1:206 Rosa. Cov 4:55. Par 93. B 1:3. Da 1. Ab 154. A 1:147d.
Variety CALIFORNICA Wat. A 1:147d.
C. PAUCIFLORA Nutt. T & G Fl 1:657. B 1:3. A 1:147d. P 1:200 Cedros.
C. SCOTTII P 4:147.
C. VERTICILLARIS DC Syst 1:66. B 1:3. Z 2:226.
CLEOME L, Syst ed 1 (1735). A 1:161d.
C. AUREA Nutt. T & G Fl 1:122. =lutea fide B 1:51. Br. Colo 233.
C. AUREA Hook. Parry. Wyo 3.
C. INTEGRIFOLIA Nutt. T & G Fl 1:122. A 1:161.
C. CINORNATA P 4:16, 212 as *Peritoma inornatum*.
C. ISOMERIS P 1:200, based on *Isomeris arborea*.
C. LUTEA Hook Fl 1:70 t 25. B 1:51. Z 2:236. Ab 81. A 1:125d. P 4:210 as *Peritoma luteum*.
C. PINNATA Pursh, Fl 2:739. A 1:116 as *Stanleya pinnata*.
C. PLATYCARPA T. US Exp Exp 2: 235 t 2. B 1:51. 2:433. P 4:211 as *Celome* p.
C. SOWORAE G Pl Wright 16. Br. Colo. 227. 233. B 1:51.
C. SPARSIFOLIA Wat bot King 32 t 5. B 1:51. P 4:212 as *Carsonia* s.
C. SERRULATA Pursh Fl 2:441. P 4:210 as *Peritoma Serrulatum*.
C. TENUIFOLIA Le Conte T & G Fl 1:123. P 4:212 as *Aldenella* t.
CLEOMBELLA DC 1:237 (1824). A 1:161d.
C. BREVIPES Wat. 17:365. A 1:162.
C. LONGIFES T. Hook Kew J 2:255. B 1:52.
C. COULTERI Harv ex G Pl Wright 1:12. 129. = *Wislizenia refracta* fide lk.
C. OBTUSIFOLIA T. Frem r 311. B 1:52. 2:433. Da 2. A 1:125d, 162.
C. OCCARPA G 11:72. A 1:162. B 1:52.
C. PÆVIPLORA G 6:520. B 1:52. A 1:162.
C. PLOCASPERMA Wat bot King 33. B 1:52.
C. PALMERANA Z 2:236.
Genus CLEVELANDIA Greene.
 "Cx tubular-campanulate, 4-cleft

Tube of cor slender; limb bilabiate, upper lip sh, spreading, bifid, lower with 3 spreading lobes, neither sacchate nor plicate. Sta 4, didynamous, wholly included within the cor.-tube; anth 2-celled the cells unequal. Sty filiform, stig entire. Cap oblong, loculicidally 2-valved, the valves bearing the placenta on their middle. Sm ann of the southern part of Lower California."—Greene, Cal ac b 1:182. Genus dedicated to Daniel Cleveland.
CLEVELANDIA BELDINGI Greene.
 Greene, Cal ac b 1:182, based on *Orthocarpus beldingi* Greene, Cal ac b 1:123.
CLIDEMIA D Don, Mem Wern sc 4:306 (1823).
C. BOLIVIENSIS Cogniaux. Z 1:94. SAM.
CLIMACTIUM AMERICANUM B 2:407.
CLINTONIA Raf. Am mo mag 1818, 266.
C. ANDREWSIANA T, Pac Ry R 4:150. Par 208. B 2:180.
C. ELEGANS Lindl, bot reg t 1241. B 1:144 as *Downingia* e.
C. PULCHELLA Lindl, bot reg t 1909. Sweet, Brit Fl Gard sr 2, t 412. B 1:144 as *Downingia* p.
C. UNIFLORA Kunth, En 5:159. B 2:179. Z 2:268.
Genus CNEORIDIUM Hooker, f.
 B & H Gen 1:312 (1862).
CNEORIDIUM DUMOSUM Hook. f.
 B 1:97. Spice bush.
Genus CNICUS Linnaeus
 L. Syst ed 1 (1735).
C. AMPLIFOLIUS P 1:70.
C. ANDERSONII G 10:44. B 1:419.
C. ANDREWSSII G 10:45. B 1:420.
C. ARIZONICUS G 10:44. B 1:419.
C. ARVENSIS Hoffm Deutschl Fl ed 1, 1 (2):130. Eu. Asia. B 1:417.
C. BENEDICTUS L. Reichl Ic 15 t 748. B 2:459 as *Carbenia benedicta*.
C. BIPINNATUS Eastwood, Cal ac pr sr 3, 1:121 (1898). M 1:5 as *Carduus* b.
C. BREWERI G 10:43. B 1:418.
C. CALCAREUS Jones, Cal ac pr sr 2, 5:704 (1895). M 1:5 as *Carduus* c.
CNICUS CALIFORNICUS A. Gray.
 G 10:46. B 1:420. Da 10.
 Staistaus Co to Baja ; Arizona.
C. CLAVATUS Jones, Cal ac pr sr 2, 5:704 (1895). M 1:5 as *Carduus* c.
C. CARLINOIDES Schrank, Pl Rar t 11. B 1:420. 2:459.
C. DIFFUSUS Eastwood, Cal ac pr sr 3, 1:121 (1898). M 1:6 as *Carduus* d.
CNICUS DRUMMONDII A. Gray.
 G 10:40. Parish, Z 5:120. Er 6:92. "Meadows at Warner ranch, SD Co, sts 1-2" hl". B 1:418.
 SD Co to Arctic regions.
 Variety **ACAULESCENS** A. Gray.
 Parish. Z 5:120. "Common in So Cal mts." but not, apparently, the typical form.
 Colo; Nevada; Baja mts!
CNICUS EDULIS A. Gray.
 G 10:47. Z 1:58. B 1:420.
 British Columbia; SBer (Parish).
C. HESPERIUS Eastwood, Cal. as pr sr 3, 1:122 (1898). M 1:6 as *Carduus* h.
C. HALLII G 19:56. Parish. Er 7:97, near Redlands, Cal.
C. LANCEOLATUS Willd Prod Fl Berl

259. Eu. B 1:417.
C. NIDULUS Jones, Cal ac pr sr 2, 5:705 (1895). M 1:6 as *Carduus* n.
CNICUS OCCIDENTALIS A. Gray.
 G 10:45. B 1:419. Da 10. P 1:91 Mig. Br 1:213 Rosa (cites *C. Hiacinus* Greene, as a synonym). Ore. Baja.
 Oregon to Baja; Cruz; Rosa.
C. PARRYI G 10:47. B 1:421.
C. QUERCETORUM G 10:40. B 1:418.
C. REMOTIFOLIUS G 10:47. B 1:420.
C. UNDULATUS G 10:42. B 1:418.
C. TIOGANUS Congdon, Er 7:186 (1900). M 1:147 as *Carduus* t.
COBABA Cav. lc 1:11 t 16, 17 (1791).
C. SCANDENS Cav. lc t 16, 17. B 1:485. Mex. Cult.
COCHLEARIA Tourn., ex L. Syst ed 1 (1735).
C. AQUATICA Eaton. Man ed 5, 181 (1839). = *Nasturtium lacustre?* fide IK. P 3:95 as *Neobeckia* a.
C. AQUATICA C. A. Meyer, in Ledeb. Fl Alt 3:88.
C. SILIQUOSA Schlecht in DC Syst 2: 368. = *Draba hyperborea* fide Ik. P 3:253 as *Nesodraba* s.
C. SPATHULATA Schlecht, lc, 369. = *Draba hyperborea* fide IK. P 3:253 as *Nesodraba grandis*.
COELOPLEURUM Ledeb., Fl Ross 2:361 (1844). = *Archangelica* fide IK.
C. MARITIMUM C & R, bot gaz, 1888, 141-5. W 5:19. Wash.
COGSWELLIA Sprengel in Roem & Schult Syst Veg 6: xviii (1820). Coulter & Rose (CNH 12:448) cites *Lomatium Raf* in J Phys 89:101 (1819), not *Lomatia R* Br (1810) as a synonym, following Jones (in Contr West bot 12: (1908) in part in transferring the sp.
C. ALATA CNH 12:448 based on *Lomatium alatum* CNH 7:228 (1900).
C. AMBIGUA Jones, Contr 12:32.
C. ANGUSTATA CNH 12:449 based on *Peucedanum Martindalei* var: *angustum* C & R, bot gaz 13:143 (1888).
C. ANOMALA Jones, Contr 12:32.
C. ARGENSIS CNH 12:449 based on *Peucedanum argense* Jones
C. ARTEMISIABUM CNH 12:449 based on *Lomatium* a (CNH 11:423).
C. AUSTINAE Jones, Contr 12:35.
C. BICOLOR Jones, Contr 12:33.
C. BRECCIABUM Jones, Contr 12:32.
C. BREVIFOLIA Jones, Contr 12:32.
C. CANBYI Jones, Contr 12:33.
C. CARUIFOLIA Jones, Contr 12:34.
 Variety **PATENS** Jones, Contr 12:34.
C. CIRCUMDATA Jones, Contr 12:33.
C. COGDONI Jones, Contr 12:34.
C. COUS Jones, Contr 12:33.
C. CUSICKII Jones, Contr 12:32.
C. DASYCARPA Jones, Contr 12:34.
C. DAUCIFOLIA Jones, Contr 12:34.
C. DECIPENS Jones, Contr 12:38.
C. DONNELLI Jones, Contr 12:34.
C. ELLIPTICA Jones, Contr 12:33.
C. FABINOSA Jones, Contr 12:33.
C. FLAVA CNH 12:449 based on *Lomatium flavum* Suks.
C. FOENICULACEA CNH 12:449 based on *Ferula* f of Nutt.
C. GEYERII Jones, Contr 12:33.
C. GIGANTEA Jones, Contr 12:32.
C. GORMANI Jones, Contr 12:33.
C. GRAYI CNH 12:450 based on *Loma-*

- tium* G.
C. HALLII Jones, Contr 12:35.
C. HENDERSONII Jones, Contr 12:33.
C. JAREDII CNH 12:450 based on *Peucedanum J* (Eastwood, Z 5:88).
C. JONESII Jones, Contr 12:34.
C. JUNIFERINA Jones, Contr 12:34.
C. LAEVIGATA Jones, Contr 12:32.
C. LEIBERGI Jones, Contr 12:35.
C. LEMMONI Jones, Contr 12:33.
C. LEPTOCARPA Jones, Contr 12:33.
C. MACDOUGALLI Jones, Contr 12:34.
C. MACROCARPA Jones, Contr 12:33.
C. MARGINATA Jones, Contr 12:35.
C. MARTINDALEI Jones, Contr 12:34.
 Variety **AUGUSTATA** Jones, Contr 12:34.. CNH 12:449 as sp.
C. MICROCARPA Jones, Contr 12:35.
C. MOHAVENSIS Jones, Contr 12:34.
C. MONTANA Jones, Contr 12:34.
C. NEVADENSIS Jones, Contr 12:33.
 Variety **CUPULATA** Jones, Contr 12:33.
 Variety **PSEUDORIENTALIS** Jones, Contr 12:37.
 Variety **PARISHII** Jones, Contr 12:33. CNH 12:450 as sp.
C. NUDICAULIS Jones, Contr 12:31.
C. OREGANA Jones, Contr 12:35.
C. ORIENTALIS Jones, Contr 12:33.
C. PARISHII CNH 12:450 based on *Lomatium P*.
C. PIPERI Jones, Contr 12:33.
C. PLATYCARPA Jones, Contr 12:32.
C. PLATYPHYLLA CNH 12:450 based on *Peucedanum latifolium* Nutt (not DC).
C. PLUMMERAE Jones, Contr 12:34.
C. ROBUSTIOR CNH 12:451 based on *Lomatium r*.
C. SANDBERGII Jones, Contr 12:35.
C. SERPENTINA Jones, Contr 12:42.
C. SIMULANS CNH 12:451. Cal.
C. SONNEI Jones, Contr 12:34.
C. SUKSDORFII Jones, Contr 12:32.
C. TOMENTOSA Jones, Contr 12:35.
C. TORREYI Jones, Contr 12:35.
C. TRITERNATA Jones, Contr 12:32.
 Variety **ROBUSTIOR** Jones, Contr 12:32. CNH 12:451 as sp.
C. UTRICULATA Jones, Contr 12:34.
C. VAGINATA Jones, Contr 12:34.
C. VASEYI CNH 12:451 based on *Lomatium V*.
C. WATSONI Jones, Contr 12:33.
C. VILLOSA Spreng. CNH 12:449 as *foeniculacea*.
COLEOSANTHUS.
C. AKILLABIS Gifts 1:149. NM.
C. MELISSOEFOLIS Gifts 1:150. NM.
 Genus **COLDENIA** Linnaeus.
 L. Diss Dass 9 (1747).
C. ANGELICA Wat. Er 2:187. Calamujet, Baja.
C. BREVICALYX Wat. Parish Er 6:91, CD (probably not from SBER).
COLDENIA CANESCENS D. C. DC 9:559. Br. 2:187, San Gregorio, Calamujet, Baja. Ar. Tex. CD. Mex.
C. ELSPIDESIMA G. 5:340. B 1:520.
C. NUTTALLII Hooker Kew J 3:296. B 1:520. Ar. Ut. Wyo. Wash.
COLDENIA PALMERI A. Gray. G 8:292. CD. Mohave. Ar. Baja!
COLEANTHUS Seid, Roem & Schult Syst 2:11. 276 (1817).
C. SUBTILIS Seid, lc. B 2:267.

COLEOGYNE T, Smith Cart 6:8 t 4 (1854).

C. BAMOSISSIMA T, lc. B 1:174.

COLEOSANTHUS Cass Philam b 67 (1816).

Herbaceous per or partly shrubby plants with opp or alt lvs and discoid hds of whitish or pink fls in panicles or cymes; inv.-bracts well-imbricated in several sr, striate, receptacle flat or convex; ak 10 striate or ribbed; pap a single row of num rough or serrate bristles.

C. ABBREVIATUS P 4:125.

C. AMBIGENS P 4:237.

C. CALIFORNICUS Kunth. A 1:189d. Ab 391.

C. CEDROSENSIS Greene Er 1:54, based on Brickellia C.

C. CUSPIDATUS Greene, Er 1:54, based on Brickellia Cuspidata G.

C. DENBUS P 4:126.

C. DESERTORUM Cov. A 1:189 fdr.

C. FENDLERI P 4:237.

C. FLOERBUNDUS P 4:237.

C. GLACIIFLUS P 4:237.

C. GRANDIFLOBUS P 4:237-8.

C. HUMILIS P 4:124.

C. KNAPPIANA Greene, Er 1:54 based on Brickellia K.

C. MODETUS P 4:236.

C. NEPETAIFOLIUS P 4:237.

C. NEVINII OK. Based on Brickellia Nevinii G.

Herbage W-woolly; lvs repandodentate; hds 30-40-fld.

C. OBLONGIFOLIUS P 4:125.

C. POLYANTHEMUS P 4:126.

C. POPULIFOLIUS P 4:238.

C. RHOMBOIDEUS Greene, Er 1:54 based on Brickellia rhomboidea.

C. SCABER P 3:100.

C. UMBELLATUS P 4:238.

C. VERBENACEUS P 4:125.

COLEOSPORIUM ELEPHANTOPODIS M 1:17.

Genus **COLLINSIA** Nuttall.

Phil ac J 1:190 t 9 (1817). A 1:229d.

C. BARBATA Bossé in Verh Berl Gartenb Ver N Reihe 1:399. B 1:553 as tinctoria.

COLLINSIA BARTSIAEFOLIA Benth.

DC 10:318. B 1:554. Thruout Cal. Baja.

COLLINSIA BICOLOR Benth.

Hort sc tr. ns. 1:480. Br 1:215, Rosa. Par 298 t. A 1:15, 229d. B 1:553. Da 13. Ab 362.

Auricula-p fls, upper divisions of cor w, tinged with rose and auricula-p spots at the center.

Lindl, Bot Reg t 1734 (1834).

Type locality: "California."

Biol, Erythea 1:17.

Hall, U 115.

Coville, CNH 4:171.

Abrams, Fl LA 362.

COLLINSIA BREVIFOLIA W. Suks.

COLLINSIA CALLOSA Parish.

A 1:15 fdr. Ab 363.

COLLINSIA CHILDSII Parry.

G, Syn Fl 2(1):257. Da 12. Sber mts. B 2:472. A 1:230.

Stem strict, mostly simple; cor light blue.

COLLINSIA CONCOLOR Greene.

A 1:15 fdr.

C. COBYMBOSA Herder. Ind Sem Hort Petrop 32. B 1:554.

C. DIVARICATA K 3:36. Cur 1:144 as sparsiflora.

COLLINSIA FRANCISCANA Biol.

C. GRANDIFLORA Dougl, bot reg t 1166, 1107. B 1:554.

C. GREENEII G 10:75. B 1:554.

C. FLOERBUNDA P 1:55 based on Tonella f.

C. FRANCISCANA Biol. A 1:16 fdr.

C. HETEROPHYLLA R. Gray, bot mag t 3695. B 1:553 as bicolor.

C. HISBUTA K 2:110, f 34. B 1:554 et Cur 1:144 as bartisiaefolia.

C. LINEARIS G 15:50. B 2:472.

C. MINIMA Nutt, Phil ac J 7:47. B 1:555 as parviflora.

C. MULTICOLOE Lindl & Paxt, Fl Gard 2:89 t 55.

COLLINSIA PARRYI A. Gray.

Gray, Syn Fl 2 pt 1, 257 (1873).

G, Syn Fl 2(1):257. B 2:472. A 1:229d.

Coville, CNH 4:171. Panamint mts.

Abrams, Fl LA 363.

Type locality: "Sber Co, Cal."

COLLINSIA PARVIFLORA Dougl.

Lindl, bot reg 13 t 1082 (1827). Cov 171. B 1:555. A 1:230d.

Often diffuse; cor little exserted 4-6 mm long.

Variety **SPARSIFLORA** Bth in DC. B 1:555 as s.

C. SEPTENNERSVA K. 2:224, f 69. B 1:553 et Cur 1:144 as tinctoria.

C. PAUCIFLORA Hook Fl 2:94 error for parviflora hds B 1:555.

C. RATTANI G 15:50. B 2:472.

C. FURFUREA Raf atl J 149.

C. SOLITARIA K 2:10. B 1:555 et Cur 1:144 as sparsiflora.

C. SPARSIFLORA F & M. Ind Sem Hort Petrop 2:38. Biol, Er 1:17. B 1:555.

COLLINSIA STRICTA Greene.

"St slender 1' hl, mostly sim, puberulent, the inf glandular-villous and very viscid; lvs oblong-lanceolate, crenate, on very sh villous-ciliate petioles; fls verticillate and crowded sh-pedicelled; cor $\frac{1}{2}$ " lg. flesh-color, the lower lip elongated, upper parted into 2 nar very acute sh seg which are reflexed and laid one against the other. Bushy hills near Sheep Ranch, Calaveras Co. Cal, Je 1889." P 2:23.

C. TENELLA Bth, DC 10:593. P 1:55 cites Tonella collinoides Nutt as a synonym. B 1:555. M 1:5 as Tonella tenella.

COLLINSIA TINCTORIA Hartweg.

Hartweg, MS, in Bentham, Fl Hartw 328 (1849).

Coville, CNH 4:171. Tejon mts.

Abrams, Fl LA 363. Gabriel mts. Type locality: "in montibus Sacramento."

Par 298. B 1:555. Z 2:165. A 1:230d.

C. TORREYI G 7:378. B 1:555. Z 2:165.

C. VIOLACEA Nutt. Am Phil sc tr 5: 179. B 1:554.

Genus **COLLOMIA** Nuttall.

Gen 1:126 (1818). P 1:126.

Herbs with opp or alt lvs: cx turbinate. In age obpyramidal or cup-shaped, its teeth or lobes equal, entire, erect, the sinuses in age distended into a recurved lobe; cor narly funneliform or

salverform, salmon-y, r'ish, p or w: sta unequal, unequally inserted on tube of cor, mostly straight: sd 1 in each cell, the sd-coat developing spiral threads when wet: Oval to obovoid. Included in *Gilia* by G.

A—Lvs lanceolate, entire or toothed.
a—Cor large, salmon-y. C: grandiflora.
b—Cor sm, lobes p, 1" lg; cx-lobes subulate. C: linearis.
c—Cor sm, p, lobes 1" lg; cx-lobes nar, distinctly awned. C: tinctoria.
d—Cor 5-6" lg, limb 3-4" broad, deep blue; cx-lobes subulate. C: mazama.
B—Lvs variously lobed and divided. C: heterophylla.

C. AGGREGATA T C Porter ex G, Syn Fl 2(1):394. B 2:465.—*Gilia* a.
C. GILIOIDES Bth, bot reg sub t 1622. B 1:488. A 1:177 as *Gilia* g.

COLLOMIA GLUTINOSA A. Gray.
Bth, bot reg t 1622. B 1:488 as *Gilioides*. Laguna mt, SD Co! Baja mts (Or 843). LA. Cat.

COLLOMIA GRACILIS Dougl.
Dougl, bot reg t 1622. B 1:488. P 3:300 as *Microsteris* g. Ap Jaz as *Microsteris* Californica. P 1:141 as *Phlox* g. A 1:176 (of recent authors as *Mic. Cal.*) Hook bot mag t 2924.

C. DEBILIS P 1:127 based on *Gilia debilis* Wat.
C. DIVERSIFOLIA P 1:128, Colusa Co., Cal.

COLLOMIA GRANDIFLORA Dougl.
Dougl, bot reg t 1174. B 1:487. Ab 312. DC 9:308. P 1:127. Par 184 sub *Gilia*. Ha U 103. *SD mts; SBER Co.

COLLOMIA HETEROPHYLLA Hook.
Hooker, bot mag t 2895, bot reg t 1347. P 1:128. B 1:488.

Gilia Sessel G. Doñ.
Navarretia heterophylla Bentham.
British Columbia to Baja mts!

C. HUMILIS Dougl. Hook Fl 2:76. P 3:301 as probably *Microsteris humilis*.

C. LEPTALEA G 8:261. B 1:488. Cur 1:142 as *Gilia Capillarlis* k.
C. LINEARIS Nutt Gen 1:126. B 1:487. Lindl, bot reg t 1166. P 1:128. Colo. Variety SUBULATA G. P 1:129 as tinctoria

C. MICRANTHA K 3:18. Cur 1:142 as *Gilia gracilis* Hooker. P 3:303 as *Microsteris* m.

C. NUDECAULIS H & A bot Beech 368. B 1:492 as *Gilia* n. P 3:304 as *Gymnosteris* n.

C. RAWSONIANA P 1:221, Fresno Co., Cal.

C. TENELLA G 8:259. P 1:129, cites *Gilia leptotes* G as a synonym; in part as tinctoria. Ut. B 1:488.

C. TINCTORIA K 3:17 t 2. Cur 1:142 as *Gilia* t. P 1:129, Cal. Nev. B 1:488.

COLUMBINA Rich ex Brongn, in Ann Sci nat, sr 1, 10:368 t 15 f 3 (1827).

C. GLABEA Wat. Br 2:143, Baja.

COMANDRA Nutt. Gen 1:157 (1818).

C. FALLIDA DC 14:636. B 2:103.

C. UMBELLATA Nutt, Gen 1:157. B 2:103. Rof, new Fl Am 2:33 sub umbellulata (error?).

COMARSTAPHYLIS Zucc in Abh ac Muench 2:331 (1837).—*Arctostaphylis* fide 1k.

C. ARGUTA Zucc in Linnaea 12: Litt 86. COMARUM L syst ed 1 (1735).

C. PALUSTRE L, sp pl 502. B 1:180 as *Potentilla palustris* Scop.

COMELYNE Plum ex L, syst ed 1 (1735).

C. ANGUSTIFOLIA K, Pac Rural Press, 31 My 1879. Cur 1:150, as "evidently *C. dianthifolia* DC."

C. DIANTHIFOLIA Red Lil 7:t390. Mex. CONANTHUS Wat, bot King 256 (1871). See Nama.

C. ARETIOIDES Wat, bot King 256. Ore. Ar. eastern Cal. B 1:515.

C. DEMISSUS Heller. Ab 327. A 1:172 as *Nama demissum*.

C. STENOCAEPUS Heller. Ab 327.

CONDALIA Cav, in Anciens nat 1:39 t 4 (1799).

C. MEXICANA Schlecht, in Linnaea 15: 471.

So Ar. (Pringle). Mex. Baja (Br). CONDALIA SPATHULATA A. Gray.

Pl Wright 1:32. CD. Baja. Ar. Tex. Mex.

CONIOTHELE DC 5:531 (1836).—*Blenosperma* fide 1k.

C. CALIFORNICA DC 5:531. B 1:395.— B. C.

Genus CONIUM Linnaeus.

L, syst ed 1 (1735). A 1:267d.

CONIUM MACULATUM Linn.
L, sp pl 243. A 1:267. B 1:258. Z 2:353.

Ab 283. Greene. Cal ac b 2:339 Cruz. McClatchie, *Erythra* 2:128, Pasadena.

Cruz (Greene). Naturalized.

CONOCLINIUM DC 5:135 (1836).—*Eupatorium* fide 1k.

C. FLACCIDUM P 4:274.

C. NEPETAEFOLIUM P 4:274.

C. VENULOSUM P 4:273.

CONVALARIA L, syst ed (1735).

C. BIFOLIA L, sp pl 316.—*Smilacina bifolia* fide 1k.

Variety KAMTSCHATICA C & S. Linnaea 6:587. B 2:162 as *Malanthemum bifolium* var. (?) dilatatum Wood.

CONVOLULUS L sys ed (1735). A 1: 344d.

C. AMERICANUS P 3:328.

CONVOLULUS ARIDUS Greene.
P 3:330. A 1:14 fdr.

C. ARVENSIS L, sp pl 153. A 1:346d.

Par 46. Greene. Cal ac b 2:408, Cruz; "no doubt of recent introduction." Da 12. B 2:470. Z 2:27. Ab 309.

CONVOLULUS BINGHAMIAE Greene.

Greene, Cal ac b 2:417 (28 My 1887).—

"Per from creeping rtstocks, the sts 3-6" lg, twining or trailing; lvs glab, oval or oblq, rather abruptly acute, the base with a pair of obtuse parallel or very little divergent hastate lobes; peduncles 1-fld: bracts oval to narly oblq, 4" lg, flat and closely subtending and oppressed to the cx, which they are too sm to half conceal: cx 6-8" lg; cor pure w: sta rather sh, the tips of the anth attaining to the base only of the linear stlg."

Type locality: "In marshy places about Burton's Mound, in city of SBER; collected in 1886, by Mrs. R. F. Bingham, and the writer."

CONVOLULUS CALIFORNICA Choisy.
DC 9:405. Lyon, bot Gajz 31:314. Cat. Parish Z 5:116—occidentalis? A 1:14d.

B 1:533. Da 12 (T. Pac Ry R 4:127—

- luteolus var. fulcratus fide B 1:534).
C. CAMPORUM P 3:328. Ill. Ind. Wis.
C. COLLINUS P 3:326 (villosus Greene. Man 265 in part).
C. DELTOIDEUS P 3:331. Kern Co. Cal.
C. FRUTICETORUM P 3:333. Cal.
C. GRACILENTUM P 3:329. Mariposa Co. Cal.
C. LIMNOPHILUS P 3:329. SF.
CONVOLVULUS LONGIPES S. Watson. Am nat 7:302. A 1:95d. Cov 166. B 1:534.
CONVOLVULUS LUTEOLUS A. Gray. G 11:90. A 1:95d. B 1:534. P 3:333. Par 44.
C. MACOUNII P 3:331. Assiniboia.
C. MACROSTEGIUS Greene, Cal ac b 1:208. 2:408 Cruz. P 1:92 Mig. Br. Z 1:85 as occidentalis. Br 1:215 Rosa.
C. MALACOPHYLLUS P 3:326. Sierra Nevada, Cal.
C. NUTTALLII P 3:330. A 1:13 fdr. So. Cal.
C. NYCTAGINEUS P 3:327. Ore.
C. POLYMORPHUS P 3:331. No Cal, Ore.
C. PURPURATUS P 3:332. SF.
C. REPENS L, sp pl 158. Ab 309. A 1:344d.
C. SEPIUM L, sp pl 153. = Calystegia s fide 1k. P 3:328. B 1:533. Br, Colo 231. Sber (Parish).
 Variety **REPENS** Da 12.
C. SPITKAMAEUS L, sp pl 158. P 3:328, 333.
C. STANS H B K Nov Gen et Sp 3:96. = Ipomoea stans fide 1k. P 3:328, 333.
C. TOMENTELLUS P 3:327. A 1:14 fdr. Mts So Cal.
COINOGYNE Less in Linnaea 6:520. = Jaumea fide 1k.
C. CARNOSA Less, lc 521. B 1:372 as J. carnosa.
CONVOLVULUS OCCIDENTALIS Gray G 11:89. Ab 309. B 1:533. Da 12. Br, Z 1:85. cites macrostegius as synonym; Guad, Mig. Cruz, Cat, Rosa. San Clemente Island and mainland. Par 46. Greene, Cal ac b 2:408, Sber. SF. Baja.
 Glau or minutely pubescent; sts freely twining over shrubs; lvs slender-petioled, angular-cordate with a deep narrow sinus to sagittate, or the upper hastate; basal lobes oft 1-2-toothed; peds elongated, surpassing the lf, 1-3-fid; bracts at base of ex ovate or obscurely cordate, membranaceous, equaling it or somewhat longer, mostly obtuse; cor campanulate-funneliform, w or pinkish, 3-5 cm lg; stig linear.
 Variety **TENUISSIMUS** Asa Gray.
 Narrowly hastate or sagittate leaves 1-2 in. long; the middle and mostly the basal lobes narrowly lanceolate; bracts ovate-oblong or ovate lanceolate, acute or acuminate. San Diego; Santa Barbara. Ab 309. A 1:13 as Nuttallii.
C. PENTAPETALOIDES L. syst ed 12. 229. Fu. Asia. Baja. Br. 1:204 Cruz. A 1:346d.
C. SOTDANELLA L, sp pl 159. A 1:349d. Par 216. B 1:553. Da 12. Ab 309. = Calystegia s fide 1k.
C. VILLOSUS G 11:90. B 1:554. P 3:326 as malacophyllus.
 Genus **CONYZA** Linnaeus. Gen ed 1, 251 (1837).
 Herbaceous or shrubby, of various

- habit; hds sm, many-fld; bracts of campanulate inv nar, inappendingulate, in 1-3 sr; female fls much more num than the hermaphrodite; their filiform or slender tubular cor sh'er than disk and sty, truncate or 2-4-toothed at apex; ak sm, compressed; pap a single sr of soft capillary bristles, sometimes an added outer sr of sh bristles or squamellae.
C. COULTERI G 7:355. B 1:332. Ab 404. McClatchie, Er 2:125, Cal. Baja. Ar. Tex. Colo. Greene, Cal ac b 2:401, Cruz. Da 8. B 1:332.
 Ann 1-2° hi, com branched, bearing num sm hds in a thyrsoid lfy panicle, viscidly pubescent or partly hirsute with many joined hairs; inv 1-2" hi hirsute with soft spreading hairs, shorter than the soft pap; fls w, cor-tube of num pist ½ as lg as sty, hermaphrodite fls 5-7.
 Cruz; L A (Farish 1098); Conoindu, Baja (Br).
C. SALICINA K 3:36. Cur 1:139 as Baccharis viminea DC.
C. SUBCURBENS G, Pl Fendl 78; Pl Wright 1:102. B 1:332 as Coulteri. (DC 5:379 = Trigeron Subd.)
COOPERIA PEDUNCULATA Herb. COPEYS Salisb, in Linn sc tr 8:305 (1807).
C. ASPLENIFOLIA Salisb, in Linn sc tr 8:305 (1807). B 2:427.
C. OCCIDENTALIS T & G Fl 1:28. B 2:427.
CORALLIORHIZA Hall, En stirp Helo 1:278 (1742).
C. BIGELOVII Wat 12:275. B 2:132. Par 278 t.
C. IKANATA R Br in Alt Hort Kew ed 2, 5:209. B 2:132.
C. MACRAEII G, Man (1856) 453. B 2:132 as striata Lindl.
C. MERTENSIANA Bong Veg Sitcha 165. B 2:132, 483.
C. MULTIFLORA Nutt. Phil ac J 3:138 t7 (1823). B 2:131. Ha 69. Par 278. Coral-root.
C. STRIATA Lindl, G en et sp Orch 534. B 2:132. (T, Pac Ry R 4:153 t 25 = Bigelovii fide B 2:132).
CORDIA L, Gen ed 1. 52 (1837).
C. ANGUSTIFOLIA Bth, bot Sulph 37 (not R & S). = Palmeri?
C. GREGGII T, bot Mex. Bound 135. Mex. Baja.
C. PALMERI Wat. Baja.
 Genus **CORDYLANTHUS** Nuttall.
 Bth in DC 10:597 (1846). = Adenostegia.
C. CANESCENS G 7:383. B 1:581.
C. CAPITATUS Nutt, DC 10:597. B 1:580. LA (Da).
CORDYLANTHUS FILIFOLIUS Nutt. DC 10:597. B 1:581, 622. Da 13. Z 1:3. Harkness, Z 1:3 as Adenostegia rigida Bth.
C. KINGII Wat bot King 233, 459 t 22. B 1:581.
C. LAXIFLORUS G, bot Mex bound 120. Ar.
CORDYLANTHUS MARITIMUS Nutt. DC 10:598. B 1:581. Da 13. A 1:282 as Adenostegia m.
C. MOLLIS G 7: 384. B 1:582.
CORDYLANTHUS NEVINI A. Gray. G 17:229. Baja mts. Cuyamaca (Or 1879). See Adenostegia N.
C. ORCUTTIANUS G 19: 95. A 1:17d.

- C. PILOSUS G 7:382. B 1:581.
 C. PRINGLEI G 19:94.
 C. RAMOSUS Nutt, DC 10:597. B 1:580.
 C. TENUIS G 7:383. B 1:581.
 C. WRIGHTII G bot Mex. bound 120. Tex. NM.

COREOPSIS L, Gen. ed 1, 263 (1737).
 C. ANGUSTATA P 4:239.
 C. ATKINSONIANA Dougl, bot reg t 1376. B 1:355.
 C. BIDENS L, sp pl 908. = *Bidens cernua* fide 1k. P 4:245 as ?
 C. CALLIOPSIDEA G, bot Mex. bound 90. B 1:355 as *Leptosyne Callopoidea*. Bolander, Cat Pl SF.
 C. LANCEOLATA L, sp pl 908. P 4:245.
 C. MARITIMA Hook. f. bot mag t 6241. B 2:457 as *Leptosyne maritima*.
 C. PERFOLIATA Walt, Fl Carol 214. = *Bidens chrysanthemoides* fide 1k. P 4:263 as a nomen seminudem.

Genus CORETHROGYNE De C.

Per herbs covered with a w woolly tomentum at least when young: Infl glandular: lvs alt entire or serrate, hds middle-sized, solitary, corymbose or panicled: Inv hemispheric to turbinate, its bracts much imbricated, scarious except the herbaceous tips: Receptacle pitted: Ray lvs sterile: Anth appendaged at apex: Sty, appendages comose or with a bearded tuft.

CORETHROGYNE CALIFORNICA DC. DC 5:215. B 1:321. Da 8.

Sts erect or ascending, 1° or more hi: branches rather equally lfy thruout and terminated by single pretty large hds: lvs linear-lanceolate or linear, chiefly entire: Inv broadly hemispherical (near ¼ lg); its scales mostly nar and acute, in fewer ranks loose, all glandular-pubescent, rarely some chaff on the receptacle among the outer fis.

Monterey to SD, near the coast.

C. CANA Greene, Cal ac b 1:223. P 1:29 as *Hazardia c.*

C. DETONSA Greene, T cl b 10:41. P 1:29 as *Hazardia d.*

CORETHROGYNE FILAGINIFOLIA Nt. Am Phil sc tr 7:290. B 1:320. Ha 126. Da 8. Er 2:30, Cat. Greene. Cal ac b 2:401 Cruz. Br. 1:211 Rosa.

Monterey; Cruz; Rosa; Quintin! in fl throughout the year!

Variety **RIGIDA** G. So Cal.

Variety **ROBUSTA** Greene.

"Suffrutescent and low, the thick somewhat depressed or ascending branches only a ft hi: panicle g and glandular-viscid, other parts w/ish with an oppressed tomentum. Southeastern part of Mig, among hi rocks; also in great abundance on the top of Prince's Island. It might perhaps well be reckoned a distinct species."—P 1:89.

Variety **TOMENTELLA** G. "Very woolly at least when young, and the lvs mostly sh'er and broader."—B 1:321.

Variety **VIRGATA** G. "Becoming glabrate, and the Inv more rigid and glandular: hds com num and corymld or panicled."—B 1:321. So Cal. See *virgata* Da 8.

C. INCANA Nutt, Am Phil sc tr 7:290. B 1:320 as *Californica*.

C. OBOVATA Bth Voy Sulph 22. B 1:321 as *flaginifolia* var.

C. SPATHULATA G 7:351. B 1:321. = *obovata* fide 1k.

C. TOMENTELLA T & G Fl 2:99. B 1:321 as *flaginifolia* var *tomentella*.

C. VIRGATA Bth Voy Sulph 23. B 1:321 as *flaginifolia* var *virgata*. A 1:193d. Ab 401.

Variety **BERNARDINA** Ab 401. A 1:193 fdr.

CORIANDRUM L, syst ed 1 (1735).

CORIANDRUM SATIVUM Linn. L, sp pl 256. C & R, Rev umb 35, Parish, Z 1:10. Da 7, Er 1:59, LA Co.

Da 7. Oregon to Baja. Coriander, an escape from cultivation.

CORISPERMUM B Juss, ex L, syst ed 1 (1735).

C. **KYSSOPIFOLIUM** L, sp pl 4. Eu. Asia, B 2:57. Canada to Mex.

Somewhat floccose—or villous—pubescent, at least when young, ½-1½° hi, erect, rather rigid: lvs linear, ¾-1½° lg, cuspidate; fl-bracts from linear-lanceolate to ovate, membranously margined: spikes sh and close, becoming more or less elongated: central sta longest, laterals partially developed or 0; fr broadly elliptical, 1½ or 2° lg, narly winged, obtuse, oft mucronate with the persistent sty.

Genus CORNUS Linnaeus.

Shrubs or trees or rarely herbs, with simple com entire and com opp, rarely verticillate lvs, and sm fis in cymes or hds, the latter involucrate with large w bracts; cx-limb minutely 4-toothed: pet 4, valvate; sta 4; ovules 1 in each cell: drupe ovoid or globose, the stone 2-celled, 2-seeded. Dogwood.

C. ALBA L, Mant 1:40 (H & A bot Beech 42=California fide B 1:275).

C. BAILEYI Z 1:63, 94.

C. CALIFORNICA C A Meyer, Phys-Meth ac b Pet 3:373 (1845). B 1:275. A 1:41d.

C. CANADENSIS L, sp pl 118. Par 96. B 1:274. P 3:76.

C. CIRCINATA L'Herit Comus 7 (C & S in Linnaea 3:139 (1828)=California fide B 1:275.)

C. GLABRATA Bth, Voy Sulph 18. B 1:275. 2:452.

C. GREENEI Z 1:63, 94.

C. NUTTALLII Audubon, Birds Amt 367; T & G Fl 1:652. B 1:274. 2: 42. Z 2:4, 157, 259, 354. Ha 99. Par 96. A 1:41d.

CORNUS OCCIDENTALE Cov 4:117. Ab 293.

Shrub 2-5m hi, with smooth p'lish branches: lvs ovate to oblong-elliptic, acute or somewhat acuminate, su'y cuneate at base, 5-10 cm lg, paler beneath and more or less pubescent with loose silky hairs, especially on the veins; cym spreading, round-topped, 3-5 cm broad, fr w, subglobose; stone 5 mm broad, somewhat compressed, furrowed on the edges.

C. PUBESCENS Nutt, Syl 3:54. Par 96. Z 1:94. Ha 99. B 1:275. Z 1:94. 2:153, 354. Ab 293 as occidentalis.

Variety **CALIFORNICA** C & S Da ., McClatchie, Er 2:123 Cat.

C. SERICEA L Mont 2:199. L'Herit Cornus 5 t 2. = *Amomum* fide 1k.

Variety OCCIDENTALIS T & G Fl 1:652 (1840). B 1:275 as pubescens.
C. SEBOTINA Raf Alsog Am 60.
C. SESSILIS T ex Durand, Phil ac J, sr 2, 3:89 (1855). B 1:274, 2:452. Coulter, bot gaz 15:33. Br. Z 1:88 Amador Co, Cal; "Fr very dark r."
C. STOLONIFERA Michx. Fl 1:92. B 1:275.
C. TORREYI Wat 11:145. B 1:275.
CORTINARIUS SINTENSII M 1:22.
CORYDALIS Vent Choix 19 (1803) in nota; DC, Fl Fr 4:636 (1805).
C. AZUREA Willd En 740. B 1:24.
 Variety **OCCIDENTALIS** C. Ckll W 5:6.
C. BIDWELLIAE Wat B 2:429.
C. BEAULIEUI Wat B 2:430.
C. CASEANA G 10:69. B 1:24. 2: 429. Br, Colo, 228, 233.
C. CUSICKII Wat B 2:430.
C. MONTANA E, G Man, ed 5, 62. = aurea fide B 1:24.
C. SCOLERI Hook Fl 1:36 t 14. B 1:24.

Genus **CORYLUS** Tournefort.

L, syst ed 1 (1735).
CORYLUS ROSTRATA Art.
 Ait Hort Kew 3:364. B 2:100. Z 2:159, 373.
 Variety CALIFORNICA A. DC.
COSCINODON RENAULDI Z 1:63.
COSMANTHUS Nolte, ex DC 9:296 (1838). = Phacelia fide IK.
C. GRANDIFLORUS DC, lc B 1:513 as Phacelia g.
C. VISCIDUS DC, lc. B 1:513 as Phacelia v.

Genus **COTULA** Linnaeus.

L, syst ed 1 (1735). A 1:252 d.
COTULA AUSTRALIS Hooker.
 Hook f Fl NZ 128. Da 10. Ab 436.
 B 1:405. Z 1:58. 2:360. A 1:253 d.
 Parish, Zoe 1:58. SD.
 Davidson, Erythea 1:61. LA Co.
 Abrams, Fl LA 436. In waste places along streets, not common. Ja-Mr.
COTULA CORONOPHILIA Linn.
 L, sp pl 892. A 1:253 d. Ab 436. B 1:405. Da 10. Par 156. Z 1:58. 2:4, 360.
 Type locality: "in Aethiopia," etc.
 Coville, CNH 4:137. Near SBer.
 Parish Zoe 1:58.
 Davidson, Erythea 1:60. LA Co.
 Abrams, Fl LA 436. Common in wet places along streams and marshes, especially toward the coast. Flowering nearly throughout the year.
C. MATRICARIOIDES Bong. Veg Sitcha 29. B 1:401 as Matricaria discoidea.
COTYLEFON L, syst ed 1 (1735).
C. ATTENUATA Wat. A 1:92 as Stylophyllum a.
C. CAESPITOSA Haw, syn pl succ 107. B 1:212.
C. CALIFORNICA Baker, Sound Ref bot 70. B 1:212 as laxa.
C. EDULIS Brewer, B 1:211. A 1:92 as Stylophyllum e.
C. FARINOSA Baker, Sound Ref bot 1:71. B 1:211. 2:447.
C. LANCEFOLATA B 1:211. 2:447. Da 6. Fr. Z 1:113 Cat.
 P 1:88 Mig; (264 San Benito Isl; 285 as linearis). Br 1:210 Ross.
 Greene, Cal ac b 2:397 Cruz.
C. LAXA B 1:212, 2:447. = Californica

fide IK. Greene, Cal ac b 2:397 Cruz? Ha 83.
C. LINEARIS Greene, P 1:285. A 1:50 as Dudleya l.
C. LINGULA Wat 14:293. B 2:447.
C. NEVADENSIS B 1:212.
COTYLEDON NUDICAULE Ab, SCAB 2:42 fd.
C. NUDICAULE Abrams. A 1:93 as Dudleya n.
C. ORCUTTII Greene. A 1:93 as Stylophyllum O.
C. OREGONENSIS Wat 17:373. A 1:165.
C. PALMERI Wat 14:292. B 2:447.
C. PULVERULENTA Baker, Sound Ref bot 1: t 66. B 1:211. 2:447. Da 6. A 1:90 as Dudleya p.
C. VISCIDA Wat 17:372. A 1:91 as Stylophyllum viscidum.
COUERTOISIA Nees in Linnaea 9:286 (1834).
C. BIPINNATIFIDA Reichenbach, Ic Exot t 208. B 1:488 as Collochia heterophylla.
COWANIA D Don, Linn sc tr 14:574 t 22 (1825).
C. ESTUARIFOLIA T ex G, Pl Wright 2: 106. P 1:175.
C. MEXICANA D Don, Linn sc tr 14:575 t 22 f 1-6. E 1:175.
C. PPLICATA D Don, Sweet Brit Fl Gard sr 2, t 400. B 1:175. (Torr, Mex bound r 314 = mexicana fide IK.
C. STANSBURIANA Torr, Stans exp Ut 386 t 3. B 1:175 as Mexicana.
CRASSULA Dill ex L, syst ed 1 (1735).
C. AQUATICA Schoeml. A 1:49 as Tillaeastrum aquaticum.
CRATAEUS L, syst ed 1 (1735).
C. ARBUTIFOLIA Ait Hort Kew ed 2, 3:202. B 1:188 et A 1:319 as Heteromeles a.
C. DOUGLASII Lindl, bot reg t 1810. B 1:189. Z 2:229.
C. RIVULARIS Nutt, ex T & G Fl 1: 464. B 1:189. P 3:99.
C. COCCINEA L sp pl 476. Z 2:229, 260. Br, Colo 229, 236.
C. SANGUINEA J G Cp, Am nat 3:407. Variety DOUGLASII T & G Fl 1:464. Nutt, syh 2:6 t 44. B 1:189 as Douglasii.
C. SALIGNA P 3:99. Colo.
C. REPIDIUM Tauch in Fl 9: i Erg 80. = Crepis fide IK.
C. CAULESCENS Nutt, Am phil sc tr ns. 7:436. B 1:436. = Crepis glauca fide IK.
C. GLAUCUM Nutt, lc. B 1:436 as Crepis glauca.
 Genus **CREPIS** Linnaeus.
 Per or ann herbs, with alt or basal mostly toothed or pinnatifid lvs, and sm or middle-sized hds, com paniculate-corymbose, of y fls: inv cylindric or campanulate, its principal bracts in 1 series, equal, with a number of exterior sm'er ones, 10-20-ribbed or -nerved, not transversely rugose, beakless; pap copious of very slender w bristles.
 L. Gen ed 1, 240, n 621 (1737).
C. ACUMINATA Nutt, Am phil sc tr ns, 7:437. B 1:436.
C. ANDERSONII G 6:553. B 1:436.
C. BIENNIS L sp pl 807. Eu. Ab 451 LA. Pasadena. Da 10, Er 1:61 LA Co.
C. COOPERI G 9:214. B 1:436. = virens

nde IK.

- C. EXILIS** M 1:142.
C. GLAUCA T & G Fl 2:488. B 1:436.
C. GRANDIFOLIA P 3:107.
C. LANCEIFOLIA P 3:108.
C. MANA Richards, Frankl J app ed 2, 92. B 1:436.
C. OCCIDENTALIS Nutt, Phil ac J 7:29. B 1:436.
 Variety **GRACILIS** Eaton, bot king 203. B 1:436 as slender forms of *acuminata*.
 Ann or blen, pubescent or hirsute, lfy at least below, branched above, 6-9 dm hi; lvs runcinate-pinnatifid, oblong or spatulate, at least the upper clasping; hds several, subcorymbose, 2.5-4 cm hi; inv canescent or pubescent, 8-12 mm hi, its principal bracts linear-lanceolate, downy within: ak glab, 13-striate.
 Variety **CRINITA** B 1:425. Wash.
 Variety **COSTATA** B 1:435. Sierra Co, Cal.
 Variety **NEVADENSIS** K 5:50. Cur 1: 141. B 1:435.
 Variety **SUBCAULIS** K 5:50. Cur 1: 141 "a form". B 1:435 as variety *Nevadensis*.
C. RUNCINATA T & G Fl 2:487. B 1:436. P 3:27.
C. PLATYPHYLLA P 3:27.
C. SUBCAEROSA P 3:107.
ORESSA L, Dis Dass 12 (1747). A 1:344d.
C. APHYLLA Heller.
C. AUSTRALIS R Br Prod 490. B 1:534 as *cretica*.
C. CAETICA L, sp pl 223. P 1:92 Mig. Da 12. B 1:534. A 1:345 d.
C. TRUXILLENIS HBK Nov Gen et sp 3:93. Peru. B 1:534 as *cretica*. Ab 452.
ORINATARIA Cass Dict 37:475 (1825). = *Aster* fide IK.
C. VISCIDIFLORA Hook Fl 2:24. B 1: 317 as *Bigelovia* Douglasii. = *Bigelovia viscidiflora* fide IK.
CROCIDIUM Hook Fl 1:335 t 118 (1833).
C. MULTICAULE Hook lc. B 1:396.
CROSSONOMA Nutt, Phil ac J ns, 1:150 (1847). A 1:153d.
C. BIGELOVII Wat 11:122. A 1:153d. B 1:132: 428. Z 1:27.
C. CALIFORNICUM Nutt lc, 150 t 23. A 1:153d. B 1:13. Z 1:27, 109. (T, Pac Ry R 4:63 t 1 excl f 1 = *Bigelovia* fide B 1:13.)
CROSSOSTIGMA Spach in Nouv ann mus Par 4:328 (1835). = *Epilobium* fide IK.
C. LINDLEYI Spach lc 404. B 1:220 as *Epilobium minutum*.
 Genus **CROTON** Linnaeus.
 Stellate-pubescent, more or less glandular and strong-scented herbs or shrubs, with mostly alt, entire, toothed or lobed lvs, and mon or dioe fls in terminal or axy clusters: stam fls uppermost; ex com 5-parted; pet com present, sm or rudimentary, alt with glands; sta 5 or more, inflexed; pist fls clustered below stam; ex 5-10-parted; pet com 0; ova 3-celled; ovules 1 in each cell; sty once, twice or many times 2-cleft; cap splitting into com 2-valved carpels; sds smooth or minutely pitted. *Croton*.
CROTON CALIFORNICUS Mull. Org in DC, Prod 15 (2): 691. Cov 194.

- B 2:69. Ab 232. Da 16 LA. Bloch, Er 2:162, El Barbasco, note on medicinal value.
 Suffrutescent, procumbent or ascending, 4-12 dm hi, dichotomously branched; branches slender, cinereous thruout with a dense appressed scurf; petioles slender, 2-3.5 cm lg; stipules obsolete; lvs com oblong, 2.5-5 cm lg, 8-18 mm wide, entire, 3-5 nerved; dioecious; stam plants more slender and short-branched; racemes simple; fls about 3 mm broad, on pedicels 4-6 mm lg; sep 5, ovate; sta 12-15; fil ciliate; pist raceme mostly 2-3-fid; sty 3, palmately 3-5-cleft or twice 2-cleft; cap com 5-6 mm hi; sds oval or globose, 4.5-5 mm lg, bk.
 Variety **TENUIS** Ferguson. Ab 233.
 Sts erect, 3-7 dm hi, with very slender branches, densely scaly-stellate; lvs narly oblong to lanceolate, 2-4.5 sm lg, 0.5-1 cm wide, entire; petioles 5-10 mm lg, less than 1/2 the length of lvs; stam fls about 2 mm broad; sta 10-12; sds 3-4 mm lg.
C. GRACILIS HBK Nov Gen et sp 2:69. Mex. B 2:69.
C. MAGDALENSE Millsp, Cal ac pr, sr 2, 2:220. Magdalena Island, Baja (Br).
C. SETIGERUS Hook Fl 2:141. Jepson, Er 1:13. B 2:68 as *Eremocarpus* S.
C. SONORAE T, bot Mex bound 2:194. P 2:90 Llano, Tex.
CROTON TENUIS S. Watson. Wat 14:297. B 2:69.
CRUCIFERAE A:1259d.
CRYPTHACANTHUS Nees, in Del Sem Hort Viat 1841. = *Ruellia* fide IK.
C. BARBADENSIS Nees lc. B 1:568 as *R. tuberosa*.
CRYPTSIS Ait oHrt Kew 1:48 (1789); 2: 505.
C. MACROURA HBK Nov Gen et sp 1: 140. B 2:276 as *Cinna macroura* (= *Epicampes* m, fide IK).
 Genus **CRYPTANTHE** Lehm.
 Sem Hort Hamb (1832). Fisch & Mey, Sem Hort Petrop (1836) 35. P 1:110. A 1:205 d.
C. AFFINIS P 1:119 based on *Krynitzkia* a, G.
CRYPTANTHE AMBIGUA Greene. P 1:113 based on *Krynitzkia* a, G. Ab 334. A 1:205d. Ha 108.
 Coville, CNH 4:164. Tejon mts. *Eritrichium muriculatum* var. *ambiguum* Gray, Syn Fl 3, pt 1, 194 (1878).
 Type locality: not given. Cal, Nev, Wash, Arizona? So Cal.
Eritrichium angustifolium Watson, bot Kings R, 241 (not Torr).
Eritrichium muriculatum Torr. Wilkes Esp xvii, t 13.
C. ANGUSTIFOLIA P 1:112 based on *Eritrichium* a, T.
CRYPTANTHE BARBIGERA Greene. P 1:114 based on *Eritrichium* b, G. A 1: 206d. Ab 334.
 Type locality: not given. S Ber Co to S Ut and Ar.
 Coville, CNH 4:165. Panamint mts. *Eritrichium barbigerum* Gray, Syn Fl 2 pt 1, 194 (1878).
 Arizona: Southern California; Baja!
C. CEDROSENSIS P 1:117 based on *Krynitzkia* C (P 1:206), of Cedros Island.

- C. CLEVELANDI** P 1:117. SD. Baja.
C. CONGESTA P 1:111 based on *Eri-trichium congestum* A DC. So Am.
C. CRASSISEPALA P 1:112 based on *Eri-trichium crassise-pala* T & G.
C. CYCLOPTERA P 1:120 based on *Krynitzkia cycloptera* Greene, Cal ac b 1:207.
C. DENTICULATA P 1:114 based on *Krynitzkia denticulata* Greene, Cal ac b 1:205.
C. DIMORPHA P 1:112 based on *Eri-trichium dimorphum* Philippi in herb Cal ac. Cordillera de Santiago (Philippi).
C. DUMETORUM P 1:112 based on *Krynitzkia* d.
C. ECHINELLA P 1:115. Mt. Stanford.
C. FALLAX P 5:54.
C. FENDLERI P 1:120 based on *Krynitzkia* F. G.
CRYPTANTHE FLACCIDA Greene. Coville, CNH 4:165. Type locality: not given. Douglas, collector.
Krynitzkia oxycarya Gray. P 1:115 based on *Myosotis flaccida* Lehm. Ab 334. A 1:206d.
C. FOLIOSA P 1:113 based on *Krynitzkia* f. Guad.
C. GEMINATA P 1:119. Truckee, Cal.
C. GLABROSA P 1:111 based on *Eri-trichium glabrosum* Philippi in herb Cal ac. Cordillera de Santiago (Philippi).
O. GLOBEATA Lehm ex F & M, lc. P 1:110. Chilli. *Eri-trichium cryptanthum* A DC.
C. GLOMERIFLORA P 1:116. Truckee, Cal. C. grisea P 5:53.
C. HISPIDISSIMA P 1:118. SLuis Obispo Co, Cal.
C. HORRIDULA P 5:55.
CRYPTANTHE INCANA Greene. "Ann, freely branched from near base, branches ascending, 1" lg or less; whole plant cinerous-hispidulous and with a different minute strigose hairiness underneath the more copious hispid, indument; fig branches loosely spicate, bractless except at base; cx sm, sep sh, nar thruout, not with attenuate or prolonged apex; nutlets apparently 4, or sometimes 2 only, 1/2" lg, elongated-ovate above a truncate base, rather abruptly and obtusely pointed, the ventral groove forked at base and closed thruout, the whole surface greyish mottled with dark-brown, smooth and polished."—Gifts 1:79. On Nine-mile creek, 5800', Tulare Co, Cal.
CRYPTANTHE INTERMEDIA Greene. P 1:114 based on *Eri-trichium intermedium* G. A 1:206d. Ab 334. Coville, CNH 4:165. LA; SD; Mohave Desert; Baja Cal.
C. JONESII P 1:113 based on *Krynitzkia Jonesii* G. Ha 108.
CRYPTANTHE LEIOCARPA Greene. P 1:117 based on *Echinosperrum leio-carpum* F & M. Ab 335. A 1:206d. Santa Cruz Island (Greene).
C. LINEARIS P 1:111 based on *Myosotis* l. Colla. So Am.
C. MARITIMA P 1:117 based on *Krynitzkia* m (P 1:265, San Benito Island; 1:291, San Bartolome bay, Baja).
C. MICROCARPA F & M. P 1:111. So Am. *Eri-trichium clandestinum* A DC.

- C. MICROMERES** P 1:113, based on *Eri-trichium micromeres* G.
C. MICROSTACHYS P 1:116 based on *Krynitzkia* m. A 1:206d. Ab 334.
C. MOHAVENSIS P 1:120 based on *Krynitzkia* M.
C. MONOSPERMA P 5:53.
C. MURICULATA P 1:113 based on *Eri-trichium* m, a DC. A 1:207d. Ab 333.
C. NEMACLAUDA P 1:118. Colusa Co, Cal.
C. OXYGONA P 1:120 based on *Krynitzkia oxygona* G.
C. PAFFERSONI P 1:120 based on *Krynitzkia* P.
C. PATULA P 1:265. San Benito Isl.
C. POLYCARPA P 1:114. Truckee, Cal.
C. FONDII P 1:291. San Bartolome bay, Baja.
C. PTEROCARYA P 1:120 based on *Eri-trichium* p.
C. PUSILLA P 1:115 based on *Eri-trichium pusillum* T & G.
C. RACEMOSA P 1:115 based on *Eri-trichium racemosum* Wat.
C. RAMOSA P 1:115 based on *Eri-trichium ramosum* A DC.
C. RAMOSISSIMA P 1:116 based on *Krynitzkia ramosissima* Greene. A 1:207. Coville, CNH 4:165. *Krynitzkia ramosissima*, Greene, Cal ac b 1:203 (1885). Gray, Am ac pr 20:277. Type locality: "Mohave Desert," Curran. Not from Cerros or Guadalupe Islands fide Greene. *Eri-trichium racemosum*, Watson. *Krynitzkia racemosa* Greene, Cal. ac b 1:208. CD (Parish 775). Baja mts and desert (Or.). San Julio canyon, etc., Baja (Br).
C. RATTANI P 1:160, near San Jose, Cal.
C. ROSTELLATA P 1:116 based on *Krynitzkia rostellata* (Greene, Cal ac b 1:203).
C. SIMULANS P 5:54.
C. SPARSIFLORA P 1:116 based on *Krynitzkia sparsiflora*.
C. TEXANA P 1:112 based on *Eri-trichium* T. A DC.
C. TOREYANA P 1:118 based on *Krynitzkia* T. G.
C. UTAHENSIS P 1:120 based on *Krynitzkia* U. G.
C. WATSONI P 1:120, based on *Eri-trichium leiocarpum* Wat.
CRYPTOCALYX Bth. Ann nat hist, sr 1, 2:446 (1839). = *Lippia* fide IK.
C. NEPETAEFOLIA Bth lc. P 4:48 as *Phyla betulaefolia*. DC Prod 11:584.
CRYPTOPLEURA Nutt. Am phil ac tr, sr 2, 7:43 (1841). = *Troximon* fide IK.
C. CALIFORNICA Nutt, lc. B 1:439 as *T* chilense (= heterophyllum fide IK).
CRYPTOSTEMMA R Br, Alt Hort Kew ed 2, 5:141 (1813).
C. CALENDULACEUM R Br, lc. B 1:298.
CUCUMIS L. syst ed 1 (1735).
C. PERENNIS T & G, Fl 1:543. B 1:239 as *Cucurbita* p. James, exp Rocky mts 2:346.
Genus CUCURBITA Linnaeus. Rough prostrate vines, rooting at the nodes, with branched tendrils, com lobed lvs which are oft cordate at base, and

large y axy mon fls: cx-tube campanulate, 5-lobed; cor campanulate, 5-lobed to about the middle, lobes recurving; stam fls with 3 sta, the anth linear, more or less united; pist fls with 1 sty; ova oblong, with 3-5 many-ovuled placentae; sty sh, thick; stig 3-5, each 2-lobed, papillose; staminodia 3: fr large, fleshy, with a thick rnd, many-seeded, indehiscent.

C. CALIFORNICA T. B 1:240. Wat 11: 137. A 1:41d. CD.

Type locality: "Sacramento valley", Cal.

C. CORDATA Wat. Baja.

C. DIGITATA G, Pl Wright 2:60, NM. B 1:239.

C. FORTISSIMA HBK Nov Gen et sp 2:123. Mex. Ab 384. Cov 109. Ha 122. Par 121. A 1:167d.

CUCURBITA PALMATA S. Watson. Wat 11:137. Or, W 5:12. B 1:239. 2:449. Z 2:101.

Type locality: "SD Co, Cal; collected in Cajon valley, and at Larken's station near the Jacumba mts."

"Canescent with sh rough pubescence, appressed on the lvs; sts lfy; lvs thick, cordate in outline, 2 or 3; broad, palmately 5-cleft to the middle with lanceolate acuminate lobes, which are oft obtusely toothed near the base, usually exceeding the petioles: fls 3 l lg, on stout pedicels, lobes acutish: cx-tube 1 l lg, the teeth broader and 3 ll lg or more; fr globose: sds 5 ll lg."—B 1:239 (1876).

C. PERENNIS G. Pl Lindh 193. B 1:239. 2:448. Z 2:101. A 1:167 as foetidissima.

CUPHEA P Br, Hist Jamaica 216 (1756).

C. MESOCHLOA P 1:141 based on viridostoma Wat.

C. VIRIDOSTOMA Wat 22:412. P 1:141 as mesochloa.

Genus CUPRESSUS Tournefort.

L. Gen ed 1, 297 (1737). A 2:407d.

C. ATTENUATA Gord Pinet 57. B 2:115 as Chamaecyparis Lawsoniana.

C. FRAGRANS K 1:103. B 2:115 et Cur 1:147 as Chamaecyparis Lawsoniana.

C. GOVENIANA Gord, J Hort sc 4:295. B 2:114.

C. GUADALUPENSIS Wat 14:300. B 2: 114. A 1:189d. 2:408d.

C. HARTWEGII Carr in Rev Hort 1855: 235. B 2:114 as macrocarpa.

C. LAMBERTIANA Gord ex Carr Conif 124. B 2:114 as macrocarpa.

C. LAWSONIANA A Murr, Edinb New Phil J n sr, 1:292 t 9 (Ja-Apr 1855). B 2:115 as Chamaecyparis L.

C. MACRABIANA A Murr, lc 293. B 2: 114.

C. MACROCARPA Hartw, J Hort sc 2: 187 (1847). B 2:113. A 2:407d.

C. NUTKANUS T, bot US expl 2: t 16. B 2:115 as Chamaecyparis Lawsoniana.

CUSCUTA A 1:208d.

CUSCUTA L, syst ed 1 (1735). A 1:208d.

C. ATPLANATA E, StL ac tr 1:503. B 1:535.

C. ARVENSIS Beyrich, Hook Fl 2:77. B 1:535. Ab 310. A 1:345d.

C. CALIFORNICA Choisy, Cuso 183. H & A bot Beech 364. B 1:535. Z 2:332. Ab 310. A 1:345d.

Variety **LONGILOBA** E. Da 12. So Cal, Ar.

Variety **BREVIFOLIA** E. Monterey, Cal. **C. CEANOTHIFOLIA** Behr, Cal ac pr 1:17. Pacific SD 1884. Cur 1:144 "evidently sub-inclusa".

C. DECORA Choisy ex E, StL ac tr 1:501. US, Brazil, SBR (Parish 539). B 1:536.

C. DENTICULATA E, Am nat 9:348. B 1:536.

C. OSTUSIFLORA HBK Nov Gen et sp. 3:122. B 1:535.

C. ODONTOLEPIS E, StL ac tr 1:486. B 1:535.

C. RACEMOSA Mart Reise Bras 1:286. Brazil. B 2:471.

C. PATENS Bth bot Sulph 35. P 1:292 San Bartolome bay, Baja.

CUSCUTA SALINA Engelm. B 1:536. Z 2:366. Ab 311. Par 165.

C. SUAVEOLENS Ser in Ann Sc Phys nat Agr et Ind 3:519. B 2:471 as racemosa variety chiliana E.

C. SUBINCLUSA Dur & Hilg, Phil ac J, sr 2, 3:42. Greene, Cal ac b 2:408 Cruz. B 1:536. Da 12. Ab 311.

C. TENUIFLORA E, G Man ed 1, 350. B 1:535.

C. UMBELLATA HBK Nov Gen et sp 3: 121. B 1:535.

C. VEATCHII Br 2:189. Ubi, San Enrique and Santa Maria, Baja.

CYLADENIA Bth Pl rartw 322 (1850).

C. HUMILIS Bth lc 323. McClatchie, Er 2:123. I.A Co. 8000' alt. B 1:474.

C. TOMENTOSA G, B 1:474.

CYCLOBOTHRA D DON, Sweet Brit Fl Fl Gard, sr 1, 3: t 273 (1828). = Calochortus fide IK.

C. ALBUS Bth Hort sc tr ns, 1:413 t 14. B 2:172 as Cal. albus.

C. CAERULEA K 2:4. B 2:173 et Cur 1: 150 as Cal. caeruleus.

C. ELEGANS Bth, bot reg t 1662. B 2: 174 as Cal. elegans (Hook. bot mag t 5976 = Cal. Maweanus fide B 2:173).

C. PANICULATA Lindl, bot reg t 1662. B 2:172 as Cal. albus variety paniculatus Baker.

C. PULCHELLA Bth. Hort sc tr, ns, 1: 412. B 2:173 as Cal. pulchellus.

CYMBIDIUM Sw in Nov act sc upsai 6:70 (1794).

C. HIEMALE Willd. B 2:133 as Aplectrum hiemale T.

GYMOPTEERUS Raf, J Phys 89:100 (1819).

C. ALBIFLORUS T & G Fl 1:625. B 1: 266 as terebinthinus T & G.

C. CINCERARIUS G 6:535. B 1:267.

C. DECFIENS Z 2:246.

C. FERNICULACEUS Nutt, T & G Fl 1: 624. B 1:266 as terebinthinus.

C. FENDLERY G, Pl Fendl 59. Tex. Parry, Wyo 4, Z 2:229.

C. GLOBOSUS Wat 11:141. B 1:267.

C. GLAUCUS Nutt, Phil ac J 7:28. Z 2: 229.

C. GLOMERATUS DC Prod 4:204. Z 2: 246.

C. MEGACEPHALUS Z 2:14.

C. MONTANUS Nutt, T & G Fl 1:624. B 1:266. Z 2:229. Parry, Wyo 4.

C. NEVADENSIS G 6:536. B 1:267, 2: 451.

C. PURPUREUS Z 2:22.

C. TEREBINTHINUS T & G Fl 1:624. B

1:266.

C. THOPOIDES Nutt, T & G Fl 1:624. B 1:266 as terebinthinus.

CYNAPIUM Nutt, T & G Fl 1:640 (1840). = *Ligusticum* fide IK.

C. APIIFOLIUM Nutt, T & G Fl 1:641. B 1:264 as *L. apiifolium*.

C. BIGELOVII T, Pac Ry R 4:94. B 1:271 as *Ferula dissoluta* Wat.

Genus **CYNARA** L. Artichoke.

Stout per prickly herbs, with pinnatifid sessile lvs, their lobes spinescently tipped, and large hds of p tubular fls: inv-bracts well-imbricated, coriaceous, spinescent; receptacle fleshy, fimbriate: ak obovate, compressed and somewhat 4-angled: pap of many series of plumose bristles.

C. CARDUNCULUS L.

Parish, Er 7:97, "rare as a wayside escape at SBER; SD Co near Smith mt."

C. SCOLYMUS L. A 1:198d. Ab 442. B 1:417.

Abrams, Fl LA 442. An occasional escape from gardens. Je-Jl.

CYNODONTIUM

C. CERNUUM Hedw, Musc Frond t 9. B 2:392 as *Bryum* c.

C. FLEXICAULE Schwaegr, suppl 1:113 t 29. B 2:366 as *Leptotrichum* f.

CYNOGLOSSUM L, syst ed 1 (1735).

CYNOGLOSSUM COLESTINUM Lindl.

C. GLOMERATUM Fraser Cat 1813 ex Pursh Fl 2:729. B 1:528 as *Eritrichium* g. P 1:58 as *Oreocarya glomerata*.

C. GRANDE Dougl ex Lehmann Pugill 2:25. Par 264 t. B 1:530.

C. LAEVE G, syn fl 2 (1):188. B 2:469.

C. LATERIFLORUM Lam, Enc 2:239. B 1:531 as *Pectocarya lateriflora* (= *linearis*).

C. LINEARIS R & P. A 1:204 as *Pectocarya* l.

C. OCCIDENTALE G 10:58. B 1:531.

C. OFFICINALE L, sp pl 134. Eu. B 1:531.

C. PENICILLATUM H & A, bot Beech 371. B 1:531 and A 1:204 as *Pectocarya* p.

C. PILOSUM R & P. B 1:531 as *Pectocarya lateriflora* (= *linearis*).

CYNOSURUS L, Gen ed 1, 13 (1737).

Ann or per tufted, with flat lvs and dense spk-like inf: spkt consisting of nar empty gms with a continuous rach, the terminal spkt of 2-4 broader gms with articulate rachilla, and subtending perfect fls: 2 outer gms broad, 1-3-nerved, pointed or sh-awned; upper gms nar'er, com empty; gms of the sterile spkt pectinate, spreading, linear-subulate; 1-nerved: sta 3; sty distinct, sh: grain finally adherent to the palea.

C. CRISTATUS L, sp pl 72. Eu. Ab 48.

Per; cu tufted, erect, slender, 3-6 dm hi; sheaths smooth, sh'ter than internodes; blades of cu flat, 2-10 cm lg, 1.5-3 mm wide; spk nearly cylindrical, oblg or linear, 3-10 cm lg; the clusters of spkt all turned to one side, the empty ones forming inv to each cluster. Eu. Inv to each cluster. Eu.

Genus **CYPERUS** Linnaeus.

Ann or per herbs: sts mostly simple, triangular, lfy near the base and with 1 or more involucre lvs at base of sim-

ple or compound, umbellate or capitate inf: rays of umbel sheathed at base, com very unequal: spkts flat or nearly terete, composed of few-many persistent or decid scales, these concave, conduplicate or keeled, 2-ranked, all fl-bearing or the lower empty: fls perfect: Perianth 0: sta 1-3; sty 2-3-cleft, decid from summit of the lenticular or 3-angled ak. Galingale. **C. ACUMINATUS** Torr & Hook, NY Lycann 3:435. B 2:214.

CYPERUS ARISTATUS Rothb. Rottl Disc Nov Pl 22; Prog 16. B 2:214. Ha 64.

C. AUREUS Presl, Rel Haenk 1:168. B 2:214 as *aristatus* Rothb. = *squarrosus* fide IK.

C. CALIFORNICUS Wat, B 2:216.

C. CASTANEUS Bigel, Fl Bost 3, 19. B 2:214 as *dianurus* variety *castaneus* T.

C. COMPRESSUS L, sp pl 46. B 2:214 (cites of Haenke's coll from Monterey, Cal, as probably *dianurus*).

C. CUPREUS Presl, Rel Haenk 1:172. B 2:215 as *erythrorrhizos* Muhl.

CYPERUS DIANDRUS Torrey.

T, cat pl NY 89. B 1:214.

Variety **CAPITATUS** Britton. Ab 65: LA, SBER.

Sts tufted slender, 1-4 dm hi; lvs about 2 mm wide, those of the inv 1-2, elongated; spikelets sessile in a capitate cluster, appearing somewhat lateral, 8-20 mm lg, linear or linear-oblong; scales with brown margins appressed, coriaceous, obtuse, shining; sta com 3; sty 2-cleft, scarcely exerted; ak lenticular, oblg or oblg-ovate, somewhat pointed, dull. Variety **CASTANEUS** T. B 2:214. Da 18. = variety *capitatus* fide Ab 65.

C. ERYTHORRHIZOS Muhl, Desc Gram 20, B 2:215. Ab 66. McClatchie, Er 2:78 LA.

Ann; sts tufted, com rather stout, 2-6 dm hi; lvs 3-8 mm wide, equaling or exceeding st, rough-margined, those of inv 3-7, lger much exceeding umbel; umbel mostly compound; spkt linear, subacute, 6-20 mm lg, less than 2 mm wide, many-fid, clustered in oblg nearly or quite sessile spikes; scales chestnut brown, oblg-lanceolate, mucronulate; rachis with membranaceous wings separating as a pair of hyaline interior scales; sta 3; sty 3-cleft; ak sharply 3-angled, oblg, pointed at both ends, pale, $\frac{1}{4}$ as lg as scale.

CYPERUS ESCULENTUS Linn. L, sp pl 45. Da 18. B 2:215. Eu. Da 18, Er 1:100 LA Co, Ab 66.

Per by scaly horizontal tuber-bearing rtstocks; sts rather stout, 3-6 dm hi; lvs light g, 4-8 mm wide, usually longer than st, with prominent midvein; those of inv 3-8, longer much exceeding umbel; umbel 4-10-rayed, usually compound; spikelets num in loose spikes, straw-colored or y'ish brown, spreading, 12-24 mm lg, 3 mm wide, many-fid; scales ovate-oblong, subacute, 3-5-nerved; rachis narrowly winged; sta 3; style 3-cleft; ak obovoid, obtuse, 3-angled.

Frequent in river bottom about LA and SBER.

C. FERRAT Richard, act sc hist nat Par 1:106. B 2:216. Tropical, Cal (Muir).

C. FLAVOMARISCUS Griseb Fl Brit WI 567. B 2:216.

- C. FLAVUS** Bocck, Linn 36:384. B 2:216 as flavomarisicus.
C. HAENKEL Presl, Rel Haenk 1:181. B 2:216 as flavomarisicus.
C. HERMANNI Buck, Phil ac pr 1862:10. B 2:215 as phymatodes variety Hermannii.
C. INFLEXUS Muhl, Desc Gram 16. B 2:214 as aristatus Rottb. Ab 66: Bear, etc.
 Sts very slender, tufted, 3-15 cm hi; lvs 2 mm wide or less, nearly equaling the sts, those of the inv 2-3, exceeding umbel; sessile, com capitate; spikelets linear-oblig, 4-6 mm lg, 6-10-fid; scales pale brown, lanceolate, firm, tapering into a lg recurved awn; sta 1; sty 3-cleft; rachis narly winged, wings persistent; ak 3-angled, narly obovoid or oblig, obtuse, mucronulate.
CYPERUS LAEVIGATUS Linn. Mant 2:179. B 2:214. Da 18. Ab 66: LA, Sber.
 Per, with slender creeping rhizomes; sts tufted, slender, 8-15 cm hi, terete, with 2-3 sh brown sheaths at base, the upper bearing a sh, erect, subtriangular lf, otherwise naked; inv of com 2 lf-like bracts, 1 a continuation of st, erect, the other spreading, 3 cm lg or less; umbel sessile, capitate, apparently lateral; spikelets sessile, many-fid, 4-6 mm lg, pale g; scales broad, obtuse, about 2 mm lg; rachis deeply pitted transversely; sta 3; sty 2-cleft; ak broadly obovate, 12 mm lg.
CYPERUS MICHAUXIANUS Schult. Mant 2:123. B 2:215.
C. MUCRONATUS Rottb Disc Nov Pl 19. B 2:214 as laevigatus.
CYPERUS OCCIDENTALIS Torr. NY Lyc ann 3:259. B 2:215 as erythrorhizos.
C. PHYMATODES Muhl, Disc Gram 23. B 2:215. = *esculentus* fide IK. Variety **HERMANNI** B 2:215, based on Hermann Buckl.
C. PUBESCENS Presl, Rel Haenk 1:181. B 2:216, as perhaps flavomarisicus.
C. REPENS Ell, sketch 1:68. B 2:215 as phymatodes (= *esculentus* fide IK).
C. RIVULARIS Kunth En 2:6. Boeck, Linn 35:452. B 2:214 as diandrus castaneus.
C. SORDIDUS Presl, Rel Haenk 1:171. B 2:215 as ? *virans* (same fide IK).
C. SPECIOSUS T, bot Mex Bound 226. B 2:216 as Californicus.
C. STENOLEPIS T, Cyp 263. B 2:215—NC, Fla, Tex, NM, Sacramento valley, Cal.
C. TENELLUS Presl, Rel Haenk 1:176. B 2:214 as ? diandrus castaneus.
CYPERUS VIBENS Michx Fl 1:29. Parish, SCAB 8:7, Sber Co. Fl 1:28. B 2:214. Dela, Tex, Sacramento valley.
 Genus **CYPRIPEDIUM** Linnaeus.
 L, svst ed 1 (1735).
C. CALIFORNICUM G 7:389. B 2:138, 484. Par 390.
C. FASOICULATUM K, Pac Rur Press My 1879. Wat 17:380. Cur 1:148.
C. MONTANUM Dougl, Lindl Orch 528. Par 388 t. B 2:138. Z s:166. A 1:376d.
C. OCCIDENTALE Wat 11:147. B 2:138 as montanum.
CYPELEA Turp, in Ann mus Par 7:219. (1806).

- C. HUMIFUSA** Turp, lc, t 121 f 5. Santa Cruz, Cal, cult (Parry), in Or hb 97). Santo Domingo Isl.
CYPTOBREYCHIA Nutt, ex T & G Fl 1:26 (1838). = *Ranunculus* fide IK.
C. NEGLECTA P 4:146.
C. RANUNCULINA Nutt, lc. P 3:193. = *R. Nuttallii* fide IK.
CYTHAREA Salisb in Hort sc tr 1:301 (1812). = *Calypso* fide IK.
C. OCCIDENTALIS M 1:132.
C. BOREALIS Salisb, lc. = *Cal. borealis* fide IK.
 Genus **CYTISUS** Linnaeus.
 Shrubs with g, lfy or sometimes nearly lfless, more or less angular branches; lvs palmately or pinnately 3-foliolate; lfts entire; fls solitary or racemose, com y; ex bilabiate; pet broad; keel obtuse; stamona delphous; pod compressed, several-seeded. Broom.
C. CANARIENSIS Steud nom ed 1, 259. Ab 210. Canary Isl, cult, an occasional escape.
 Much branched, 1-2 m hi, soft pubescent, lfy; lfts 6-12 mm lg; fls y, 15-20 mm lg, fragrant, in terminal racemes; upper cx-lip deeply 3-toothed, the lower slightly so.
DACTYLIS L, Gen ed 2:29 (1742).
D. GLOMERATA L, sp pl 71. Eu. Ab 48. Da 19. B 2:301. Z 1:188.
 Genus **DALEA** Linnaeus.
 L, Hort Cliff 263 t 22 (1737).
 Cx nearly equally 5-cleft or toothed; standard cordate, its claw free; wings and keel com lger; their claws adnate to and jointed upon the cleft staminal tube; sta 10 (or 9), monadelphous; anth uniform; ova 2 (nearly 4-6-) ovuled; pod ovate, compressed, com indehiscent, included in cx, 1-2-sds. Herbs or shrubs, glandular-punctate; lvs unequally pinnate, very rarely digitately 3-foliolate or simple; lfts sm, entire, sometimes stipelate; stipules sm, subulate; fls narly sessile in terminal pedunculate spikes or rarely solitary. About 100 sp, ours peculiar to the arid sections.
D. ALBIFLORA G, Pl Wright 2:38. B 1:141. Ar, NM.
D. SLOPECAROIDES Willd, sp pl 3:1336. B 1:141. Ar to Miss.
D. AMORNA Wat, Am nat 7:300 (My 1873).
 "Shrubby, much branched; pubescence sh, silky, dense only in upper axils; lfts 7-11, narly linear, 3-4" lg, obtusish; fls loosely racemed, few, large, deep-p; pedicels 1" lg; cx pubescent, 3-5" lg, lanceolate acuminate teeth equalling tube; pet 6" lg; ova densely pubescent.—Allied to *D. Fremontii*, Johnson, and *Schottii*, Northern Ar (Mrs. E. P. Thompson). In damp places; Ap."
D. ABBRESCENS T, G, Pl Thurb 316. B 1:142. A 1:378d.
D. BENTHAMII Br. 2: 148. Santa Margarita Isl.
D. BRACHYSTACHYS G Pl Wright 2: 39. B 1:141. Ar, NM.
D. CALIFORNICA Wat 11:132. B 1:142. 2:441. A 1:378d.
D. CALYCOSA G, Pl Wright 1:40. B 1: 142.
D. CANECENE Bth, Bot Sulph 12. Br

- 2:145.
D. OBYSSORRHIZA G 5:156 Mex. Br. 2:145, Cardon Grande, Baja.
D. DIVARICATA Bth, Bot Sulph 12. Br 2:145 Magdalena Isl.
 Variety **COTNERA** G 7:335. B 1:142 as Parryl.
D. EMORYI G, Pl Thurb 315. T, Pac Ry R 5:360 t 11. B 1:142. Br 2:147, Cajon de Santa Maria, Baja, etc. A 1:378d.
D. EVANESCENS Br 2:146, near San Ignacio, Baja.
D. FORMOSA T, NY ann Lyc 2:177. Br 2:147, San Esteban, Baja.
D. FREMONTII T, ex G Pl Thurb 316. Wat, bot king 65. B 1:148. 2:441. Nev.
D. KINGII Wat, bot king 64 t 10. B 1:148. Nev.
D. LAEVIGATA G, Pl Wright 2:38 NM. R 1:141 Ar.
D. LARATA Spreng, syst 3:327. Br Colo 234.
D. MEGACARPA Wat 20:359. P 1:202 Cedros. Br 2:148, San Julian, Calamujet, Baja. Son.
DALEA MOLLIS Benth.
 Bth 306. B 1:141. Ar, NM, Ft Mohave.
D. NANA T, ex G, Pl Fendl 31. B 1:141. M 1:30.
DALEA ORCUTTII S. Watson.
 Wat 20:359. A 1:72 fdr.
D. PARRYI G 7:397. B 1:141. Br 2:145 Santa Margarita Isl. A 1:378d.
D. POLYADENIA T, ex Wat bot king 64 t 9. B 1:142. 2:441. Nev.
D. RAMOSISSIMA Bth, bot sulph 11 t 10. T. Emory's rec 138. Br 2:146 Magdalena Isl.
DALEA SAUNDERSII Parish.
 "A shrub 6-10 dm hi, the old bark smooth and gray, the new growth sparsely hirsute; glands few, prominent and prickly-like; lfsts 2-3 pairs narly lanceolate to oblanceolate, 5-15 mm lg, the margins revolute; fls in a nar elongated raceme, sh pedicellate, 1 cm lg, ultra-marine blue; cx 5 mm hi, its teeth sh'er than tube, acute, upper pair broadened at base, ciliate; stig hirsute, becoming 1 cm lg; ovules 4.—Parish, SCAB 2:83 t 2.
 Type locality: "Desert sands, near Victorville, cir 3000° alt, in the Mohave Desert."
D. SCOTTII T, bot Mex bound 53. B 1:143. Br 2:148 Cajon de Santa Maria, Baja. A 1:378d.
D. SEEMANNI Wat 22:470. Br 2:146 San Esteban, Baja. A 1:378 fdr. Durango?
D. SPINOSA G, Pl Thurb 315. T Pac Ry R 7: 9 t 3. B 1:143. Br 2:148 Calamujet, Baja. A 1:379d. = *Asagraea spinosa* fide IK.
D. TICSTORIA Br 2:147, San Gregorio Baja, "staining the legs of animals y"—as do various other sp!
 Variety **ARENARIA** Br 2:147, sands of the sea shore, Boca de Soledad, Baja.
D. VETULA Br 2:146, Comondu, San Gregoris, Baja.
D. WIELIKENI G, Pl Fendl 32 NM. B 1:142. Ar. Chilhuahua (Wislizenus).
DAMASONIUM Mill, Gard Dict ed 6 (1752).
D. CALIFORNICUM T, Pac Ry R 4:142 t 21. B 2:200. = *Alisma Californica* fide

- IK.
DAPHNIDOSTAPHYLIS Glotzsch in L'inn 24:79 (1851). = *Arctostaphylos* fide IK.
D. ACUTA lc 81. = *A. Hookeri* ? fide IK.
D. CORDIFOLIA lc 80. = *A. tomentosa* fide IK.
D. FENDLERIANA lc 80. = *A. uva-ursi* fide IK.
D. GLAUCA lc 80. = *A. glauca* fide IK.
D. HOOKERI lc 80. = *A. Hookeri* fide IK (*pungens* fide B 1:453).
D. PUMILA lc 81. = *A. pumila* fide B 1:453.
D. PUNGENS lc 80. = *A. pungens* fide B 1:453.
D. TOMENTOSA lc 79. = *A. tomentosa* fide IK.
DARLINGTONIA T, Smith Cont 6:4 t 12 (1854). = *Chrysamphora* fide Greene.
D. CALIFORNICA T, lc 5. B 1:17. Par 396 t. = *C. Californica* Greene.
DARLUCA Raf in Ann Gen sc Physc 6: 87 (1820). = *Faramea* fide IK.
D. FLUM M 1:23.
D. PROSTRATA Raf, New Fl Am 4:55. = *F. odoratissima* fide IK.
DASTILIBION Zucc, AGZ 6:258, 303 (1838).
D. BIGELOVII T, Pac Ry R 4:151. B 2: 163 as *Nolina* B.
 Genus **DATISCA** Linnaeus.

Stout glab herb: lvs divided and more or less incised and sharply serrate: fls fascicled in the axils on sh pedicels: cx of stam fl very sh (less than 1" lg), with 4-9 unequal lobes; sta in ours 8-12, mostly 10; fl sh; cx of pist fls with ovoid tube, somewhat 3-angled, 3-toothed, 3-4" lg; sta (when present) 2-4, alt with teeth: sds num, sm, in 2 to several rows upon the placentae.

DATISCA GLOMERATA B. & H.
 Eastwood Zoe 5:136. "Weum Kali" of the Yokala tribe of Pomas Indians, who use it to stupefy fish so that they may easily catch them, in the same manner as the amole (*Chlorogalum Pomeridianum*) and the Turkey-mullein (*Eremocarpus setigerus*) or "Perba del Poscado" of the Mexicans.
 A 1:41d. B 1:242, 2:449. Da 7. Ab 257. *Tricerastes glomeratus* Presl, Rel Haenk 2:88 (1835).

Type locality: "In parte occidentali Mexici et in California ad Monte-Rey."

Genus **DATURA** Linnaeus.

Ann or per erect branching narcotic herbs, with alt petioled entire or sinuate-dentate lvs, and large showy solitary sh peduncled fls: cx elongated-tubular or prismatic, 5-cleft or spathe-like, circumscissile near the base; cor funnelform, the limb plaited, 5 lobed, lobes broad, acuminate; sta inserted at or below middle of cor; fl filiform, elongated; ova 2-celled, or falsely 4-celled; sty filiform; stig slightly 2-lobed; cap 4-valved from top or bursting irregularly, ovoid or globose, prickly.

- D. ARBOREA** L, sp pl 179. B 1:543.
D. DISCOLOR Bernh in Trom NJ Pharm 26: 149. Cf Linn 8 (1833) Litt 138. Mex. B 1:544.

Cor p'ish; cap and stout prickles pubescent. Baja (Or 2190).

D. **METEL** Moc & Sesse, DC Prod 13 (1): 544. = meteloides fide IK.
Variety **QUINQUECUSPIDATA** T, Pac Ry R 7:19. B 1:544 as meteloides.
DATURA METELOIDES DC.

Prunose-glaucous, erect, branching, 6-10 dm hi from a per rt; lvs unequally ovate, more or less coarsely repand-dentate or nearly entire; ex cylindric, about 8 cm lg; cor w or tinged with violet, 15-20 cm lg, limb about 10 cm broad, with 5 slender subulate teeth; cap drooping in fr, 5 cm in diam, densely prickly.

Type locality: "in calidis Novae Hispaniae regionibus."

DC Prodr 13 (1): 544 (1852). Greene, Cal ac b 2:408, Cruz B 1:544. Da 12. Z 2: 232. Ab 352. Cov 158. Par 54.

D. **QUERCIFOLIA** HBK Nov Gen et sp 3:7. Mex. B 1:544.

D. **STRAMONIUM** L, sp pl 179. Ab 353. Par 97. B 1:544.

Stramonium or Jamestown-weed. Ann. g, glabrous. 8-10 dm hi; lvs sinuately and laciniately angled and toothed; ex prismatic; cor w, about 8 cm lg; cap erect, thickly armed with sh stout prickles.

D. **SUAVEOLENS** Humb & Bonpl ex Willd En Hort Berol 227. Mex. Par 97.

D. **TATULA** L, sp pl ed 2, 256. B 1:544, 2:471. Parish, Z 1:123. = Stramonium fide IK.

D. **THOMASII** T, Pac Ry R 5:362. B 1: 544 as discolor.

D. **WRIGHTII** Regel, Gartenf 8: t 260. B 1:544 as meteloides.

Genus **DAUCUS** Tournefort.

L, syst ed 1 (1735). A 1:268 d.
D. **BRACHIATUS** T, Pac Ry R 4:93. B 1:273. = *Caucalis microcarpa* fide IK.

DAUCUS CAROTA L.
L, sp pl 242. Ab 292. Z 2:27. Da 7. Er 1:59 LA Co. A 1:268d.

DAUCUS IUSILLUS Michx.
Michx Fl 1:164. Br, Z 1:114 Cat. Bloch, Er 1:232, 233 "Yerba del Vibora"—note on medicinal use. Greene, Cal ac b 2: 399 Cruz. Br 1:211 Rosa. P 1:88 Mig. Ab 292. Z 1:22. 2:354. Da 7. B 1:272. 2: 452. A 1:268d.

DECODON J F Gmel, syst 677 (1791). = *Nesaea* fide IK.

D. **VERTICILLATUS** Ell sketch 1:543. P 1:42. = *N. verticillata* fide IK.

D. **AQUATICUM** Gmel, lc. = *N. verticillata* fide IK.

Genus **DEINANDRA** Greene.

Erect, rigid, brittle, balsamic-viscid an; hds mostly sm, few-fld, paniced; lvs serrate or entire; inv bracts few, half enclosing their ak, their tips sh, rigid, erect; rays com 5, broad, 3-toothed, diurnal; receptacle chaffy only next the rays; ray-ak gibbous; tuberculate-rugose, the terminal areola raised upon a distinct curved beak from the angle of ventral face of ak; disk-ak mostly sterile, with or without a paleaceous crown.

DEINANDRA FASCICULATA Greene. A 1:193d. Ab 421.

Hemizonia fasciculata T. & G.
DEINANDRA KELLOGGII Greene. Abrams, Fl LA 422. Pasadena.

A 1:193d.
DEINANDRA-WRIGHTII Greene. Abrams, Fl LA 422. SBer.

A 1:193d.
DELPHINIUM L, syst 1 (1735). A 1: 151d.

D. **APICULATUM** P 1:285, plains of the San Joaquin near Byron Springs, Cal.

D. **BICOLOR** Nutt, Phil ac J 7:10. B 1:11.

D. **CALIFORNICUM** T & G Fl 1:31. B 1: 11.

D. **CARDINALE** Hook, bot mag t 4887. Par 370. B 1:12. 2:428. Da 1. Ab 153. A 1:151d.

D. **CONSOLIDA** L, sp pl 530. Eu. A 1:152.

D. **COCCINEUM** T, Pac Ry R 4:42. B 1: 12 as cardinale.

D. **COGNATUM** P 3:14.

D. **DECORUM** F & M, Ind sem Hort Petrop 3:33. B 1:11. Da 1. Ab 153. A 1:152d.

Variety **FATENS** G. Ab 153. A 1:152d.

D. **DEPAUPERATUM** Nutt, T & G Fl 1: 33. B 1:11. A 1:152d.

D. **DIVERSIFOLIUM** P 3:93.

D. **ELATUM** L, sp pl 531. Eu. Variety **OCIDENTALE** Wat bot king 11. B 1:11. 2:428 as occidentale.

D. **EXALTATUM** H & A bot Beech 317. B 1:11 as Californicum.

D. **FLAMMEUM** K 2:22. Cur 1:130 as cardinale.

D. **GLABRUM** P 3:257.

D. **GLAUCUM** Wat, B 2:427.

D. **GRACILENTUM** P 3:15.

D. **HANSENI** P 3:94.

D. **HESPERIUM** G, bot gaz 12:51. A 1: 152.

DELPHINIUM LUPORUM Greene.

"Rt apparently woody-fibrous; solitary st over 1' hi, slender, sparsely lfy except at base, very light-g, glab and shining; lowest lvs 5-parted, seg round obovate and with 2 or 3 broad rounded and rather deep lobes, those of st with more cuneiform divisions and acute lobes, or the divisions simple and entire and oblong-lanceolate cut in those next below the rather naked peduncled raceme; this very lax, made up of only 5-7 large fls on lg and slender ascending pedicels; the pedicels and the lg straight slender-conical spur loosely villous-pubescent; sep all deep-blue p, each with a very prominent the nar apiculation; ovaries canescently villous."—Gifts 1:76. Coyote creek, Tulare Co, Cal.

D. **MENZIESII** DC syst 1:355. B 1:11. Farrv, Wyo 4. SD Co!

Variety **UTAHENSIS** Wat, bot king 12. B 1:11 as bicolor Nutt.

D. **NELSONI** P 3:92.

D. **NUDICAULE** T & G Fl 1:33. B 1:12. 2:428. Par 352 t. A 1:151d.

D. **OCIDENTALE** Wat, B 2:428. Coulter, Man Rocky mts 11.

D. **PARRYI** G, bot gaz 12:53. Cov 57. A 1:152.

D. **PARRYI** G bot gaz 12:50. Da 1. Ab 153. Par 21:201, Cruz, 206 Rosa; 224 Santa Inez mts. A 1:152d.

D. **FATENS** Bth 296. A 1:152 et. B 1:11 as decorum.

D. **FAUPEUCULUM** P 1:288, Wash, near the sea coast.

D. **RECURVATUM** P 1:285, Antioch to Tulare, Cal, along the San Joaquin river.

D. **SARCOPHYLLUM** H & A bot Beech

317. B 1:12 as nudicaule var. elatius.
D. SCAPOSUM Greene, bot gaz 6:156, NM. Z 2:227. A 1:152.
D. SCOPULORUM G, Pl Wright 2:9, NM. B 2:428. Par 834.
D. SIMPLEX Dougl. Hook Fl 1:25. B 1:10. A 1:153d.
D. SONNEI P 3:246.
D. TROLLIFOLIUM G 8:275. B 1:112: 428. Z 2:285.
D. VARIEGATUM T & G Fl 1:32. B 1:10. Da 1. A 1:153d. Ab 153.
DENDROMECON Bth, Hort sc tr, sr 2, 1:407 (1834). A 1:161d. Monotypic! (see rigidum).
D. AGNINA P 5:296, 299d.
D. ARBOREA P 5:297, 306d.
D. CAESIA P 5:297, 303d.
D. CAUDATA P 5:296, 298d.
D. DENSIFOLIA P 5:397, 304d.
D. ELLIPTICA P 5:297, 300d.
D. FASTIGIATA P 5:296, 298d.
DENDROMECON FLEXILE Greene. Torr cl b 13:218 (N 1886): Cal ac b 1:389, 2:389, Cruz; P 1:43. Br. Z 1:47 as form of rigidum. A 1:71 fdr, 72 as rigidum.
D. FLEXILIS P 5:297, 304. — flexile.
D. HARFORDII K 5:102. Cur 1:130:— "A peculiar form of *D. rigidum*, with thickly clustered very broad lvs, coll on Rosa by W. G. W. Harford." P 1:43. 5: 299. Z 1:46 as rigidum. B 1:22 as rigidum. A 1:72, 161 as rigidum.
D. HERBACEA P 5:297, 303d.
D. LEOPHYLLA P 5:297, 302d.
D. PALLIDA P 5:297, 301d.
D. PUMILA P 5:297, 302d.
D. QUERCETORUM P 5:297, 301d.
D. RHAMNOIDES P 5:297, 305d.
DENDROMECON RIGIDUM Benth. Curran, Cal ac pr sr 2, 1: 244, refers *D. Harfordii* and *D. flexile* to this. Hort sc tr, sr 2, 1:407. B 1:22, 2:429. Da 2. Z 1:46, 2:120. Ab 160, Br 1:207 Rosa (cites Harfordii and flexile as synonyms). Ha 81. Par 122t. A 1:72d, 161. P 1:43, 5:296, 297. Br. Z 1:46:—"nearly trout Cal, Cat, Cruz, Rosa, etc." Jepson, Er 2:14, notes fasciculation, not rare in this sp. All the other "species" of the genus may well be considered as synonyms!
D. SALIGNA P 5:297, 300d. Genus **DENTARIA** Linnaeus. Per herbs growing in damp woods, with fleshy tuberous rt-stocks, erect mostly unbranched sts and more or less divided lvs: fls large, w or oft tinged with p; pet much lger than sep with slender claw and ovate spreading blades: siliques linear, flattened, their valves nerveless: sds in 1 row in each cell, wingless: cotyledons thick, oft unequal, accumbent. L. syst ed 1 (1735). = *Cardamine* fide IK.
D. CARDIOPHYLLA P 3:122.
D. CUNEATA P 3:123.
D. DOUGLASSII P 3:124.
D. FULCHERRIMA P 3:123.
D. RHOMBOIDEA P 3:124.
D. ROTUNDIFOLIA P 3:124.
D. SINUATA P 3:124.
D. INTEGRIFOLIA Nutt, T & G Fl 1:88. P 3:122. B 1:31 as *Cardamine paucisecta* (= *C. integrifolia* fide A 1:111).

D. MACROCARPA Nutt, T & G Fl 1:88. B 1:30. Ore.
D. TENELLA Pursh, Fl 2:439. B 1:30. 2:430.
D. TENUIFOLIA Hook Fl 1:46. B 1:30 as tenella.
D. CALIFORNICA Nutt, T & G Fl 1:88. B 1:31 as *Cardamine paucisecta*. Wat 14:289. B 2:430. Par 4 t. Ab 173. P 3: 122. A 1:111 as *Cardamine intergrifolia*. Variety **PACHYSTIGMA** Wat 14:289. B 2:430.
DESMATODON Bridel.
D. CALIFORNICUS Lesq, Cal ac mem 1:10. B 2:369 as *Barbula atrovirens*.
D. CERNUUS Bruch & Schimp. B 2:368, Eu, Nev, Brit Am.
D. GUEPINI Bruch & Schimp. B 2:369 as *Barbula* G.
D. LATIFOLIUS Bridel. B 2:368. Variety **MUTICUS** Bridel. B 2:368.
D. NERVOUS. Variety **EDETULUS** Lesq & Sull. B 2: 369 as *Barbula atrovirens*.
D. RYSTITIUS Bruch & Schimp. B 2:368.
DEWEYA T & G Fl 1:641 (1840). = *Arracacia* fide IK.
D. ARGUTA T & G Fl 1:641. B 1:257. Ab 283. A 1:271 as *Velaea arguta*.
D. HARTWEGII G 7:342. B 1:257, 2:451.
D. KELLOGGII G 7:343. B 1:257.
D. VESTITA Wat 17:374. A 1:271 as *Velaea vestita*.
DIAPEDIUM Koen steud nom ed 2, 468 (1811). = *Dicliptera* fide IK.
D. ATTENUATUM M 1:5.
DICENTRA Bernh in Linn 8:457, 468 (1833); 12:663 (1838). A 1:109d.
D. CHRYSANTHA Walp rep 1:118. Par 168. B 1:24. Da 2. A 1:109d.
D. UCULLATA Bernh in Linn 8:468. R 1:24.
D. FORMOSA Walp rep 1:118. B 1:24, 2: 429. Z 2:161. Par 248 t.
D. COBBOLEUCA E, bot gaz 6:223. Da 2. A 1:170 fdr.
D. PAUCIFLORA Wat. B 2:429.
D. UNIFLORA K 4:141. Cur 1:130. B 1: 24, 2:429. Z 2:161.
DICHAETA Nutt, Am Phil SC tr, sr 2, 7:383 (1841). = *Baeria* fide IK.
D. FREMONTII G, Pl Fendl 102. B 1: 377 as *B. F.*
D. TENELLA Nutt lc. B 1:377 as *B. uliginosa* var. *tenella*.
D. ULIGINOSA Nutt lc. B 1:377 as *B. u.*
DICHELOSTEMMA Kunth En Pl 1:469 (1843). = *Brodiaea* fide IK.
D. Californica wood, Phil ac pr 1868: 173. Cur 1:149 as *B. volubilis*. B 2:156 as *Stropholirion Californicum*.
D. CAPITATA Bth ex wood lc. B 2:154 as *B. capitata*.
D. CONGESTUM Kunth, En Pl 4:470. B 2:154 as *B. congesta*.
D. FULCHELLUM M 1:132 based on *Hookera pulchella* Salisb.
DICHELYMA Myrin.
D. CYLINDRICARPUM Austin, bot gaz 2:111. B 2:405, as *falcatum*.
D. FALCATUM Myrin. B 2:405, Ore; 419.
D. SWARTZII Lindb. B 2:405, as probably *Hypnum* *sulcatum*.
D. UNCINATUM Mitten. B 2:405, Wash. Genus **DICHONDR** Forst. Creeping per herbs with filiform sts: lvs reniform or round-cordate, entire;

ped sh, naked, 1-fld: cor deeply 5-left or-parted, lobes imbricated in bud: sta sh: ova 2-parted, forming 2 indehiscent or irregularly bursting utricles in fr: styles 2, distinct or united at base: sd 1: cotyledons linear entire.

D. ARGENTEA Willd. Br 1:215 Rosa?
D. OCCIDENTALIS House, M 1:130. A 1:130 fdr.

DICHONDRA REPENS Forst.
 Char Gen 39 t 20. B 2:170. Z 2:336, 336. Br. Z 1:114 Cat.

DICOLIPTERA Juss in Ann mus Par 9: 267 (1807).

D. BRACHIATA Spreng, syst 1:186.
 Variety **ATTENUATA** G, Syn Fl 2 (1): 331. M 1:5 as *Diapedium attenuatum*.

D. RESUPINATA Juss lc, 268. B 1:589.
D. THLASPIODES Nees in DC Prod 11: 474. B 1:589 as *resupinata*.

DICORIA T & G, Emory rec 143 (1848).
D. BRANDEGEI G 11:76. B 1:615. Br, Colo 230.
D. CANESCENS T & G, Emory rec 143. B 1:615. Da, Er 1:61 LA. G. (Or 2184). Ar. Ut.

DICRANELLA LANGLOISII Z 1:63.
DICRANOWESSIA.

D. CIBREATA Schimp. B 2:362 as *Weissia c.*
D. CRISPULA Schimp. B 2:362 as *Weissia c.*

DICRANUM Hedw. Moss.
D. ALBICANS B & S. B 2:364.
D. ANGUSTIFOLIUM Z 1:94.
D. COMGESTUM Bridel. B 2:364 as *fuscescens*.
D. CANADENSE Z 1:94.
D. CRISPUM Hedw. B 2:364.
D. CONSOBRINUM Z 1:63.
D. FUSCESCENS Turner. B 2:364.
D. HETEROMALLUM Hedw. B 2:364. Eu, Cal.

D. LATIFOLIUM Hedw, Musc Frond 1: 89 t 3. B 2:368 as *Desmetodon latifolius*.
D. MAJUS Turner. B 2:365. Wash; Eu.
D. PALUSTRE La Pyl. B 2:365.
D. POLYCARPUM Ehrh. B 2:363. Eu.
D. PURPUREUM Hedw, spec 36 t 36. B 2:365 as *Ceratodon purpureus*.
D. SCREBERI Swartz, B 2:364; Eu, Ore.

D. SCOPARIUM Hedw. B 2:364, Eu, Cal. Ore.
D. STRICTUM Schleich, B 2:364, Eu, Cal, Wash.
D. SUBULIFOLIUM Z 1:94.
D. SUBULATUM Hedw. B 2:363, Eu, NH, Cal.
D. SULCATUM Z 1:94.
D. VARIUM Hedw. B 2:363, Eu, SF.
D. VIRENS Hedw. B 2:363, Eu, Wash, Cal.
 Variety **SERRATUM** B & S. B 2:363.
 Variety **WAHLENBERGII** B 2:363.

DICTYOPHORA.

D. PHALLOIDEA M 1:22.
DIDYMON Hedw.
D. CYLINDRICUS B & S. B 2:366, Eu, India, Nev.
D. PURPUREUS Hook & Taylor, Musc Brit 65 t 20. B 2:365 as *Ceratodon purpureus*.
D. RIGIDULUM Hedw, Musc Frond 3: 8t 4. B 2:371 as *Barbula rigidula*.
D. RUBELLUS B & S. B 2:366, Eu, Africa, Nev, Cal, Atlantic states.

D. HENDERSONI Z 1:63.
DIETRIA Nutt, Am Phil sc tr, sr 2, 7:300 (1841). = *Aster fide IK* (*Machaer-anthera fide Greene*).

D. ASTEROIDES T, Emory rec 142. P 3:63 as M. A.
D. CANESCENS Nutt Am Phil sc tr 7: 300. P 3:59 as M. c. B 1:322 as A. c.
D. CORONOPHOLIA Nutt, lc 301. B 1: 322 as A. *tanacetifolius*.
D. DIVARICATA Nutt, lc. B 1:322 as A. *canescens*. P 3:61 as M. *montana* (?); 4:23 as M. d. in part.
D. INCANA T & G Fl 2:100. B 1:322 as A. i. P 3:62 as M. i.
D. PULVERULENTA Nutt lc. B 1:322 as A. *canescens*. P 3:61 as M. *montana* (?); 4: 23 as M. p.
D. SESSILIFLORA P 3:60 (error for *sessilifolia* Nutt) as M. s.
D. SESSILIFOLIA Nutt lc. B 1:322 as A. *canescens*.
D. VISCOSA Nutt lc. B 1:322 as A. *canes cens*. P 3:61 as M. *montana* (?); 4:22 as M. v.
DIGITARIA Heist ex Adans Fam 2:38, 550 (1763). = *Panicum fide IK*.
D. SANGUINALIS Scop Fl Carn ed 2, 1: 52. B 2:258 as P. s.
DINEBRA DC, cat Hort Monsp 104 (1813). = *Bouteloua* in part fide IK.
D. ARISTIDOIDES HBK Nov Gen et sp 1:171. B 2:291 as B. a.
DIOSPYRUS VIRGINIANA Linn.
DIPLACENE Beauv, Agrost 80 t 16 (1812).
D. FASCICULARIS Beauv, Agrost 80 t 16 f 9. B 2:292 as *Leptochloa f.*
DIPLACENE IMBRICATA Scribn. *Leptochloa imbricata* Thurber. S Ber (W. G. Wright); Texas; Baja. Ft. Yuma, Cal (Or 2080).

Genus DIPLACUS Nuttall.

Evergreen glutinous shrubs: lvs opp, revolute in bud: fls solitary in axils: cx tubular, 5-angled, 5-toothed: cor with funnellorm tube and rather broad bilabiate limb: sta 4: stig of 2 flat lobes, closing together when irritated: cap firm-coriaceous, linear-oblg, included in cx with a woody enlargement at pointed apex, opening down the upper suture only or mainly, valves spreading out nearly flat and bearing the placentae on their middle.

D. ARACHNOIDEUS Greene, Cal ac b 1: 210. 2:409 Cruz.
D. AUBANTIIUS Don, in Sweet Hort Brit, ed 3, 516.
D. CAECINALIS Dougl, Rev Hort, sr 4, 6:137 (1857). = *Mimulus c.* fide IK.
DIPLACUS GLUTINOSUS Nutt.
 Nutt, ann nat hist, sr 1, 1:137. Par 144 t. Greene, Cal ac b 1:95.
 Bush Monkey-flower. Low shrub, 2-4' hi; lvs oblong-lanceolate, revolute, denticulate, glab and deep g above, pubescent beneath with branching hairs; cor buff or salmon-color, 1½" lg or more, the throat nar-funnelform, lobes emarginate, with more or less irregular margin. Type locality: "vicinity of SF."
 Variety **STELLATUS** P 2:155 based on *stellatus* K.
 Variety **LATIFOLIUS** P 2:155 based on *latifolius* Nutt.

DIPLACUS GRANDIFLORUS Greene.
Groenl. Rev. Hort, sr 4, 6: 403. Cal ac b
1:96, 156. A 1:16 fdr.

DIPLACUS LATIFOLIUS Nutt.
Nutt Ann nat hist sr 1, 1:138.

D. LEPTANTHUS Nutt, lc.
DIPLACUS LINEARIS Greene.
P 2:156. A 1:17 fdr.

DIPLACUS LONGIFLORUS Nutt.
Nutt, lc 139. F 2:156. A 1:17d.

DIPLACUS PARVIFLORUS Greene.
P 1:36; 2:157; Cal ac b 2:409 Cruz. A
1:16 fdr.

DIPLACUS PUNICEUS Nutt.
Nutt, lc 137. Greene, Cal ac b 1:96. Ab
364. A 1:17d.

DIPLACUS STELLATUS Kellogg.
K 2:18. Greene, Cal ac b 3:95. Cur 1:
145. F 1:206 Cedros.

DIPLOPAPPUS Cass in Dict sc nat 13:
308 (1819). = *Aster* fide IK.

D. ALPINUS Nutt, Am Phil sc tr ns,
7:304. P 3:245 as *Ionactis alpina*. = *A.*
scopolorum fide IK.

D. ERICOIDES T & G Fl 2:182. P 3:148
as *Leucoclea* e. (= *A. ericaefolius* fide
IK).

D. FILIFOLIUS Hook, Fl 2:21. B 1:329
as *Erigeron filifolium*.

D. INCANUS Lindl, bot reg t 1693. Hook
bot mag t 3382. B 1:322 as A. 1.

D. LEUCOPHYLLUS Lindl in DC, Prod
5:278. B 1:321 as *Corethrogyne flagin-*
ifolius var. *tomentella* G.

D. LINARIIFOLIUS Lindl, DC Prod 5:
277. P 3:245 as *Ionactis* 1.

D. OCCIDENTALIS H & A, bot Beech
350. B 1:329 as *Erigeron foliosum*.

DIPLOSTEPHIUM CANUM G.
Br 1:211. Rosa (ctes *Hazardia cana*, serrate
and detonsa Greene as synonyms).

"Lvs vary in outline from sharply, serrate
and crenate to almost entire."

Type locality: "Guadalupe Island."
P 1:29, as *Hazardia cana*.

D. LINARIIFOLIUM Nees, Ast 199
(1832). P 3:245 as *Ionactis* 1.

Genus **DIPLOTAXIS** DC.
Erect an or per herbs: lvs pinnatifid
or lobed; fls large, y, in terminal racemes:
siliques elongated linear flat or
flattish, sh-beaked or beakless; valves
mostly 1-nerved; sty slender; sds in 2
rows in each cell, marginless; cotyledons
conduplicate.

DIPLOTAXIS TENUIFOLIA DC.
LC Syst 2:632. Ab 169.

Ann branched from the base, sparingly
hispid or glab, the slender branches
3-6 dm hi, lfy only below; lvs oblanceolate,
sinuate-lobed or sometimes pinnatifid,
5-10 cm lg, nar'd at base, com
slender-petioled; fr'ng racemes lg, loose;
fls 12-16 mm broad; pod about 3 cm lg,
2 mm wide, erect, flattish; fr'ng pedicel
18-30 mm lg. Eu. Sand Rocket.

DIPSACEAE.

Herbs with opp or verticillate exstipulate
lvs: fls perfect, borne on an elongated
or globose receptacle, bracted and
involucrate: cx-tube adnate to the ova,
fls limb cup-shaped or disk-shaped, or
divided into spreading bristles: cor ep-
lychnous, the limb 2-5-lobed: sta 2-4,
inserted on the tube of the cor and alt
with its lobes; fl distinct: ova inferior,
1-celled; sty filiform; stig undivided,

terminal or lateral; ovule 1, pendulous:
fr an ak, its apex crowned with the
persistent cx-lobes.

Genus **DIPSACUS** Linnaeus.

Rough-hairy or prickly, tall erect bien
or per herbs, with opp dentate or pin-
natifid, usually large lvs, and b or lilac
fls in dense terminal peduncled oblong
hds: bracts of the inv and scales of the
receptacle rigid or spiny-toothed: ex-
limb cup-shaped, 4-toothed or 4-lobed:
cor oblique or 2-lipped, 4-lobed: sta 4:
stig oblique or lateral: ak free or adnate
to the involucrel.

D. PULLONUM L, sp pl 97. Eu. B 1:287.
Z 1:57, 86. Da 8, Er 1:59 LA Co. Ab 383.
Parish, Z 1:57. Vasilit Z 1:86, Fuller's
teasel, "Freely dispersed about the bay
of S. F.", Par 392. A 1:179d.

D. SYLVESTRIS Mill Gard Dict ed 8, n
1. Eu. Z 2:383.

DIBCA L, Diss Chen 17 (1751).

D. OCCIDENTALIS G 8:631. B 2:62.

D. PALUSTRIS L, sp pl 358. (T, Pac Ry
R 4:133 = *occidentalis* fide B 2:62.)

DIBINA Hasse, SCA b 1:26.

D. HASSEI Zahlbr, T cl b 27:644 (1901).
Hasse, SCAB 1:27, Monica on bark of
Rhus laurinum.

D. REDIUNTA Zahlbr, Ann K K Natur
Hist Hofmus 17:31 (1901), based on
Lecanora rediunta Stiz (*Lecidea* subgenus
Nyl). Hasse, SCAB 1:26, "Cat, on bark
of *Heteromeles arbutifolia*, and since
also on the mainland upon the Cal
walnut and *Quercus agrifolia*."

DISPORUM Salisb, Hort sc tr 1:331
(1812).

D. HOOKERI Nichols, Gard Dict 1:484.
Par 382.

D. MENZIESII Nichols, Gard Dict 1:485.
Par 383.

DISSODON Grev & Arn. Moss.

D. HORNSCHEUCHII Grev & Arn. B 2:
386, Eu. Ore.

DISTICHUM B & S. Moss.

D. CAPILLACEUM B & S. B 2:374.

D. INCLINATUM B & S. B 2:374. Eu,
Cal.

Genus **DITHYREA** Harvey.

Low branching ann, with stout sts
and thickish ovate or orbicular suben-
tire lvs, the whole herbage more or less
cinerous-tomentose with stellate hairs:
infl racemose, dense, oft branched: fls
w'ish or p; sep ovate to oblg, erect or
spreading, pubescent; pet conspicuous
with spreading blade and slender claw:
sta 6 with linear sagittate anth: pods
strongly obcompressed, 2-celled; cells
nearly orbicular, indehiscent with a
thickened margin, separating at matur-
ity from the persistent linear axis, 1-
seeded; sds flat, marginless; cotyledons
accumbent.

D. CALIFORNICA Harv. Lond J bot 4:
77 t 5 (1845). B 1:48 as B is *cutella* C.
Variety **MARITIMA** A. Wislitz 95.

D. WISLITZII E. Wislitz Tour 95. =
Biscutella W. fide IK.

DOASSANSIA SINTENSI M 1:19.

Genus **DODECATHEON**. Linnaeus.

L. Diss Chen 25 (1751). P 1:209-214.

Low per herbs, with entire or repand
basal lvs, and rather large fls in involu-
crate umbels terminating scapes: cx

deeply 5-lobed, the lobes reflexed, slightly unequal, the tube sh, thickened at throat; sta 5, inserted on throat of cor; fl sh and flat, monadelphous, but at length separable above; sty filiform, exerted; fr a cap with columnar placenta surrounded at base by the now erect ex: sds num, minute, testa punctate.

DODECATHÉON ALPINUM Greene.
Greene, Er 3:39 (1895) based on Meadia variety alpinum G. Ha 101.

DODECATHÉON CLEVELANDI Greene.
Orcutt, W Am Scientist 7:128.
Abrams, Fl LA 300.—"Frequent on dry mesas and grassy hillsides."
P 1:213. Da 11. K Br, Z 1:17, 20 as Meadia var Hendersonii. Par 212. A 1: 104 fdr; 199 fdr. Z 1:17; 4:94 as syn.

Variety **ALBA** Or, W 7:128.
Variety **SPLENDENS** Or, W 7:128.

D. ORNATUM P 2:74. K Br Z 4:94 as Meadia.

D. CRUCIATUM P 1:213 (2:75 as Hendersonii var. c). Z 4:94.

D. CRUCIFERUM K Br Z 1:18, 20 (read cruciatum fide Z 1:50), as Meadia var. Hendersonii.

D. CUSICKII P 2:73. K Br Z 4:94 as Meadia.

D. DENTATUM Hook Fl 2:119. K Br Z 1:19, 20 as Meadia var frigidum.

DODECATHÉON ELLIPTICUM Nutt.
Nutt ex Durand, Phil ac J, sr 2, 3:94. P 1:210, 211, K Br. Z 1:18, 19, 20 as Meadia var. ellipticum.

D. FRIGIDUM C & S Linn 1:217. K Br, Z 1:18, 20 as Meadia var. frigidum.

DODECATHÉON HENDERSONII Gray.
Par 210. P 1:210, 211. Br 1:214 Rosa. A 1:199d. K Br Z 1:17, 19, 20 as Meadia var H.

Variety **CRUCIATUM** P 2:75. Par 210 t.

D. INTEGRIFOLIUM Michx Fl 1:123.

D. JEFFREYI B 1:467 = Jeffreyi (error).

DODECATHÉON JEFFREYI Moore.
Moore, Fl des Serres 16:94 t 1662. Greene Cal ac b 2:406 Cruz. P 1:210, 214. K Br Z 1:18, 19, 20 as Meadia var. J.

Variety **REDOLENS** Hall bot gaz 31:392. Ha U 101.

D. LAETIFLORUM P 5:112.

D. MEADIA L, sp pl, ed 1, 144, Par 210 t. B 1:467. Z 1:17, 202:363. P 1:209. American cowslip. Pride of Ohio. Shooting star. The type of genus, as regarded by some authors, the only species, occurring from Pa to Cal.

Variety **ALPINUM** B 1:467. K Br Z 1: 17-20 as var Jeffreyi. Ckel W 6:11.

Variety **BREVIFOLIUM** B 1:467. K Br Z 1:18, 20 as var ellipticum.

Variety **FRIGIDUM** Hook bot mag t 5871. Wat, bot King B 1:467.

Variety **HENDERSONII** G. Thruout Cal.

Variety **JEFFREYI** G. Z 1:20. 2:164.

Variety **LANCIFOLIUM** G. B 1:467. K Br, Z 1:20 as var Jeffreyi.

Variety **LATILOBUM** G. B 1:467. K Br. Z 1:20 as var frigidum.

Variety **MACROCARPUM** G. B 1:467. K Br. Z 1:20 as var Jeffreyi.

D. FATULUM P 1:211 K Br, Z 1:18, 20 as Meadia var ellipticum: 4:94 as syn.

D. PAUCIFLORUM P 2:72. K Br Z 4:94 as Meadia.

D. SANCTABUM P 5:113.

DODONAEA L, Gen, ed 1, 341 (1737).

D. VISCOSA Jacq. En Pl Carib 19. L. Mant 228. Baja (Br).

DOELLINGERIA Nees, Gen et sp Aster 177 (1832.)

D. AMYGDALINA Nees, lc 179. P 3:52.

D. ORNIFOLIA Nees, lc 181. P 3:53 as infirma.

D. IMPERMA P 3:52.

D. OBOVATA Nees, lc, 182. P 3:53 as reticulata.

D. RETICULATA P 3:53.

D. UMBELLATA Nees, lc, 178. P 3:52.

Genus **DONDIA** Adans.

Fleshy an or per herbs, sometimes suffrutescent, with alt narly linear thick or nearly terete entire lvs and perfect or polygamous bracteolate fls solitary or clustered in the upper axils; ex 5-parted or -cleft, seg sometimes keeled or slightly winged in fr, enclosing the utricle; sta 5; sty com 2, sh; sd vertical or horizontal; embryo coiled into a flat spiral.

D. CALIFORNICA Heller, based on Suaeda C, Wat. Ab 131.

Glab or pubescent; sts woody at base, about 2 dm hl; branches decumbent, 6-12 dm lg, woody below, bearing ascending or erect, very lfy branchlets 15-30 cm lg; lvs broadly linear, acute, 10-14 mm lg; fls 4 mm broad, 1-3 in axils; perianth deeply cleft; sd vertical, nearly 2 mm broad, faintly reticulate.

D. DEPRESSA Britton. Ab 131.

An, branched from base and com above, 2-5 dm hl; branches decumbent or ascending, com very lfy; lvs narly linear, 2-3 cm lg, broadest at or near the base, the upper often narly lanceolate; sep acute, 1 or more of them strongly keeled in fr; sd about 1 mm broad, dull, minutely reticulate.

D. MAQUINI Nelson, based on Suaeda Torreyana Wat. Ab 131.

Erect branched rather bushy, com about 6 dm hl, somewhat woody at base, branches lfy, smooth or somewhat tomentose; lvs linear subterete, narrow at base, 12-18 mm lg, acute, the floral similar; clusters mostly 7-fd; perianth deeply cleft, incurved or slightly cucullate; sd vertical, 1.5 mm broad, dark brown, finely tuberculate.

D. MULTIFLORA Heller, based on Suaeda suffrutescens Wat. Ab 131.

Somewhat shrubby, 6-10 dm hl, with slender diffuse or divaricate lfy branches, more or less tomentose; lvs num, sm, 1 cm lg or less oblg, nar at base, obtuse or acute; fls solitary or clustered, shly lobed, sm; sd mostly vertical, less than 1 mm broad, obscurely tuberculate.

DOUGLASIA Lindl, Braude J sci (O 1827) 385.

D. MONTANA G 7:371. Parry, Wyo 12.

Genus **DOWNINGIA** Torrey.
T, Pac Ry R 4:116 (1856).

D. FICORNUTA G. K Br, Z 1:374.

D. CONCOLOE Greene, Cal ac b 2:153. K Br, Z 1:374. 4: 93 as syn.

D. CORYMBOSA K Br, Z 2:375.

D. ELEGANS T, bot US expl expd 2: 375. B 1:444. Z 1:374.

D. HUMILIS Greene, Cal ac b 2:153. K Br Z 4:93 as syn.

D. INSIGIFIA P 2:80, "near Elmira, Cal." K Br, Z 1:374 et 4:93 as syn.

- D. MONTANA** KBr, Z 1:377 et 4:93 as syn.
D. ORNATISSIMA P 2:80, "near Elmira, Cal." KBr, Z 1:374 et 4:93 as syn.
DOWNINGIA PULCHELLA Torr. Pac Ry R 4:116. B 1:444. Z 1:374.
D. FUSILLA T, bot US expl expd 2:375. Z 1:374. Chilli.
D. TRICOLORE P 2:79, "near Elmira, Cal." KBr, Z 1:374 et 4:93 as syn.
 Genus **DRABA** Linnaeus.
 Dill ex L, syst ed 1 (1735). A 1:260d.
D. ALBERTINA P 4:312.
D. ALGIDA Adams ex DC syst 2:337. B 1:29 as alpina var algida Regel.
D. ALFINA L, sp pl 642. Parry, Wyo 7, 14. B 1:29.
 Variety **ALGIDA** Regel, Fl Ost. sib 1:183. B 1:29.
 Variety **DENSIFOLIA** Parry, Wyo 5.
 Variety **GLACIALIS** Dickie, J Linn sc 11:33. B 1:29.
D. AMPHIPHILA M 1:145.
D. AUREA Vahl, Fl Dan t 1460. Hook. bot mag t 2934. B 2:430.
 Variety **STYLOSA** G. Br. Colo. 233.
D. AUREOLA Wat, B 2:430.
D. BRACHYCARPA Nutt. T & G Fl 1:108. P 4:207 as Abdra b.
D. CAROLINIANA Walt, Fl Carol 174. P 4:204.
 Variety **MICRANTHA** Z 2:227.
D. CORUGATA Wat, B 2:430. Ha 82. A 1:346d.
D. CRASSIFOLIA R Grah, Edinb Phil J 1829:182. B 1:28.
DRABA CUNEIFOLIA Nuttall. T & G Fl 1:108. B 1:28. Da 2. A 1:77d, 260d. Ab 176. P 4:201.
 Variety **BREVIPES** Watt. A 1:260.
 Variety **INTEGRIFOLIA** Wat. 23:256. A 1:77 (fdr sub cuneifolia), 260d. Ab 176.
 Variety **INTEGRIFOLIA** Wat. Parish, SCAB 2:81, Monica et SBer," a form of sterile soils." **
 Abrams, Fl LA 176.—Same range as the type and apparently more common.
 Variety **FLATYCARPA** Wat. A 1:260d.
 Variety **SONORAE** Parish. A 1:260d. Ab 176.
 Variety **SONORAE** Parish, SCAB 2:81 based on D: Sonorae Greene, Cal ac b 2:59.
 Abrams, Fl LA 176.—Same range as type, most common form with us.
 Quintin (Palmer 611).
 So Cal; Ar.
 Draba Sonorae Greene, Cal ac b 2:59 (1886).
D. DEFLIXA P 4:20.
D. DIOTYOTA P 4:313.
D. DOUGLASHII G 7:328. B 1:29.
D. EURYCARPA G 6:520. B 1:29. Parry. Wyo. 22.
D. GLACIALIS Adams, mem sc nat Mosc 5:106. B 1:29 as alpina var glacialis.
D. GRANDIS Langsd, DC Syst 2:355. = hyperborea fide Ik. P 3:253 as Neodrabag.
D. HELLERIANA P 4:17.
D. HELLERI Small, Fl SEUS 479. M 1:145 as ammophila, Tex.
D. HYPERBOREA Desv. J bot 3:172. P 3:253.
D. INTEGRIFOLIA P 4:201.
D. JOHANNIS Host FC Austr 2:240. (G, Am J sci 33:242 = crassifolia fide B 1:29.)
D. LEMMONI Wat, B 2:430.
D. LUTEOLA P 4:19.
D. MEMOROSA L. sp pl 643. P 3:306 et 4:313.
 Variety **LUTEA** Wat, bot King 22. B 1:28 as stenoloba.
D. FLADNIKENSIS Wulf in Jacq misc 1:147 t 17 f 1. Z 2:227.
D. NEOMEXICANA P 4:19.
D. OLIGANTHA P 4:313.
D. PETROPHILA P 4:17.
D. PINETORUM P 4:18.
D. PRAEALTA P 3:306.
D. SPECTABILIS P 4:19.
D. STENOLOBA Ledeb, Fl Ross 1:154. B 1:28. P 4:313, 314.
D. SONORAE Greene, Cal ac b 2:59. A 1:260 as cuneifolia variety S.
 DRABA UNILATERALIS M. E. Jones. Jones, Torr Cl b 9:124.
 A 1:260 d. Greene, Cal ac b 1:72 as Heterodrabu.
 Valle de las Palmas, Baja (Or 1892). Colusa Co, Cal.
 Heterodrabu unilateralis Greene, Cal ac b 1:72.
D. STREPTOCARPA G, Am J sci sr 2, 33:242. P 4:17.
D. STYLOSA Turcz in sc nat Mosc b 27 (2):300. Ecuador. P 4:17-19.
D. VERNA L sp pl 642. P 4:205. = Eraphila vulgaris fide IK.
D. VIRIDIS M 1:27.
DRAPERIA T. Am. ac pr 7:401 (1868).
D. SYSTYLA T, l. B 1:506.
DRIMOPHYLLUM Nutt, sylv 1:85 (1842).
D. PAUCIFLORUM Nutt, sylv 1:85 t 22. B 2:61 as Umbellularia Californica.
DROSERIA L, syst ed 1 (1735). P 3:81.
D. ANGELICA Huds, Fl, ed 2, 1:135. Eu. B 1:213.
D. INTERMEDIA Hayne, Schrad J bot 1800, 1:37. B 1:213.
D. LONGIFOLIA L, sp pl 282. Eu. B 1:213 in part as intermedia.
D. ROTUNDIFOLIA L, sp pl 282. B 1:213. Eu. Asia. Fla. Cal. Arctic regions.
DRUDEOPHYTUM
D. FARISHII C & R Mon 82. A 1:271 as Velaea P. Ab 284.
DRYMARIA Willd ex Roem & Schult, syst 5: xxxi (1819).
D. ARENARIODES Willd, l. c. 406. Z 2:68.
D. CARINATA Z 2:70.
D. CRASSIFOLIA Bth, bot Sulph 16. Z 2:68, 69.
D. CORDIFOLIA Z 2:69.
D. DEBILIS Z 2:68.
D. DEPRESSA Gifts 1:153. NM.
D. FENDLERI Wat 17:328, NM. Z 2:69.
D. GLANDULOSA Bart, Presl Rel Haenk 2:9. Z 2:69.
D. HOLOSTEOIDES Bth, bot Sulph 16. Z 2:68, 69.
D. POLYCARPIOIDES G, Pl Fendl 12. Z 2:68.
D. POLYSTACHYA Z 2:69.
D. VISCOSA Wat 22:469.
 "Ann. prostrate, diffusely branched; sts and branches glab or nearly so: lvs

linear-spatulate, somewhat fasciated, 6" lg or mostly much less, glandular pubescent or glabrate; fls nearly sessile in loose corymbs; sep viscid-pubescent, scarcely a line lg; pet included, bind: cap oval, few-seeded, equally the sep.—Wat 22:469. Near Quintin.

DRYAS L. Gen. ed 1, 148 (1737).
D. ANEMOIDEA Pall Reise 3: app 733. P 4:49 as *Sieversia pentapetala*.
D. PENTAPETALA L. Amoen 2:353, et sp pl 1:501. P 4: 49 as *Sieversia* p.

Genus **DRYMOCALLIS** Tourn.
 Fourr in Ann Linn sc Lyon ns, 16:371 (1863). A 1:317d. = *Potentilla* fide 1k.
DRYMOCALLIS GLANDULOSA Rydb.
 A 1:317d. Ab 200.

Abrams, Fl LA 200.—Frequent in the chaparral belt in all our mts. Ours not typical, having usually smaller fls and less acute sep. Mr.-Jl.

Potentilla glandulosa Lindl, bot reg 19 t 1583 (1833).

Type locality: "California."
 Greene, Erythea 1:5. Pacific coast.
 Davidson, Erythea 2:30. Cat I.
 Variety **MONTICOLA** Rydb.
 A 1:318d. Ab 200.

Abrams, Fl LA 200.—Frequent in the pine belt of our mts. My-Ag.
 Rydb, mon NA Pot 199 (1898).

Potentilla glandulosa var. *Nevadensis* Watson.
 Hall, U 87.

Genus **DRYOPTERIS** Adams.
DRYOPTERIS RIGIDA-ARGUTA Und.
 California to Alaska.

Genus **DUDLEYA** Britton & Rose.

A 1:90 fdr.
DUDLEYA ABRAMSII Rose.
 A 1:49 fdr.
DUDLEYA ACUMINATA Rose.
 Calmali, Baja (Or). Cedros Island (Br)?
DUDLEYA ALBIFLORA Rose.
 Magdalena bay, Lower California (T. S. Brandegee).

DUDLEYA ALOIDES Rose.
 A 1:49 fdr.
DUDLEYA ANTHONYI Rose.
 San Martin Island, Lower California (A. W. Anthony).

DUDLEYA BERNARDINA Britton.
 A 1:52 fdr.
DUDLEYA BRANDEGEEI Rose.
 "Probably native of Lower California" (Mrs. T. S. Brandegee).

DUDLEYA BRAUNTONI Rose.
 A 1:53 fdr. Ab 187.
DUDLEYA BREVIPES Rose.

Calmali, Baja (Or).
DUDLEYA BRYCEAE Britton.
 A 1:51 fdr.

DUDLEYA CANDELABRUM Rose.
 A 1:51 fdr.
DUDLEYA CANDIDA Britton.
 A 1:51 fdr.

DUDLEYA CONGESTA Britton.
 A 1:53 fdr.
DUDLEYA CULTRATA Rose.

A 1:50 fdr.
DUDLEYA PARISHII Rose.

A 1:52 fdr.
DUDLEYA PAUCIFLORA Rose.
 San Pedro Martin mt, Baja (T. S. Brandegee).

DUDLEYA PULVERULENTA.
 A 1:90 d. Par 143. Ab 186.
 ?Cotyledon pulverulenta Baker in Saund Kefug Bot 1:t 66 (1869).
 ?*Cheveria argentea* Lam, III Hort 10: 78 (1863).

DUDLEYA PUMILA Rose.
 A 1:50 fdr.
DUDLEYA RIGIDA Rose.
 Lower California (J. E. McClelland).
DUDLEYA RIGIDIFLORA Rose.
 Plaza Maria, Lower California (A. W. Anthony).

DUDLEYA ROBUSTA Britton.
 A 1:52 fdr.
DUDLEYA RUBENS B & R.
 Cotyledon rubens, Br, Cal ac pr sr 2, 2:165 (1890). "Chiffs near San Esteban," Baja.

DUDLEYA RUSBYI Britton & Rose.
 Cotyledon rusbyi Greene, Torr cl b 10: 125 (1863).

San Francisco mountains, Arizona.
D. SEELDONI Par 146 t.

DUDLEYA TENUIS Rose.
 A 1:50 fdr.
DUDLEYA XANTI Rose.

Vicinity of San Lucas, Baja (Xantus).
DUDLEYA DELICATA Rose.
 A 1:53 fdr.

DUDLEYA ELONGATA Rose.
 A 1:53 fdr. Ab 188.
DUDLEYA GRANDIFLORA Rose.

A 1:49 fdr.
DUDLEYA GREENEII Rose.
 A 1:50 fdr.

DUDLEYA HALLII Rose.
 A 1:50 fdr.
DUDLEYA INGENS Rose.

A 1:51 fdr.
DUDLEYA LANCEOLATA.
 Cotyledon lanceolata Benth & Hook, Brewer & Watson, Bot Cal 1:211 (1876).
 A 1:90d. Par 146.

DUDLEYA LINEARIS Britton & Rose.
 Cotyledon linearis Greene, Pittonia 1: 255 (1869).

San Benito Island, Baja.
DUDLEYA LURIDA Rose.
 A 1:52 fdr. Ab 188.

DUDLEYA MINOR Rose.
 A 1:51 fdr. Ab 187.

DUDLEYA NUBIGENA B & R.
 Cotyledon nubigena Br Cal ac pr sr 2, 3:136 (1891). Sierra de la Laguna, Baja.

DUDLEYA OVATIFOLIA Britton.
 A 1:52 fdr. Ab 187.

DULICHIUM Pers, syn 1:65 (1805).
D. SPATHACEUM Rich, ex Per lc. B 2:213.

DURAVIA Gifts 1:23, based on sp of Polygonum (section Duravia Wat).
D. BIDWELLIAE Gifts 1:23 based on P: B (Wat 14:294).

D. BOLANDERI Gifts 1:23 based on P: B (G 8:400).
D. CALIFORNICA Gifts 1:23 based on P: c (Melsan in DC 14:100).

D. GREENEII Gifts 1:23 based on P: G (Wat 14:295).
DYSMICODON Nutt. Am phil sc tr, sr 2, 8:255 (1843). = *Specularia* fide 1k.

D. CALIFORNICUM Nutt lc, 256. B 1: 446 as *S. biflora*.

D. OVATUM Nutt, lc B 1:446 as *S. biflora*.

Genus **DYSODIA** Cav.

DYSODIA Cav in Anal Cienc nat 6:334 (1802).

D. ANTHEMIDIFOLIA Bth, bot Sulph 29. P 1:291, San Bartolome bay, Baja.

D. CHRYSANTHEMOIDES Lag. Gen et sp 29. B 1:397.

D. COOPERI G 9:201. B 1:388. CD. Mo-have.

D. POROPHYLLOIDES G. Am ac mem. NS. 5:322. B 1:397. Ar. Cal. Calmalli (Br).

D. SPECIOSA G 5:163. B 1:397.

EATONIA Raf, J Phys 89:104 (1819).

E. ANNUA Skds. A 1:159 fdr.

E. OBSTUSATA G, B 2:302.

San Bernardino, Cal. (Parish).

E. PURPURASCENS Raf lc.

EBUROPHYTON

E. AUSTINAE M 1:49.

ECHEVERIA DC 3:401 (1828). = Cotyledon fide 1k.

E. ARGENTEA Lem, Ill. Hort. 10: misc 78 (1863). A 1:90 as Dudleya pulverulenta.

E. FARINOSA Lindl. J hort sc 4:292. B 1:212 as C. f.

E. LANCEOLATA Nutt, T & G Fl 1:561. A 1:90 fdr as Dudleya l. T, Pac Ry R 4: 89 in part=C. farinosa fide 1k.

E. LAXA Lindl, J hort sc 4:292. B 1:212 as C. l.=C. caespitosa fide 1k.

E. PULVERULENTA Nutt. T & G Fl 1: 560. A 1:90 fdr as Dudleya p.

ECHEIDIACARYA G ex B & H Gen 2: 854 (1876).

E. ARIZONICA G 11:89 Ar. B 1:519. P 1:21 as Plagiobothrys Pringlei.

ECHINALIS C Koch, in Linnaea 24:403 (1851). = Cnicus fide 1k.

E. CARLINOIDES Cass, DC Hort Genev t 22. B 1:421 as C. s. (Eu; Sib.)

E. HUTANE Cass lc B 1:421 as C. Carlinoides.

ECHINACEA Moench. Meth 591 (1794).

E. ANGUSTIFOLIA DC 5:554. M 1:5 as Branneria a.

E. TENNESSEENSIS M 1:149 error for Brauneria t (Beadle bot gaz 25:359 (1898)=B. angustifolia.

ECHINOCHLOA Beauv, Agrost 53 t 11 (1812). = Panicum fide 1k.

E. CRUS-GALLI Beauv lc. B 2:260 as P. C.

ECHINOCTYSIS T & G Fl 1:542 (1840. P 1:1, 143. Marah K.)

E. FABACEA Naudin, Ann Sci nat, sr 4, 5:154. Par 28 t. P 1:3. Z 1:137.

Br 1:210. The plants of both Cruz and Rosa seem to be this species rather than *E. macrocarpa*. They mature either 4 or 8 large sds."

Synonymy: Megarrhiza Californica T, Pac Ry R, Wat, B 1:241.

E. GLENSIS Greene, Cal ac b 1:189.

E. GUADALUPENSIS Cogniaux, DC mon phan 3:819. Greene, Cal ac b 2:398 Cruz. P 1:3, 88 Mig.

Synonymy: Megarrhiza Guadalupensis Wat, B 1:241.

E. MACROCARPA Greene, Cal ac b 1: 188; 2:398 Cruz (vide *E. fabacea*). Par 30. P 1:203 Cedros.

E. MABA Cogn. DC mon phan 3:817.

E. MURICATA K 1:57. P 1:3. Cur 1:138 as Megarrhiza muricata Wat.

Synonymy: *E. Watsoni* Cogn. DC mon phan 3:819, fide P 1:3.

E. OREGANA Cogn. Diag Cucurb nouv 2:87, 97. P 1:3.

Synonymy: Megarrhiza oregana T, Pac Ry R; B 1:241.

E. WATSONI Cogn.—vide muricata.

ECHINODORUS Rich. mem mns Par 1:365 (1815).

Per or ann herbs with lg-petioled, elliptic, ovate or lanceolate, oft cordate or sagittate lvs, 3-9-ribbed, mostly nuncate with dots or lined; scapes oft lger than the lvs; inf racemose or paniculate; fls perfect, in whorls, each whorl with 3 outer bracts and num inner bracteoles; pet w: receptacle large convex or globose; sta 12-30; ova num, sty obliquely apical, persistent; stig simple; ak more or less compressed, ribbed and beaked, forming spinose hds. Bur-head.

E. CORDIFOLIUS Griseb, Goett Abh 7:257 (1857). Ab 16.=rostratus fide 1k.

Lvs com broadly ovate, obtuse, cordate at base, 12-16 cm lg and wide, sometimes lanceolate and sm'er; petioles angular, striate, 5-15 cm lg; scapes 1 or more, erect, 10-30 cm hi; fls 3-6 in each whorl, on pedicels 6-12 mm lg; bracts linear-lanceolate, acuminate, dilated at base, inner perianth seg sh'er than the outer, 4-6 mm lg; sta com 12; sty exceeding the ova in length; fr'ing hds bur-like, 4-6 mm in diam; ak obovate or falcate, 6-3-ribbed; beak apical, oblique, 1.5 mm lg

Abrams, Fl LA 16.—"Occasional along streams and banks of ponds. My-Jl."

Echinodorus rostratus E.

SD! Baja mts! Comondu, Baja (Br).

ECHINODORUS ROSTRATUS Engelm. G man bot ed 1, 460 (1848); ed 2, 438. Ab 17 as cordifolius.

ECHINOPANAX Decne & Planch in rev hort (1854) 105.=Fatsia fide 1k.

E. HORRIDUS D & P, lc. B 1:273 as F. h.

ECHINOSPERMUM Sw ex Lehm, Asperif 113 (1818).

E. DEFLEXUM Lehm, lc 120. B 2:469. Z 2:232. Parry Wyo, 18. Eu. Sib.

Variety **FLORIBUNDUM** Wat, B 1:530.

E. DIFFUSUM Lehm, Pugil 2:23. B 1: 530, 2:469. Z 2:166.

E. FLORIBUNDUM Lehm Pugil 2:24. B 1:530. 2:469.

E. FREMONTII T & G, Pac Ry R 12:46. P 4:96.=redowskii fide 1k.

E. GREENEII G 12:163. B 2:469. A 1:100 d. P. 1:15 as Allocarya Echinoglochin.

E. LAPPULA Lehm, Asperif 121. Eu. (H & A bot Beech=Redowski fide B 1: 530).

E. LEOCARPUM F & M, Sem Hort Pet-rop 1835: 36. B 1:528 as Eritrichium l. P 1:117 as Cryptanthe leocarpa.

E. NERVOSUM K 2:146. Curif 121. Cites Californicum G as a synonym.

E. FATULUM Lehm. Hook Fl 2:84. B 1:530 as Redowskii.

E. REDOWSKI Lehm, Asperif 127. P 4: 97. B 1:529. 2:469.

Variety **CUPULATUM** G. B 1:530.

Variety **STRICTUM** Wat bot King 246. B 1:530 as variety cupulatum G.

E. STRICTUM Ledeb, Fl Abt 1:200, Sib. Nees, in Neu-Wied, Trav 2:443=Redo-

wski var. *cupulatum* fide B 1:530.
E. TEXANUM Scheele in Linnaea 25:260 P 494.—Redowski fide 1k.
ECLETES P Br. Hist Jamaica 181 (1756).
E. MACROSPHON T, bot Mex bound 158 t 43.—Macrosiphon Berlandieri fide 1k. M 1:2 as *Macrosiphonia macrosiphon*.
ECLIPTA L, Mant 2:157 (1771).
E. ALBA Hassk, Pf Jav Rar 528; Mig F1 Ned Ind. 2:65.—Erecta fide 1k. near Ft Yuma, Cal. (Or 2093).
EDOSMIA Nutt, T & G Fl 1:612 (1840).
E. GAIRDNERI Nutt lc. P 1:274 as *Ataenia Gairdneri*. B 1:54 as *Carum Gairdneri*.
E. OREGANA Nutt hb. P 1:274 as *Ataenia O.*
EGLETES Cass, sc Phlora b 1817:153.
E. CALIFORNICUS K 1:57. Cur 1:140 as *Eriophyllum caespitosum*.
ELATELUM Jacq, Stirp Am 241 (1763).
E. BIGELOVII Wat 12:252. B 2:449.—*Echinocystis* B? (fide 1k).
E. MINIMUM Wat 12:252. B 2:449.—*Echinocystis m* fide 1k.

ELATINACEAE.

Low herbs with opp or verticillate stipulate entire or serrate lvs, and sm axillary or fascicled regular perfect fls: sep 2-5, imbricated; pet equal in number, hypogynous; sta equal in number or twice as many; ova 2-5-celled; sty 2-5; ovules many, anatropous; cap with septifid dehiscence; placentae central; sd-coat crustaceous, rugose or ribbed.

Genus ELATINE Linnaeus.

L. Gen. ed 1, 118 (1737).

Water-wort: glab dwarfs, somewhat succulent, growing in water or in wet places, rooting at nodes: lvs entire: fls 2-4-merous: sep sub-membranous, obtuse: pet w or w'ish: cap globose, thin membranous, 2-4-celled, several or many seeded; sds striately sculptured.

ELATINE AMERICANA Arn.

Arn in Edinb J nat geog sc 1:431. B 1:80. 2:436. A 1:27d.

ELATINE BRACHYSPERMA Gray.

G 13:361, 363. Z 2:343. B 2:436. Ab 251. A 1:27d.

ELATINE CALIFORNICA A. Gray.

G 13:364. B 2:436. Da 3. A 1:27d.

E. TEXANA T & G Fl 1:678. B 1:80 as *Bergia* T.

Genus ELEOCHARIS R. Brown

Ann or per herbs, with simple, com. terete sts, and lvs reduced to mere sheaths or the lower rarely bearing a blade: Spkts solitary, terminal, erect, several many-fd, not subtended by an inv: scales concave, spirally imbricated: perianth of 1-12 com retrorsely barbed bristles, or sometimes 0: sta 2-3: sty 2-cleft and ak lenticular or biconvex, or 3-cleft and ak more or less distinctly 3-angled: base of the sty persistent on the summit of the ak, forming a terminal tubercle. Spike-rush.

ELEOCHARIS ACICULARIS R. Br.

R Br, Prod 224. Ab 70. Ha 65. Da 18. B 2:221. Eu. Asia. Brit Columbia to Mex.

Rt-stock very slender, creeping; sts 1-8' hi, very slender; spkt 1-3' lg, few-

fd; bractlets ovate-oblong, 1½" lg, r'ish-brown with broad g midvein: sty deeply 3-cleft: ak ¼" lg, obscurely triangular, ribbed on the sides; tubercle broad, sh, blunt.

ELEOCHARIS ARENICOLA Torrey. T. ex E & G, Bost J nat hist 5:237. Da 18. B 2:222.

Near Vulcan de las Tres Virgenes, Baja!

E. ELEOCHARIS Montana.

E. BOLANDERI G 7:392. B 2:222.

ELEOCHARIS CAPITATA R. Br.

E. DOMBEYANA Kunth, En Fl 2:145. Peru. (Boeck, Linnaea 36:450, as to Drummond's plant=*arenicola* fide B 2:222).

E. ENGELMANNI Steud, Syn pl Cyp 79. =ovata fide IK (Halls Texas n 696=obovata fide B 2:222).

E. MONTANA Roem & Schult, Syst 2: 153. Bth 27 (B 2:222 as *truncata*). Ab 72.

Eleocharis arenicola Torrey.

Per; sts slender, sulcate, 15-45 cm hi, erect; basal sheaths brown; spike oblq or sometimes ovate, 4-10 mm lg, rounded at apex; scales num, closely imbricated, ovate, very obtuse, brown with g midvein, scarious margined; bristles 4-6, about =ing ak; sty 3-cleft; ak obtusely 3-angled, oblong-obovate, about 1 mm lg, g'ish brown, smooth; tubercle broad at base, slightly constricted, deltoid, acute.

E. OBTUSA Schult, Mont 2:89.=ovata fide 1k. B 2:222.

E. OLIVACEA T, N Y ann Lyc 3:300. B 2:222, Ore.

E. OVATA R Br, Prod 224. B 2:222, Eu.

ELEOCHARIS PALUSTRIS R. Br. Prod 224. Eu. B 2:221. Da 18. Ab 70. Ha 65.

Common spike-rush. Per: ra-stock stout, creeping, stoloniferous; sts ½-2" hi, slender, mostly terete, sheathed at base, 1f-less; sheaths sub-truncate; spikelet many-fd, 6-12" lg, oblq-lanceolate to linear, brown with broad w'ish margin and g'ish keel; sty 2-cleft; ak planoconvex, rounded but not angled on back, 1" lg including tubercle, which is constricted at point of junction. Baja! SF. creeping spike-rush.

E. FAUCIFLORA B 2:221 based on *Scirpus p.* Lightf, Reicheub Ic Fl Germ 8 t 299.

E. PYGMAEA T, N Y Lyc ann 3:313.=*Scirpus nanus* fide 1k. B 2:221.

E. ROSTELLATA T, Fl N Y 2:347. B 2:222. Da 18. Ab 71, LA, SBER. Baja!

Per; sts rather slender, compressed, strongly sulcate, 3-8 dm hi; often reclining and ring at apex; basal sheaths light colored, truncate; spike oblong, 6-10 mm lg; scales straw-colored, or pale brown, ovate, obtuse, carinate, rather firm, about 4 mm lg; bristles 6, exceeding ak; sty 3-cleft; ak obovate, obtusely 3-angled, about 2 mm lg; tubercle not constricted at base, pyramidal, about 1 mm lg.

Eleocharis rostellata occidentalis Wat. Variety **OCIDENTALIS** Wat, B 2:222—"Nutlet nar'er, oblq-obovate; bristles mostly sh'er." Ab 71 as typical.

E. TRUNCATA Schlecht, bot seit 7:118.
 =Dombeyana fide Baekeler (B 2:222).
ELIUSINE INDICA Gaertn, Fr et Sem
 1:8. Parish, SCAB 8:7. LA.
ELIUSIA Nutt, T & G Fl 1:125 (1838).
 =Oligomeris fide lk.
E. SUBULATA Nutt Lc. B 1:54 as O.
 subulata.

Genus **ELLISIA** Linnaeus.

ELLISIA CHRYSANTHEMIFOLIA Bth
 Linn sc tr 17:274. Ab 321. Da 11. B 1:
 505. Br 1:214 Rosa. Par 40. Vide Eucrypta c.

Contra Costa Co to Quintin; Guad;
 Cruz; Rosa.

ELLISIA MEMBRANACEA Benth.
 Linn sc tr 17:274. Cov 157, Funeral mts.
 B 1:505.

Sts succulent, light g, smooth except
 for some stiff bristly hairs that some-
 times help support the weak sts; lvs
 pinnately divided into 3-9 obtuse, linear
 divisions with margined petioles; shady
 damp places.

Macrocalyx membranaceus Kuntze,
 Rev. Gen Pl 2:434 (1891).

Type locality: Californian.
 SF to Quintin.

E. TORREYI G 20:302.

ELODEA Michx, Fl 1:20 (1803). Juss
 Gen 255 in obs (1789); Vent Tabl 3:144
 (1799)=Hypericum fide lk. Jack in Ma-
 lay misc 2: n 7, 21 (1882)=Cratoxylon
 fide lk.

E. CANADENSIS Michx Fl 1:20. B 2:129
 as Anacharis c.

ELIOPHANTHELLA ATTOLENS M 1:4.

ELYTROSPERMUM Steud, Nom ed 2,
 1:552 (1840).=Elytrospermum Mey.

ELYTROSPERMUM C. A. Meyer, mem
 sav Etr Peterab 1:200 t 2 (1830).=
 Scirpus fide lk.

E. CALIFORNICUM Mey, lc. B 2:218 as
 S. tatora (=riparius fide lk).

Genus **EMMENANTHE** Benth.

EMMENANTHE Bth. Linn sc tr 17:281
 (1835).

Ann with habit of Phacelia and dif-
 fering from that genus only by lvs y or
 cream-colored persistent cor, destitute
 of appendages.

E. GLABERRIMA T ex Wat, bot King 257
 B 1:514.

E. GLANDULIFERA T, lc. B 1:514. Wat,
 bot King 257. Nev.

E. LUTEA G 10:329. B 1:514. Nev. Idaho.

E. PARVIFLORA G, Pac Ry R 6:84 t 15.
 B 1:514 Ore.

EMMENANTHE PENDULIFLORA Bth.
 Linn sc tr 17:281. B 1:515. Ab 326. Da.
 12. Er 1:12. Per 134 t Greene. Cal ac b 2:
 407 Cruz. Ar! Baja! A 1:78d. Guad.

E. FUSILLA G 11:37. B 1:515 Nev.

EMPETRUM L, syst ed 1 (1735).

E. NIGRUM L, sp pl 1022. Eu. Asia. P
 3:79.

EMPLECTOCALDUS T, Smith Cont 6:
 10 t 5 (1854).

E. FASCICULATUS T, lc. B 1:168 as
 Prunus f.

ENCALYPTA Schreb.

E. OLIATA Hedw. B 2:386. Eu. N Y.
 Ore. Colo. Cal.

E. BRASDOCARPA Schwaegr. B 2:386.
 Eu. Colo. Wash. Nev. Arctic Am.

E. VULGARIS Hedw. B 2:385. Nev. Ut.
 Cal. Colo. Eu.

ENCELIA Adans, Fam 2:128 (1763). A
 1:185 d.

E. CALIFORNICA Nutt, Am phil sc tr
 7:357. Par 132. Greene. Cal ac b 2:403
 Cruz. Da 9. Ab 415. B 1:351. A 1:185d.

E. CONSPERSA Bth, bot Suph 26. P 1:
 265. San Benito Isl; 268 Cedros; 290, San
 Bartolome bay, Baja. B 1:351 (? as Cal-
 ifornica).

ENCELIA ERIOCEPHALA A. Gray.
 G 8:657. Cov 131. B 1:351. CD Cape San
 Lucas, Baja.

CD (Parish 228); Cape San Lucas.

ENCELIA FARINOSA A. Gray.
 G, Emory R 143. Cov 131. B 1:351. 2:456.
 Da 9. Ab 415. S D Co!

"Incenso," 6 ft high, San Gregorio,
 Baja (Br). SD Co!

Synonymy: *E. radians* Greene, fide Br
 Z 1:83.

ENCELIA FRUTESCENS A. Gray.
 G 8:657 (1873). Cov 131, Panamint and
 Inyo mts. Ut. SD Co! Z 2:248. B 1:352.

Type locality: "Agua Caliente on the
 Gila, Ar.

Utah; Arizona; SD Co!

Synonymy: *Simsia frutescens* G.

E. NIVEA Bth, bot Sulph. 27. B 1:354 as
 Vigulera n.

E. RUTANS Z 2:230.

E. RADIANIS Cal ac pr sr 2, 2:176.=
 farinosa fide Br, Z 1:83.

E. STENOPETALA Greene, Torr cl b 10:
 41. P 1:204 Cedros.

ENCELIA VISCIDA A. Gray.
 G 11:78. S D mts! B 1:616.

ENDOTHEA

E. LONGIROSTRIS M 1:14.

ENTOSTHODON Schwaegr. Moss.

E. BOLANDERI Lesq. B 2:388. SF.

E. TEMPLETONI Schwaegr. B 2:388.
 Eu. Cal.

ENTYLOMA ELLISII Halsted. Z 1:94,
 on spinach.

EPICEDIDIUM L, syst ed 1 (1735).

E. HEXANDRUM Hook Fl 1:30 t 13. B 1:
 15 as Vancouveria hexandra.

Genus **EPIPACTIS** Haller.

Adans, Fam 2:70 (1763).

St lfy from creeping rtstocks: Fls in
 racemes with foliaceous bracts; sep and
 pet nearly equal, spreading; lip strong-
 ly constricted at middle, lower portion
 deeply concave, upper portion dilated:
 Anth 2-celled, sessile behind the broad
 truncate stig, on a slender jointed base;
 pollen-masses become attached to gland
 capping the sm rounded beak of stig:
 Ovaries reflexed at maturity.

E. AMERICANA Lindl, in ann nat hist
 4:385. B 2:137 as gigantea.

E. GIGANTEA Dougl ex Hook Fl 2:202 t
 202. Ha 70. B 2:137. Da 11. Z 2:4, 166,
 374. Par 394 t. Stream orchis.=Royleana
 fide lk. Wat, bot King 341.

E. ROYLEANA Lindl, in Royle, Ill bot
 Himal 368.

Genus **EPHEDRA** Tournefort.

Tourn, ex L, Gen ed 1, 312 (1737).

E. ANTISTYLLITICA Berland, ex CA
 Mey, mon Eph 101. B 2:109, (of Wat, bot
 King 328 t 39 as Nevadaensis).

- E. CALIFORNICA** Wat 14:300. B 2:109. Da 17. A 1:366d.
- EPHEDRA NEVADENSIS** S. Watson. Wat 14:299. B2:108. Nev. Mohave. Mex.
- EPHEDRA OXYCARPA** Engelm.
- E. TORREYANA** Wat 14:299. B 2:109.
- EPHEDRA TRIFURCA** Torr. Emory R 152. (Parry, bot obs. Ut 351 = Torreyana fide IK.) B 2:109. Ut.
- EPHELIS MEXICANA** M 1:23.
- EPHEMERUM** Hampe. Moss.
- E. SERRATUM** Hampe. B 2:358. Eu. Atlantic states, Cal.
- EPICOSTORUS** Raf Atl J 144 (1832). = Neillia fide Ik.
- E. MONTANUS** Raf lc. = N. monogyna fide P 2:29. = N. Torreyi fide IK.
- EPILOBIUM** Dill ex L, syst ed (1735). Erect herbs, ann, per by creeping r-stocks, or propagating in autumn by offsets: lvs opp or alt: fls p, rose-color or w; pet 4, oft emarginate or bifid: sta 8, the 4 alt sh'er: stlg oblg or 4-lobed: ova lg and nar, 4-celled: cap 4-valved: sds num, the summit bearing a tuft of lg hairs (coma). Willow-herb.
- E. ADEOCAULON** Haussk, in Oestr bot zeit 29:119.
- Variety **OCIDENTALE** Trelease, Mo bot gard r 2:95:—"Remotely lfy, especially the mostly strict very glandular branches; lvs more triangular-lanceolate, 50 mm lg on main st, erect, prominently denticulate, very sh-stalked, those of infl sm and acute at both ends." McClatchie, Er 2:123 Cat. Cov 102 Mono Co. Cal. Mont? Ut. Ar. Da 6.
- Type locality: "Vancouver Island and Brit Columbia to central Cal and Nev?"
- Variety ? **PERPLEXANS** Trelease, lc, 96t 25:—"Slenderer, sub-simple or with few ascending remotely lfy branches, less glandular, the infl sometimes canescent with incurved hairs; lvs scarcely 50 mm lg, divergent, lanceolate, rather obtuse and sparingly undulate-serrulate, thin and light g, the upper acutely tapering to slender sometimes elongated petioles. Yellowstone Park to Ora. Colo. NM, and Cal." Ar. Nev. Ha 96.
- E. ALPINUM** L, sp pl 348. B 1:219.
- E. ANGUSTIFOLIUM** L, sp pl 347. Eu. Par 250. Cov 102. Ckl W 5:11. Haussk, mon 37. Trelease, Mo bot gard r 2:80 as spicatum. Z 2:162.
- E. BREVI-STYLUM** Barb. B 1:220. = glandulosum fide Ik. Trelease, Mo bot gard r 2:100. Wash, Cal.
- E. CALIFORNICUM** Hausskn, mon 260. Da 6. Ab 264. Alamitos.
- "Tall, rather slender, somewhat branched, glab below, the infl and buds w with lg and rather coarse ascending hairs: lvs oft 75-100 mm lg, lanceolate, subacute, rather remotely serrulate, rounded or acutely tapering to sh petioles, soon glab; fls comparatively few; fr'g ped slender, sometimes nearly equaling the lvs; cap at length nearly glab; sds almost beakless, 0.4x0.9 mm; coma w."—Trelease, Mo bot gard r 2:96.
- E. COLORATUM** Muhl ex Willd En 1: 411. Greene. Cal ac b 2:398 Cruz. B 1: 219. Haussk, mon 258. Trelease, Mo. bot gard r 2:92d, 94 (of authors in part as adenocaulon). Can to SC; Wise; Neb; Mo.
- LA.; Cruz; S Ber mts (Parish 1148).
- E. FRAVESCANTUM** Barbey. B 1:220. Trelease, Mo bot gard r 2:90d, 95, t 15. Ore. Cal.
- E. GLABERRIMUM** Barbey. B 1:220. 2:447. Ha 96. Trelease, Mo bot gard r 2: 104 t 38. Wash. Ore. Cal.
- E. KOLOBRICEUM** Trelease, Mo bot gard r 2:91 t 17. Ab 264. Da 6, Cov 102. McClatchie, Er 2:123. Cat.
- "Rather woody, loosely branched, at least the upper lvs and branches canescent with subappressed hairs; lvs 50 mm lg, rather remote and smaller on the fig branches, oblg-lanceolate, obtuse or exceptionally acute, undulately lower-serrulate, nar'ed or abruptly contracted and then cuneately nar'ed into sh petioles; fls produced in lg succession along the elongated branches, erect, pale, barely 5 mm lg; frg ped about 10 mm lg and equalling the lvs; sds sh-beaked, very finely papillate, 0.4x1 mm; coma w or somewhat dingy. Cal: SBER Co (Parish 1881 n 1022) and Kern Co."—Trelease, lc.
- E. JUCUNDUM** G 12:57. B 2:448. Trelease, Mo bot gard r 2:86 as paniculatum var. jucundum.
- E. LATIFOLIUM** L, sp pl 1:347. B 1:219. Trelease, Mo bot gard r 2:81 t 2. Labrador to Alk. Ore.
- E. LUTEUM** Pursh, Fl 1:259. B 1:219. Trelease, Mo bot gard r 2:82. Ore to Alk. Sib.
- E. MINUTUM** Lindl, Hook Fl 1:207. B 1:220. 2:448. Guad (Palmer, Greene). Ore. Wash, north.
- Variety **FOLIOSUM** T & G Fl 1:490. Guad (Palmer) fide Trelease. Mo bot gard r 2:86.
- E. OBOCORDATUM** G 6:532. B 1:218. Par 256. Trelease, Mo bot gard r 2:83 t 6. Cal. Nev.
- E. OPACUM** Lehm, Hook. Fl 1:205. Ore. B 1:219, perhaps a "hybrid between latifolium and spicatum."
- E. OREGANUM** P 1:225, Grants' Pass. Ore. Trelease, Mo bot gard r 2:105 t 40, as a hybrid ? of glaberrimum.
- E. OREGONENSE** Hausskn mon 276 t 14 f 66. Ore. north. Trelease, Mo bot gard r 2:109 t 25; Cal?
- Variety ? **GRACILLIMUM** Trelease lc, t 46. Ha 97.
- E. ORIGANIFOLIUM** Lam, Ency 2:376. B 1:219. = alsinifolium fide Ik.
- E. PANICULATUM** Nutt, T & G Fl 1: 490. Ab 264. Ha 97. Par 250. B 1:220. McClatchie, Er 2:123 Pasadena, SBER (Parish 1021). Trelease, Mo bot gard r 2: 85 t 8.
- Sts erect at base, slender, terete, loosely dichotomously branched, glabrate at base, somewhat glandular-pubescent above or nearly smooth, 3-8 dm, hi; lvs chiefly fasciated and alt, lanceolate or linear-lanceolate, acute, sparingly denticulate, tapering to a slender winged petiole, 3-5 cm, lg, becoming smaller and bract-like above; fls scattered toward ends of branches; pet about 8 mm, lg, vio; cap fusiform, falcate, about 2 cm lg; sds about 1 mm broad, 2mm lg, papillate.

E. PARISHII Trelease, Z 1:210; Mo bot gard r 2: 97 t 27. SBER Co; Baja. A 1: 335 d.
E. SPICATUM Lam, Fl Fr 3:482. Par 250 t. Ha 97. Trelease, Mo bot gard r 2:80 t 1.

Mostly 2° hi, subsimple, glabrate below; lvs 25 mm lg, alt, lanceolate, acute, nearly entire, very sh-stalked, paler below, thin pinnately veined with the evident lateral veins confluent in submarginal loops; inf elongated, racemose, with sm bracts; young fl-buds soon reflexed but again spreading or ascending before expansion; pet 10-15 mm lg; sty exceeding sta, hairy at base; cap 50-75 mm lg, from subsessile to lg-stalked; sds 0.4x1.4 mm, with very lg dingy coma. Eu. Asia. Greenland, Alk. NC. Ill. NM. Ar. Cal.

E. WATSONI Barbey, B 1:219. Trelease, Mo bot gard r 2:91 t 16. Cal.

EQUISETUM L.

E. ARVENSE L. B 2:330.

E. BOREALE Bong, Veg Sitch 174. B 2: 330 as arvense.

E. EBURNEUM Schreb. B 2:330 as Telmateia.

E. FRUVIATILE Smith. B 2:330 as Telmateia.

E. HERMALE L. B 2:331. Eu. Asia. SF.

E. LAEVIGATUM Al Br. B 2:331, 485. Cal. Ore. Ohlo. La.

EQUISETUM MEXICANUM Milde.

Milde. McClatchie, Er 2:122 Pasadena.

Parish, Zoe 5:71. Mohave; CD. (?)

McClatchie, Erythea 2:122, Catalina.

EQUISETUM ROBUSTUM Al Br.

Al Br. B 2:330. Da 20.

Davidson, Erythea 2:30, Catalina.

Horse-tail rush, SD Co.

Ehrh. B 2:330. Da 20. Br 1:205. Cruz.

EQUISETUM TELMATEIA Ehrh.

San Bernardino (Parish 798).

ERANTHIS Salisb, Linn sc tr 8:303 (1807).

E. HYEMALIS Salisb, lc, 304. Eu. P 3: 152 as Cammarum hyemale.

ERCHETITES Raf, Fl Ludov 65 (1817).

E. POLYPODIODES P 3:90, based on Senectio gracilipes R & G, Am J sci, sr 3, 1:156.

Genus EREMIATRUM Gray.

EREMIASTRUM G. Am ac mem sr 2, 5: 320 (1855).

Hd many-fld, heterogamous; the num w rays in 1 sr, fertile; inv campanulate, of nearly =nar scales, outermost nearly foliaceous; receptacle flattish, naked; ligules oblg, entire; branches of sty tipped with a lanceolate appendage; ak obovate-oblg, flat, 1-nerved on each margin; outer pap of 8-10 thin laciniately dissected scales, each of several united bristles, inner pap of about as many stout bristles or awns and some smaller ones intervening.

E. BELLIOIDES G, lc. B 1:306.

A low daisy-like, hirsute or hispid ann, 1-4' hi, and sending off procumbent branches; "resembling Monoptilon but larger"; lvs alt, narly spatulate, entire, disposed to be crowded under the terminal solitary hds, and passing into scales

of inv; hd (including the expanded w rays) about 8" in diam, handsome, disk y. Ut. CD Mohave.

EREMIASTRUM ORCUTTII S. Watson. A 1:58 fldr. CD.

ERMINULA Greene. =Dimeresia G.

EREMOCHLOE Wat, bot King 382 t 40 (1871).

E. BIGELOVII Wat, lc, 382. NM.

E. KINGII Wat, lc, 382 t 40. B 2:300. Cal.

E. TRUBSEI Wat, lc, f 1. =Bigelovii fide Ik.

Genus EREMOCARPUS Benth.

Stellate-pubescence glandular and heavy-scented an herbs, with alt entire 3-nerved-petiolate, exstipulate lvs, and mon apetalous fls in axy cymes; cx 5-6 parted, slightly imbricate in the stem fls, 0 in the pist; sta 6-7, central on the hairy receptacle; fl exserted; ova with 4-5 sm glands at base, 1-celled, 1-ovuled; sty simple, filiform, stigmatic at apex; cap obovate-oblg, 2-valved; sd smooth and shining; endosperm fleshy.

E. SETIGERUS Bth bot sulph 53 t 26. Greene, Cal ac b 2:412. Cruz. Ab 233. Or W 5:12. Da 16. B 2:68.

Hoary with a dense stellate and spreading hispid pubescence; lvs ovoid or rhomboid, 2-5 cm lg, on slender petioles, the upper crowded and appearing opp or verticillate; pist fls few. lg-pedicelled; cx with oblg, obtuse seg, 2 mm lg; stam 1-3 in the axils; ova and sty densely pubescent; cap and sd 4 mm lg. Turkey weed.

Croton setigerus Hooker, Fl Bor Am 2:141 (1833).

Greene Fl Fr. 89 (1891).

Type locality: "On Mensies' Island, and on sandy banks of the Columbia upwards."

"On the sea beach near SD (Parry, Schott). Near San Felipe (Emory). This plant begins to fl and even bear fr when it has scarcely formed a st and all its lvs are in the rosette clusters, spreading flat on the ground."—T, bot Mex bound 196 (1859).

Genus EREMOCALYTA Greene.

Hirsute-canescens low ann with num lfy-bracted racemose branches; rts imparting a p stain; lvs in a basal rosulate tuft; racemes dense, biserial, lfy-bracted; pedicels filiform, sh and persistent with cx; cx 5-parted lobes nerveless, not manipulate in fr, its lobes neither margined nor carinate, erect, attached for their whole length, groove open, slightly dilated and not furcate at base; sty enlarged in fr and persistent. (P 1:58.)

E. LEPIDA P 1:59 based on Eri-trichum micranthum var. lepidum G. Ab 331. Ha 108. SD. SBER Co.

Sts stouter than in E. micrantha, 8-15 cm hi; cor larger, its limb 4-6 mm broad, appendages conspicuous; nutlets nearly 2 mm lg, pectinate-scabrous.

E. MICRANTHA P 1:59 based on Eri-trichum micranthum T. Ab 331.

Hirsute-canescens throughout; sts slender, erect, diffusely branched from the base, 6-12 cm hi; lvs linear, 4-10 mm lg; fls crowded; cor scarcely 2 mm lg, its

lobes about 1 mm lg, obscurely appendaged at throat; nutlets oblong-ovate, acuminate, smooth or nearly so, about 1 mm lg.

EREMOSEMIUM P 4:225 based on Grayia.

E. BRANDEGII P 4:225 based on G. Brandegei G 11:101.

E. SPINOSUM P 4:225 based on Chenopodium (?) spinosum Hook Fl 2:127, or G. polygaloides H & A, bot Beech 387.

ERICACERIA Nutt, Am phil sc tr ns, 7: 318 (1841). = aplopappus fide IK.

E. CUNEATA McClatchie, Er 2:124 based on A. cuneatus G. LA Co. Ha 126.

E. DIFFUSUM Bth, bot sulph 23. B 1: 314 as Elgelovia diffusa.

E. MICROPHYLLA Nutt, lc 319. B 1:313 as A. ericoides. A 1:194 as chrysona ericoides.

E. NANA Nutt, lc B 1:314 as A. nanus.

E. RESINOEA Nutt, lc. B 1:314 as A. nanus.

E. ERECTA Klatt, Ahh Nat Ges Halle 15:326. = A. Bloomeri fide IK.

E. MONACTIS, McClatchie, Er 2:124 based on A. monactis G. LA Co.

Genus **ERIGERON** Linnaeus.

Hort Cliff 407 (1737). A 1:247d.

E. ACCEDANS P 4:155.

E. ACRIS L, sp pl 653. B 1:327.

E. ANDERSONII G 6:540. B 1:325 as Aster A.

E. ANGUSTATUS Greene, Cal ac b 1:88 based on inornatus var. angustatus G, Syn Fl 215. (Fries ex Nym Consp 389 = acris fide IK.)

E. ANNUUS Pers, syn 2:431. B 1:331.

E. ARGENTATUS G 8:649. Z 2:230. B 1:328.

E. AEMERIAEFOLIUS Turcz ex DC 5: 291. Sib. B 1:326.

E. HELLEDIASTEMUM Nutt, Am phil sc tr, ns, 7:307. (G, in Hall Ore coil = divergens, fide. B 1:331.)

ERIGERON BIOLETTII Greene.

"Size of E: angustatus: whole plant scabrous-puberulent: lvs oblanceolate, obtuse, with sparsely but rigidly hispid-ciliate margins: corymb with branches less divergent: ak appressed-pubescent. On Hood's Peak, Biololetti, and Howell mt, Jepson."—Greene, Man 181.

ERIGERON BLOCHMANAE Greene.

P 3:25. A 1:59fdr.

E. BLOOMERI G 6:540. B 1:328. 2:455.

E. BREWERI G 6:541. Parish, Er 7:97 Hesperia, Cal. Cov 126. Soda Springs.

Type locality: "Yosemite valley," Cal; alt 4000'.

E. CAESPITOSUS Nutt, Am phil sc tr, ns, 7:307. B 1:327.

Variety **GRANDIFLORUM** Eaton, bot King 153. B 1:328 as in part = nevadense.

Variety **TENERUM** G. B 1:328. Nev.

ERIGERON CANADENSIS Linn.

L, sp pl 2:863 (1753). Cov 126, Kern river. Or W 5:12. Da, Er 1:59, LA Co. McClatchie, Er 2:125. Cat. A 1:247. Greene, Cal ac b 2:401, Cruz. B 1:331. Da 8. Ab 404 as Leptilon C.

Type locality: "in Canada, Virginia, nunc in Europa australi."

Throughout temperate N. A. Baja mts! Synonymy: Leptilon canadense Brit-

ton.

E. CANUS G, Pl Fendl 67. B 1:328.

E. CASCADENSIS M 1:6.

E. CERVIUS P 3:163.

E. CILIBEUM G Pl Fendl 68. B 1:331

as divergens, "a low variety".

ERIGERON COLVILLEI Greene.

A 1:59 fdr.

E. COMPOSITUM Pursh Fl 2:535. B 1:

E. COMMIXTUS P 5:58.

327. Parry, Wyo 14.

E. COMPOSITUS P 4:156.

E. CONCINUM T & G Fl 2:174. B 1:330.

E. CONSOBEBINUS P 3:186.

E. COBYMBOSUS P 3:291.

E. COBYMBOSUM Nutt, Am phil sc tr, ns, 7:308. B 1:329. Parish, Z 5:119, not likely at "Providence mt".

E. COULTERI Porter, Fl Colo, 61. Par. 110.

E. DECUMBENS Nutt, Am phil sc tr, ns, 7:309. B 1:329, 330, 2:455.

E. DISCOIDEA K 5:55. B 1:332 as Conyza Coulteri.

ERIGERON DIVERGENS T. & G.

Fl 2:175. B 1:331. P 4:155. A 1:247.

Nebri; Texas; Washington; Baja (Br).

E. DOUGLASSII T & G Fl 2:177. B 1:329

as foliosum; 330, var.

E. DROBACHENSIS O. Muell, Fl Dan t 874. B 1:327 as acre L.

E. DRUMMONDII P 3:295.

E. EATONI G 16:91. Z 2:248.

E. ELATIOB P 3:163.

E. ELATUS P 3:164.

E. ELONGATUS Ledeb, Fl alt 4:91. B 1: 327 as acre L.

E. EXIMIUS P 3:295.

E. FILIFOLIUS Nutt, Am phil sc tr, ns, 7:308. B 1:329.

E. FLAGELLARIS, G, Pl Fendl 68. Z 2: 248.

E. FLORIFER Hook Fl 2:20. = Townsendia florifera fide B 2:455.

E. FOLIOSUM Nutt, Gamb 177. Am phil sc tr, ns 7:309. B 1:329. Da 8. Ab 403. Ha 127. Greene, Cal ac b 1:88. Br 1:211 Rosa. A 1:247.

Scabrous and somewhat strigore-pubescent, 4-8 dm hl, lfy thruout; lvs narly oblanceolate, entire, about 4 mm broad, 3-6 cm lg, those of the branches reduced; hds hemispheric, 12-14 mm broad; rays about 30, nar, p; ak with a few coarse, bristly sh hairs.

Baja mts! S Ber (Parish); Rosa; Oregon.

Variety **STENOPHYLLUS** A. Gray.

Cruz (Greene); range of type.

A 1:247.

Variety **TENUISSIMUS** A. Gray.

Hanson's! SD Co!

A 1:247.

ERIGERON FRAGILIS Greene.

"Tufted sts erect, rigid, slender, 2 or 3° hl, very lfy up to the corymbose summit, dark g or even p'ish, scaberulous: lvs linear-filiform, 1½-2' lg, ascending, rigid, very fragile when dry, rough with minute pustulate incurved hairs; corymbose panicle loose and ample, of 10-15 hds, branches ascending; subulate bracts of the broad-campanulate inv in about 3 series, nearly glab; rays num and nar, deep-violet: ak obl-linear, nearly glab, or with obvious setiform hairs on and near the raised margins; inner pap finely

capillary, scaberulous and very fragile, the outer present but inconspicuous, composed of very sh and fine bristles. Trabucco canyon, Orange Co, Cal, Je 1901, LeRoy Abrams (n 1901). Sp in some sort intermediate between *E. foliosus* Nutt and *E. tenuissimus* Greene.—SCA b 1:39 (I Ap 1902).

E. FRAGILIS Greene. Ab 403.

E. FRATERATUS P 3:162.

E. GLABRATUM Hoppe & Harnsch ex Bluff & Fingern, comp Fl Germ 2:364. Variety *MINOR* Hook Fl 2:18. B 1:327 as *armerise-folium*.

E. GLAUCUM Ker Gawl, bot reg t 10. B 1:330. Par 312 t 338. Greene, Cal ac b 2:401 Cruz. P 1:89 Mig. Br 1:212 Rosa. A 1:247.

E. GORMANI P 3:156.

E. HISPIDUM Nutt. B 1:331 as probably *glaucum* ker.

ERIGERON INCOMPUS A. Gray.

Syn Fl 1 (2): 218. A 1:247.

Baja: SD foothills.

E. INORNATUS G 16:88. Greene, Cal ac b 1:88, Cal, Ore, Wash, Jepson, Er 1:13.

Variety *VISCIDULUS* G, syn Fl 1 (2): 215. P 1:174 as *viscidulus*.

ERIGERON JACINTEUS Hall.

Hall. A 1:60 fdr.

E. JUCUNDUS P 3:165.

E. KIMBERGII P 3:165.

E. LONGICAPITULUM Hook Fl 2:18. B 1:327 as *armeriaefolium*.

E. MACOUNII P 3:162.

E. MARTIMUM Nutt. B 1:331 as *glaucum*.

E. MEMBRANACEUS P 3:294.

E. MICROLOPHUS P 3:293.

E. NISER G 13:372. B 2:455.

E. NELSONII P 3:294.

N. NEVADENSE G 8:649. B 7:38.

E. OCHROLEUCUM Nutt, Am phil sc tr, ns, 7:309. B 1:328. 2:455.

ERIGERON PARISHII A. Gray.

G, syn fl 1 (2): 212. A 1:247.

"Rigid and rather stout, at length somewhat corymbosely branched, lvs spatulate-linear (largest 2" wide or nearly so), rather sh: hds sh-ped: inv cinereous-puberulent and glandular: rays near $\frac{1}{4}$ " lg, p: disk-cor beset with some sparse and sh minute hairs: ak sparsely hirsute: pap conspicuously double; outer setose-sequamellate."—G. Rocky canyons, Mohave (Parish).

E. PAUCIPETALUS M 1:140.

E. PEREGRINUS P 3:166.

E. PETROPHILUS P 1:218, near Berkeley, Cal.

ERIGERON PHILADELPHICUS Linn.

L, sp pl 863. B 1:331. Da 8. Z 2:127. Ab 403. Par 222. A 1:247.

Per by stolons, soft-pubescent or sometimes nearly glab; sts slender, mostly branched above, 3-6 dm hi; lower lvs spatulate or obovate, obtuse, dentate, 2.5-7 cm lg, nar'd into a sh petiole; upper lvs clasping, oft cordate at base, entire or dentate; hds several or many, corymbose-paniculate, 1-2 cm broad; peds slender, thickened at summit; inv depressed hemispheric; its bracts linear, com scarious-margined; rays 100-150, 4-8 mm lg, light rose-p; pap simple; ak puberulent.

Fla; Texas; SD Co; SBar Co (Parish). **E. PLANTAGINEUS** P 3:292.

E. PLATYPHYLLUS Gifts 1:145. NM.

E. PURPUREUS P 4:155.

E. PURPUREUM Ait, Hort Kew, ed 1, 3: 186. B 1:331 as *Philadelphicum*.

E. RACHNOSUM Nutt, Am phil sc tr, ns, 7:312. B 1:327 as *armeriaefolium*.

Variety *ANGUSTIFOLIUM* Nutt. B 1: 327 as *armeriaefolium*.

E. RADICATUM Hook, Fl 2:17 t 123. B 1:327. Ckll, W 6:10.

E. ROBERTIANUS P 3:293.

E. SALSIGINOSUS G 16:93. Par 338.

ERIGERON SANCTARUM S. Watson. Br 1:212, S. Inez mts near SBar; Cruz. A 1:247.

Santa Inez mts, S Bar Co; Rosa.

E. SETULOSUS P 4:319.

E. SONNEI P 1:218. Nev.

E. SPATULIFOLIUS Howell, Fl NW

Am 1:317, M 1:6 as *cascadensis*.

E. SPECIOSUM DC 6:284. B 1:330.

E. SPATHULIFOLIUS Rydb, Torr cl b

26:545.

E. STENOXYLLUM G, Pac Ry R 4:98. (B 1:330 cites Nutt, Gamb 176, not G, as *foliosum* var. S.) P 1:89 Mig. Greene, Cal ac b 1:88, 2:401 Cruz.

ERIGERON STRIATUS Greene.

Sts 2 or 3' hi, stoutish, very erect, bright-g, glab and notably striate, very lfy up to the corymbose summit; lvs oblg-linear, about $1\frac{1}{4}$ " lg, obtuse, carinate-nerved beneath, glab on both faces, the margins remotely scabrous-denticulate: hds 5-10 on slender rigid ascending bracted ped: inv campanulate their oblg-linear acute bracts in about 3 sr and glab: rays rather few and very nar, deep vio: ak oblg-linear, sparsely strigulose or almost glab, the margins not prominently raised or thickened; inner pap fine and very scabrous, not fragile, the outer scanty and wholly inconspicuous, consisting of few and wry sh bristles. Huston Flat, SBar Co, Ag 1900. Dr W. R. Shaw, the specimens communicated by LeRoy Abrams. In habit and foliage this is very much like the northern mt *E. inornatus*, Greene, but the nds and fls are of a very different character."—Greene, SCA b 1:39 (I Ap 1902).

E. STRIGOSUM Muhl, Wild sp pl 3:1956. B 1:331.

E. SUPLEX G 7:353. B 1:330.

E. TENUISSIMUS P 3:25.

A 1:59 fdr.

E. TRACYI P 5:59.

E. UNIFOLIUM L, sp pl 864. B 1:327.

E. URSINUM Eaton, bot King 148. B 1:327. Parry, Wyo 17.

E. VISCIDULUS P 1:174 based on *inornatus* var. *viscidulus* G.

ERIOCARPUM Nutt, Am phil sc tr, ns, 7:320. = *Allopappus* fide IK.

E. GRINDELIOIDES Nutt lc. = *A. Nuttallii* fide IK.

E. JUNCEUM Greene, Er 2:108 based on *Allopappus junceum* Greene. Mts SD Co, Baja.

ERIOCARPUM SCABELLUM Greene.

"Suffrutescent, the lfy fl'g branches rather slender, and with a sh hirsutulous pubescence, foliage scabrous: lvs nar'ly oblg, $\frac{1}{4}$ " lg, sharply and saliently toothed: hds solitary at ends of

bracted pedunculiform branches: rays light y; ak very pubescent: pap sh'er and more aristiform than in *Eriocarpum junceum*. LA bay, Baja. (Edward Palmer, 1887, n. 539.)—Greene. Er 2: 108-9.

ERIOCHLOA HBK Nov, Gen et sp 1: 94 t 30, 31 (1815).

E. PUNCTATA Ham Prod Pl Ind Occ 5. Ft Yuma, Cal (Or 2065).

ERIOCOMA Nutt, Gen 1:40 (1818). = *Oryzopsis* fide IK.

E. CUSPIDATA Nutt, lc. B 2:283. Da 19. = *O. cuspidata*.

E. MEMBRANACEA Steud Nom ed 2, 1:586.

E. WEBBERI Thurber, B 2:283. = *O. Webberi*.

ERIODICTYON Bth, bot sulph 35 (1844). A 1:172d.

ERIODICTYON ANGUSTIFOLIUM Nt. Phil ac J. ns. 1:181 B 1:518

E. CALIFORNICUM Greene. A 1:173d. Ab 327. Par 58. (Decne bot Voy venus 22 = *crassifolium*.)

E. CRASSIFOLIUM Bth. A 1:78d. B 1:518 as *tomentosum*.

E.: *tomentosum* Bth non Greene (vide Cal ac pr, sr 3, bot 1:129-130).

ERIODICTYON GLUTINOSUM Benth. Bth, lc 36. B 1:518, 2:468. Da 12. Z 2: 120, 158. Par 58 t. A 1:173 as *Callifornicum* Greene.

E. FAREYI P 2:22 based on Nama P. A 1:172 as Nama P, 173.

ERIODICTYON NIVEUM Eastwood, Cal ac pr, sr 3, bot 1:130 f d.

E.: *tomentosum* Greene non Bth.

Type locality: Jolon, Monterey Co, Cal.

ERIODICTYON SESSILIFOLIUM Grn. A 1:12 fdr.

E. TOMENTOSUM Bth, bot Sulph 36. B 1:518. Da 12. Ab 328. Par 58. A 1:173.

Shrub, 25-30 dm hi, w'ish tomentose with a more or less dense coat of sh villous hairs, sometimes rusty-colored, branches lfy to top; lvs oblg or oval, rigid, obtuse. 5-10 cm lg; cymes at length broad; cx densely villous, cor slightly so; cor somewhat salver-shaped and about twice the length of cx.

E. TRASSIAE Eastwood.

"Densely w-tomentose, except the dark-colored, glandular-hirsute cx: lvs elliptical, 5 cm lg, 15 mm wide, acute at apex, base nar'd to a petiole 5 mm lg, margins dentate except near base, veins distinct on the lower surface, barely evident on the upper; panicle slightly surpassing lvs, with branches spreading or curving upwards, rather slender, glandular and tomentose, bracts from elliptical with dentate margins to lanceolate or linear with margins entire; cymes densely fld; fls sm, on pedicels 1 mm or more in length; cx divisions 5, nar'ly linear, not uniform in length, 4-5 mm lg; cor p, tube equalling cx, 5 mm lg, contracted at base and throat, furrowed longitudinally, divisions of limb irreg orbicular, not uniform in size, glandular-hirsute externally as well as the upper part of the tube, sta inserted half way down the tube, almost sessile; sty branches glab, 1½ mm lg; ova ovoid, glandular-hirsute; fr unknown."—Eastwood, Cal

ac pr, sr 3, bot 1:131 t 10 f 2 a—2 c. Cat. **E. TRICHOALYX** Heller. A 1:173 fdr. M 1:108.

Genus **ERIOGONUM** Michx.

Fl 1:246 t 24 (1803). A 1:279d.

E. ABERTHEANUM T, Emory R 150, NM Baja. B 2:22.

E. ACETOSELLOIDES T ex Bth, DC 14: 16. = *gracile* fide IK.

E. AFFINE Bth, DC 14:13. = *nudum* fide IK.

E. ALATUM T, Sitgreaves R 168 t 8.

E. ALBUM Nutt, Gamb 164. B 2:26 as *dichotomum*.

E. ANEMOPHILUM P 3:199. Nev. **ERIOGONUM ANGULOSUM** Benth.

Linn sc tr 17:406 (1837). Cov 185, Coso mts. B 2:25. Da 14.

CD (Parish 974); Agua Dulce, Baja (Br) **E. ANSERINUM** P 4:320. Modoc Co, Cal.

ERIOGONUM APICULATUM S. Watson. Wat 17:379.

San Diego mts (Parish 971). Ha U 72.

E. ARACHNOIDEUM Esch, ac Peters mem 287. A 1:280 (et IK) as *latifolium*.

E. ARCUATUM P 4:319. Colo.

E. ARIDUM P 3:200. Nev.

ERIOGONUM ARBORESCENS Greene. Cal ac b 1:11; 2:410:—"about 6° hi when well grown, shrubby and evergreen, forming a rounded and compact bush."

Br 1:216 Rosa. Cur as *fasciculatum*.

E. AURICULATUM Bth, Linn sc tr 17: 412, nomen nudum. A 1:280 as *latifolium*.

E. AZALEASTRUM P 5:67. Nev.

ERIOGONUM BAILEYI S. Watson. Wat 10:348. Ha 73. Cov 185. Nev, Cal.

Ar, Ut. B 2:31.

Hanson's! Kern Co; Nevada; Arizona.

Very diffusely much-branched, 1° hi or less, glau and glab (rarely tomentose thruout) except lvs, which are densely w-tomentose both sides, orbicular to broadly ovate, 3-6" broad; bracts sh, triangular or lanceolate; inv 1" lg or com less, somewhat wider above, teeth obtuse: fls light rose or y'ish, ¼-¾" lg.

Variety **TOMENTOSUM** Sereno Watson.

San Ber Co; (Lemmon); Cantilles mts. Wat 12:268. B 2:31. Loosely floccose-tomentose thruout, bracts more linear; inv broadly turbinate, deeply toothed. SBER Co. Cantilles mts!

E. BLOOMERI Parish. A 1:82 fdr. Ab 118.

ERIOGONUM BRACHYPODUM T. & G. G 8:180. B 2:23.

Low and depressed, very divaricately much-branched and rather rigid, beset thruout (except lvs) by scattered sh glandular hairs: lvs densely tomentose both sides, orbicular, 3-6" in diam; st sh: inv turbinate-campanulate, ¼-2-3" lg, on pedicels less than 1" lg, more or less deflexed; fls 1" lg, rose, outer seg cordate-ovate, obtuse, inner ½ as wide, obtusely acuminate. SBER Co.

E. CAESITOSUM Nutt, Phil ac J 7:50 t 8. T & G rev Eriog, Am ac pr 8:157. B 2:19. Nev. Wyo.

E. CELENUM Nutt, Gamb 162. B 2:23. Ore. Nev. Ut. Colo. NM.

ERIOGONUM CINERUM Benth. Bth bot sulph 45. DC 14:8. B 2:27. Da 15. Ab 117. A 1:279d.

Curran once referred *E. giganteum* to this, but later published a variety of that species.

San Pedro and Monica on seashore.

E. CLAVATUM Small. A 1:101 fdr.

E. COGNATUM P 3:201. Mt SF, Ar.

E. COMPOSITUM Dougl. B 2:20, 480, Wash, Id, Mendocino Co.

E. CORYMBOSUM Bth, DC 14:17. B 2:28.

E. CRASSIFOLIUM Bth, Hook Fl 2:134 t 176. B 2:21 as *Flavum* Nutt.

ERIOGONUM CRENULATUM Parry. Colorado Desert (Parish).

E. DASYANTHEMUM T & G. B 2:30, Jepson, Er 1:12. Nev, Cal.

E. DAVIDSONI Greene. A 1:82 fdr.

E. DEDUCTUM P 5:71. Sierra Nev of Cal.

E. DEPLEXUM T, Ives R 24. B 2:23. Ut. Ar, Mohave.

ERIOGONUM DELICATULUM S. Wat. Wat. 17:379. Da 15.

E. DENSUM P 3:17.

E. DENUDATUM Nutt, Phil ac J, ns, 1:161. A 1:213 as *Nemacaulis Nuttallii*.

ERIOGONUM DESERTICOLA S. Wats. A 1:88 fdr.

E. DICHOTOMUM Dougl. DC 14:14. B 2:26. P 4:320. Ore. Yreka.

E. DOUGLASII Bth. DC 14:9. Ore. Sierra Co, Cal. B 2:19.

E. DUMOSUM P 3:199. Plumas Co, Cal.

E. EFFUSUM Nutt. B 2:28 as *microthecum*.

E. ELATUM Dougl. B 2:27. Wash, Nev, Yreka.

E. ELLIPTICUM Nutt, Gamb 161. B 2:20 as *stellatum*.

ERIOGONUM ELONGATUM Benth.

Bth, bot Sulph 45. DC 14:14. B 2:29. Da 15. Ab 118. A 1:280d.

Monterey to Baja; LA (Davidson).

E. ERICAEFOLIUM T & G. B 2:28 as *fasciculatum*.

ERIOGONUM FASCICULATUM Benth. B 2:28, 481. Da 15. Z 2:337, 371. Par 34 t.

P 1:207 Cedros. A 1:280d. Ab 117. Ha 73. Bentham, Linn soc tr 17:411 (1837).

Type locality: "Upper California." Coville, CNH 4:186. SBER.

"Buckwheat." Arizona; Utah; S Bar to Baja. Most excellent bee pasturage. Ha U 73.

ERIOGONUM FASTIGIATUM Parry. A 1:67 fdr.

E. FLAVUM Nutt. B 8:21. Ore, Wash, Ark. Parry, Wyo 6. P 4:319.

E. FLEXUM M E Jones, Z 2:15. Ar.

ERIOGONUM FOLIOSUM S. Watson. A 1:87 fdr.

ERIOGONUM GIGANTEUM S. Watson. A 1:82 fdr.

Variety **FORMOSUM** K. Br. A 1:82 fdr.

E. GLANDULOSUM Nutt. B 2:25, probably NM or Colo. Cuyamaca (Or 487); referred to *apiculatum* by Parry.

E. GLAUCUM Small. A 1:101 fdr.

E. GORDONI Bth, DC 14:20. B 2:25. Colo.

ERIOGONUM GRACILE Benth. Bth bot Sulph 46. DC 14:17. B 2:31. Da 15. Ab 119. A 1:280d.

S F; San Fernando, Baja (Br). Ha U 73.

E. grande Greene pitt 1:38. Cruz.

E. rubescens Greene, pitt 1:38. Cruz. Abrams, Fl LA 119.

Variety **LEUCOCLADON** Torrey. Less branched, branches strict, becoming glabrate; fls pale rose. Ab 119. A 1:280d.

E. GRACILLIMUM B 2:480. Mohave.

E. GRANDE P 1:38. Greene, Cal ac b 2:410. Cruz. A 1:101, 102 fdr, 280 as *gracile*.

E. GREENEI G 12:83. B 2:26 as *dichotomum*.

E. KEEBEMANNI D & H, Pac Ry R 5:14 t 17. B 2:30. A 1:77.

E. HELIANTHEMIFOLIUM Bth. B 2:29 as *Wrightii*.

E. HERACLEOIDES Nutt. B 2:20, Wash, Nev, Ut.

E. HIRTIFLOSUM G. Wat 12:259. B 2:22, 480. A 1:78.

E. HOOKERI Wat, B 2:23. Ut.

E. INCANUM T & G, Am ac pr 8:161. B 2:21.

ERIOGONUM INFLATUM Torr. Frem r 317. B 2:25. Cov 186, Funeral mts, etc.

Fl. Mohave; Nevada; Arizona.

ERIOGONUM INSIGNE S. Watson. Wat 14:295. B 2:23. Ut. Cov 186. Er 2:

202. Cajon de Santa Maria, Baja.

E. INTRECATUM Bth, bot Sulph 46 t 22. P 1:289, San Bartolome bay, Baja (type locality). B 2:31.

E. IREBITUM Br 2:202. Agua Dulce, Baja.

ERIOGONUM JUNCEUM Greene.

"Suffrutescent, the woody and densely lfy branches only a few 1 hi, loosely cespitose, w-tomentose, as are also the sm obovate or obovate-elliptic lvs; slender ped 5-9' hi, perfectly glab, of a vivid g and seedy-looking, com but once-forked, bearing inv 1/4-3/4 apart, these sessile, nar-campanulate, glab, obtusely toothed; perianth w, seg with r-brown midvein, all obovate and very obtuse."—Gifts 1:77. Kern river canon, Tulare Co, Cal. Jac? "

E. KELLOGGII G 8:293. B 2:22. Mendocino Co.

E. KENNEDYI Porter. Wat 12:263. B 2:26. Kern Co.

E. KINGII T & G. B 2:26. Nev.

ERIOGONUM LATIFOLIUM Smith. P 2:26. Da 14. Z 2:371. A 1:280d.

Abrams, Fl LA 117. Bluffs near Monica.

Curran, Cal ac pr, sr 2. 1:268. Cites as synonyms: *EE arachnoideum* Esch, affine et *auriculatum* Bentham, grande Greene nudum Dougl, et var *pauciflorum* S. Watson, oblongifolium Bentham, et **E. LEMMONI** Wat 12:266. Nev. B 2:29.

E. LEUCOCLADON Bth. B 2:31 as *gracile*.

E. LOBBII T & G, Am ac pr 8:162. B 2:20.

E. LONGULUM P 5:70. Lake Co, Cal.

E. LUTEOLUM P 3:200. Napa Co, Cal.

E. MARIFOLIUM T & G, Am ac pr 8:161. B 2:21.

E. MICROTHECUM Nutt. B 2:28. Ore, Nebr, NM.

ERIOGONUM MINUTIFLORUM Wats.

E. MOHAVENSE Wat 12:266. B 2:28. Mohave.

E. MODOCENSE P 5:68. Modoc Co, Cal.

ERIOGONUM MOLESTUM S. Watson. Wat 17:379. Da 15. Ha 73.

E. MOLLE Greene.

"Shrubby, the leafy branches a ft or 2 hi; lvs oblig. obtuse at both ends, 2-4 lg on petioles nearly as lg, cinerous above and beneath with a dense sh velvety pubescence and altogether devoid of w wool; inv few, many-fl'd, corymbose at summit of stout naked ped at ft or 2 lg. Rocky summits of the extreme north end of Cedros Island; a species of singular aspect; not in fl."—P 1:207.

E. NIVEUM Dougl. B 2:26. Wash. Ore Id.

E. NEGLECTUM P 5:69. Colo.

E. NODOSUM Small. A 1:157 fdr.

ERIOGONUM NUDUM Dougl.
Douglas, MS, in Bentham, Linn sec tr 17:413 (1837).

B 2:27. Ab 117. Br 1:216 (cites grande et rubescens as synonyms), Rosa. Par 34. A 1:280 (as latifolium), 281d. Wash to Baja.

Type locality: "plains of the Multoonah."

Coville, CNH 4:187. Tehachapi canyon.

Abrams, Fl LA 117. Cat.

Variety **OBLONGIFOLIUM** Wat 12:264.

B 2:27. Cov 187. Ha 74.

Variety **FAUCIFLORUM** Wat 12:264. B

2:27. A 1:280 as latifolium.

E. NUTANS T & G. Wat, bot King 307

t 33. B 2:23. Lassen Co, Cal. Nev.

E. OBLANCOBOLATUM P 5:71. Mt St.

Helena, Cal.

E. OBLONGIFOLIUM Bth. A 1:280 et

B 2:27 as latifolium.

E. OCHOCEPHALUM B 2:480. Nev.

ERIOGONUM ORCUTTIANUM S. Wats.

A 1:77 fdr.

E. OVATUM P 5:69. Lassen Co, Cal.

E. OVULIFOLIUM

Nutt, Phil ac J 7:50. B 2:26. Cov 187.

Parry, Wyo 4. 14.

ERIOGONUM PALMERI S. Watson.

Wat 12:267. B 2:30. Julian, SD Co. Ut.

Cov 187 as plumatella.

ERIOGONUM PARISHII S. Watson.

SBer mts (Parish); Baja mts!

ERIOGONUM PARRYI A. Gray.

G 10:77. So Ut. Cov 187. Nev.

Colorado Desert (Parish, Orcutt).

ERIOGONUM PARVIFOLIUM Smith.

Bth. bot sulph 12. B 2:27. A 1:281d.

Abrams, Fl LA 117. Common on the

sand-dunes along the seashore.

Davidson, Pl LA Co 15.

SBar; Soledad, SD Co (Or 974).

E. PHARNAEOIDES T. Stigreeves r

167 t 11. B 2:22. Ar. Nm.

E. PIPEERI P 3:263. Wash.

ERIOGONUM PLUMATELLA D. & H.

Pl HERm 45. Pac Ry R 5 (3): t 16.

Cov 187.

Colorado Desert (Parish); Nevada.

E. POLIFOLIUM Bth. B 2:28 as fasci-

culatum, "a com hoary form, with less

revolute lvs and elongated peduncles."

ERIOGONUM PONDII Greene.

P 1:267, 289, San Bartolome bay, Baja.

Cedros Island (Pond).

E. POLYANTHUM Bth, DC 14:12. B 2:20

as stellatum.

E. POLYCLADON Bth. B 2:31. Ar. NM.

E. PROLIFERUM T & G. B 2:26 as

ovalifolium var.

ERIOGONUM PUSILLUM T. & G.

Wat 8:184. Cov 188, Coso mts. Da 14. A

1:77. B 2:24.

SBer Co; Nevada; Arizona.

E. FYROLAEFOLIUM Hook, Kew J bot

5:395 t 10. B 2:21. Mt Shasta.

E. RHOLINATUM P 5:67. Cal Sierra;

Nev.

ERIOGONUM RENIFORME Torr.

Frem 2d r 317 (1845). Da 14. B 2:24.

Type locality: "on the Sacramento riv-

er," Cal.

Coville, CNH 4:188. "Found in recent

years only in the Mohave Desert region,

and it is probable that Fremont col-

lected the original specimens there."

Ft. Mohave; CD; Baja.

E. ROSEUM D & H. Pac Ry R 5:14 t 15.

B 2:30 as virgatum.

E. ROSMARINIFOLIUM Nutt, Gamb

164. B 2:28 as fasciculatum.

E. ROTUNDIFOLIUM Bth. B 2:24. Tex.

NM.

E. SUBSCISSUM P 1:39, 92 Mig. Greene,

Cal ac b 2:410 Cruz. A 1:101 fdr, 280 as

gracile et latifolium (vide nudum).

E. SYDNEUM P 5:63. Yellowstone

Park.

E. SALUSGINOSUM Hook, Kew 5:264.

Z 2:16.

ERIOGONUM SAXATILE S. Watson.

B 2:29. A 1:281d.

Abrams, Fl LA 118. Gabriel, SBer

mts.

McClatchie, Erythea 2:78; Mt Lowe,

L. Co.

Watson, Am ac pr 12:267 (1877).

Coville, CNH 4:188. Panamint mts.

Santa Lucia mts; SBer (Parry). Ha U

74).

E. SCALARE Wat 12:261. B 2:25. El

Rosario, Baja! (E. irretitum Br.)

ERIOGONUM SPECIOSUM Drew.

A 1:281 fdr.

E. SPERGULINUM G 7:389. B 2:22, 480.

E. SPHAEROCEPHALUM Dougl. B 2:

19. Wash, Nev. Cal.

ERIOGONUM STELLATUM Benth.

Linn sc tr 17:409. B 2:29. Ha 74.

Oregon to So Cal; Utah; Arizona.

Variety **BANIFORME** B 2:20—"Infr

much branched; lvs mostly sm and oft

densely tomentose on both sides." Ft

Tejon; Mt San Carlos.

E. STRICTUM Bth. B 2:29. Ore.

E. SUBALPIMUM P 3:18.

E. SUBRENIFORME Wat 12:260. B 2:25.

Ar. Ut.

E. SULPURIUM P 5:70. Near Yreka,

Cal.

ERIOGONUM TAXIFOLIUM Greene.

P 1:267. Cedros. A 1:81 fdr.

ERIOGONUM THOMASII Torr.

Pac Ry R 4:364. B 2:24. Z 2:250. Cov

188, Panamint valley. CD. Baja. Colo.

Ft Mohave.

Type locality: "near Ft Yuma," Cal.

CD; Baja; Colo (Br). Ft. Yuma to Ft

Mohave.

E. THURBERI T. A 1:102 fdr. B 2:24.

Da 14. Ab 116. Z 2:250.

E. TETROIDES Bth. B 2:19. Ore. Wash.

E. TOLMIEANUM Hook Fl 2:134. B 2:

20 as umbellatum variety monocephalum.

E. TORREYANUM G. B 2:20.

E. TRACHYOGONUM T. B 2:29 as

Wrightii.

E. TRICHOPES T, Emory r 151 = trichopodum (error).
ERIOGONUM TRICHOPODUM Torr.
B 2:24, 480. Da 15.

Utah; Ft. Mohave; CD! Baja! N. M.
E. TRIPODUM P 1:39. Lake Co, Cal.
E. TRUNCATUM T & G, Am ac pr 8:
173. B 2:28.
ERIOGONUM UMBELLATUM Torr.
Ann NY Lyc 2:241. B 2:19. Cov 188,
Inyo mts. Par 182 t.

Oregon to SBer mts (Parish 594).
Variety **MONOCEPHALUM** T & G. B
2:20.

E. URSINUM Wat 10:347. B 2:21, 480.
Par 182.

ERIOGONUM VAGANS S. Watson.
A 1:77d.

E. VILLIFLORUM G. B 2:22.

ERIOGONUM VIMINEUM Dougl.
B 2:30. Da 15. Ab 119. Er 1:12. A 1:87,
213d.

Washington; Nevada; Baja!
ERIOGONUM VIRGATUM Bentham.
Bentham, in DC Prodr 14:16 (1856).

Type locality: "in California."
Coville, CNH 4:188.
Davidson, Pl LA Co 15.
Jepson, Erythea 1:13.
Abrams, Fl LA 119.
Siskiyou Co (Greene).

B 2:30. Er 1:13. Ab 119. A 1:213d.
E. WATSONI T & G, Am ac pr 8:182.
B 2:23.

ERIOGONUM WRIGHTII Torr.
Abrams, Fl LA 118. Gabriel mtd.
Sacramento to Baja! N M; Nevada.

DC 14:15. B 2:29. A 1:213d.
Variety **SUBSCAPOSA** Wat. Da 15. Ha
74.

Variety **TAXIFOLIUM** Parish.
E. Taxifolium Greene, pitt, 1:267; 2:295.
A 1:214d.

ERIOGYNIA Hook Fl 1:255 t 83
(1833). = Spiraea fide IK.

E. PECTINATA Hook, lc. B 1:171.2:443.
= S: p.

ERIOFAPPUS Arn in Lindl Int Nat
syst ed 2, 443 (1836). = Layia fide IK.

E. GLANDULOSUS Arn, lc. B 1:368 as
L: f.

ERIPHOBUM L, syst ed 1 (1735).
E. GRACILE Koch, Roth Cat 2, add
259 (1788). B 2:220. Z 2:4, 378.

E. POLYSTACHYUM L, sp pl 52. B 2:
220.

ERIOPHYLLUM Lag, Gen et sp nov 28
(1886).

Shrubs or herbs with entire or di-
vided lvs clothed with cottony wool, es-
pecially on under side; fls y: inv-bracts
lance-shaped, united at base; pap of
membranaceous scales.

Sec: **ACTINOLEPIS** (DC 5:655 as gen).
Low and diffuse winter-ann, with sh-
ped or sessile hds only 2 or 3" hi: inv-
bracts few, distinct to base, herbaceous
or chartaceous in age: anth-tips ovate-
lanceolate to linear-subulate.

*Hds sessile or nearly so in forks or
at summit of branches, then subtended
by a lf or glomerate, 2" hi, wholly y-
fid: receptacle flat or barely convex:
anth-tips ovate-lanceolate, obtuse: lvs
sm, spatulate, com 3-lobed or 3-toothed
at summit.

E. MULTICAULE G 19:24.
Whitened with rather close cottony
wool, sometimes denudate in age: sts
slender, at length much branched, a
span hi, most of internodes exceeding
lvs: rays 3-5, obovate, 1" lg: ak glab-
rate: pap of 10-15 rather firm narly
subulate or almost aristiform paleae,
or sometimes 0 in all or some of disk-
fis, especially when these are infertile:
then their sty is only minutely forked
at apex. SBer. Tucson.

E. LANGLEYI G 19:25.
Rays 0: fls all fertile: ak villous.
Mohave. Tucson.

*Hds pedunculate, terminating
branches, 3-4" hi: receptacle convex or
conical: plants 3-5" hi, erect and at
length diffuse, with mostly entire lvs.

†Rays about 5, inconspicuous: disk-
fis not num: anth-tips ovate-oblg, ob-
tuse.

E. NUBIGENUM Greene, G 19:25. Z 2:
163. Yosemite.

††Rays 5-9, exerted and ample, oval
or oblg: disk-fis more num: anth-tips
nar and slender: receptacle high-convex
or obtusely low-conical.

E. WALLACEI G 19:25. Ha 127.
Thickly clothed with cottony wool:
lvs obovate or spatulate, occasionally 2-3-
toothed at apex: pap of 6-10 sh-oval or
obovate obtuse and paintless nerveless
paleae, of firm texture and opaque: sty-
tips somewhat subulate-conical: cor all
y. SD Co! Ar. Ut.

E. LANOSUM G 19:25.
Rays w or rose-color. Ar. Ut. Mohave.

Sec: **TRICHOEPHYLLUM** (Nutt as gen).
Larger, erect: hds when clustered sm,
when solitary com rather large: inv-
bracts of firm texture: rays and disk-
fis golden y: cor-tube com glandular or
hairy: anth-tips ovate, mostly obtuse:
ak linear or cuneate-linear, glab or
nearly so: pap of sh opaque and nerve-
less and pointless paleae, sometimes very
sm, rarely obsolete or 0.

*Suffruticose, or suffruticose, lf y to
top, branching: hds sm, compactly
corymbosely cymose, sh-peduncled:
ligules roundish-oval, 1-2" lg: pap of
oblg-linear paleae much sh'er than ak:
lvs mostly lobed or divided and mar-
gins revolute.

E. STAECHADIFOLIUM Lag, Gen et
sp nov 28. Br 1:213 Rosa. Z 2:359 SF.

Canescent with close-pressed pannose
tomentum, at length partly denudate,
1-4" hi from a woody base: lvs once or
twice pinnately parted into linear di-
visions and rhachis, or upper linear
with a pair of lateral lobes, or some of
them entire, upper face soon glabrate,
and g: hds 3-4" hi, num in rather loose
paniculate clusters: inv cylindraceous-
campanulate; its bracts 8-10, linear-
spatulate to narly-oblg, thinish: recep-
tacle convex, alveolate-toothed: rays
6-8: paleae of pap 8-12, 4 over ak-
angles rather longer. SBer.

Variety **DEPRESSUM** Greene, Cal ac
b 2:404. "Sts stout 1" lg or less, de-
pressed, forming a low hemispherical
tuft: lvs broad and with about 2 pairs
of divaricate linear-oblg lobes. A

plant in aspect extremely unlike the continental type of the sp; but the fls and fr present no characters. Frequent on cliffs near the sea, on the north side only [of Cruz].

E. NEVINII G, Syn Fl 2 (1): 452. Br. Z 1:114 Cat.

"St about 3° hi, decidedly woody below: lvs comparatively large, equally w-tomentose on both sides, twice pinnately parted into nar and very obtuse seg and lobes: corymbiform and compound cymes naked-peduncled, of very many and much crowded hds: bracts of inv mostly 3-4-nerved: receptacle wholly naked: rays not surpassing disk-fls: pap of 4-8 oft unequal paleae. Island of San Clemente; off SD, on rocks overhanging the sea, Nevin & Lyon, Ap 1885."—G.

ERIOPHYLLUM CONFERTIFLORUM

G 19:25. Par 186. P 1:90 Mig; 1:205 Cedros. Da 9. Ab 430. Z 2:359 SF. A 1:304d.

Variety **LAXIFLORUM** G 19:25. Hds loosely fastigate-cymose and mostly slender-peduncled. Cal. Ha 127. Golden Yarrow.

Variety **TRIFIDUM** G 19:25. A form with sm sh lvs, simply 3-5-cleft into oblg or sh-linear lobes. SBer.

"Herbaceous, com (perhaps always) per: hds larger, mostly solitary or scattered and conspicuously pedunculate: receptacle from convex or low conical to flat (even in the same sp): ligules 6-13, ¼-½"lg, oblg or oval: lvs variable.

*Ak glab, glabrate, or sparsely appressed-pilose, not glandular.

E. CAESPITOSUM Dougl, Lindl, bot reg t 1167. Jepson, Er 1:12. Z 2:359 SF.

Floccosely w-woolly, many-stemmed from rt: lvs in age with upper face oft glabrate; lower ones from incisedly 3-5-lobed to pinnately parted, or upper varying to linear and entire: inv-bracts 8-12, oblg or oval: disk-cor tube mostly hirsute-glandular and longer than pap, which is variable, sometimes very sh, sometimes obsolete. Extremely variable and widely distributed, many forms having received varietal names or described as species.

Variety **ACHILLAEODES** G 19:25. Ak sparsely pubescent or glabrate. Cal near sea.

Variety **INTEGRIFOLIUM** G 19:25.

Low, oft dwarf, caespitose-tufted, 3-10' hi. Mont, Wyo. SBer Co.

Variety **LATIFOLIUM** G 19:26.

Sts com 2° lg, branched and lax when growing in shade: lvs thin, dilated, from rhombic or cuneate to oblg-lanceolate, 3-5-lobed and incised or dentate, lobes oblg to broadly lanceolate: ped sh: rays 9-13: cor-tube either sparsely or densely hirsute with gland-tipped hairs, much longer than pap, rounded paleae of which not wider than the narly oblg-cuneate or nar'er glab ak, com very sh and forming a crown, sometimes 0.

Variety **LEUCOPHYLLUM** G 19:26.

Span to 1° hi, rather strict: lvs nar, entire or sparingly cleft or parted:

hds solitary, lg-peduncled: inv campanulate, 4-5' hi, of about 8 oblg bracts: pap in typical plant of nar lanceolate paleae, 4 com twice as lg as others. Brit Col to Cal; Idaho.

Variety **GRANDIFLORUM** G 19:26.

Rather strict and stout, densely woolly: lvs all linear or lower narly lanceolate or spatulate, lacinate-serate or entire, or some parted into a few narly linear divisions: hds solitary, lg-peduncled: inv ½' hi, hemispherical, densely woolly, of 10-13 bracts: rays as many, large: ak com pubescent: cor-tube sparsely hirsute glandular. Guad. Cal.

++Ak and cor-tube glandular: st slender, under 1° hi.

E. GRACILE G 19:26. Idaho.

E. WATSONI G 19:26. Nev.

***Ann, with lvs apparently all alt; hds sm, pedunculate, terminating lax branches: receptacle conical: pap a crown of sm paleae, not longer than width of summit of ak, sometimes sh or 0: sty-tps conical.

ERIOPHYLLUM AMBIGUUM A. Grav. San Bernardino mountains (Parish).

G 19:26, based on *Bahia ambigua* and *parviflora* B 1:382.

Other sp of the genus are:

E. ARACHNOLEUM Par 188 (based on *Bahia arachnoidea* Fisch & Lallement, Ind Sem Hort Petrop 1842; G, Fl Frem 109; B 1:322), treated by G as *caespitosa* var *latifolium*.

ERIOPHYLLUM OBOVATUM Greene.

Er 3:123. A 1:66 fdr.

E. TERNATUM P 3:185. Ore.

E. TANACETIFLORUM Greene.

"Suffrutescent below, erect slender, 2° hi, lfy thruout: lvs thinnish, sparingly floccose beneath, from palmately trifid to somewhat pinnatifid: hds 3-7, nearly or quite sessile at the summit of the simple st; inv oval, 2" hi, bracts broad and nearly equal, acutish; rays 0; ak with a few closely appressed hairs and no resin-glands; pap of about 8 unequal linear obtuse or retuse paleae. Wooded hills of Calaveras Co, Cal, between Sheep Ranch and Murphy's, Je 1889." P 2:21.

ERYSIMASTRUM Rupr, Fl Cauc 76 (1869). = *Erisimum* fide IK.

E. CHEIRANTHUS Traut, Act Pet 3: 105. P 3:138 as *Cheiranthus turrifoloides*.

ERITRICHUM Schrad, in Comm Gotting 4:186 in obs (1820).

E. ANGUSTIFOLIUM T, Pac Ry R 5: 363. B 1:528. (Wat, bot king 241 = *muriculatum* fide B 1:528.) A 1:205 as *Cryptanthe ambigua*.

E. BABBIGERUM G, Syn Fl 194. B 2: 468. P 1:114 as *Cryptanthe* b. A 1:206 as *Cryptanthe* b.

E. CALIFORNICUM DC. B 1:526. = *Allocarya hispida*.

Variety **SUBGLOCHIDIATUM** G. B 1: 526. P 1:18 as *Allocarya scopulorum*.

E. CANESCENS G B 1:526.

E. GEORSIANUM DC 10:130. B 1:525.

G 10:56. P 1:13 as *Allocarya* C.

E. CIRCUMCISSUM G 10:58. B 1:527.

P 1:59 as *Piptocalyx* c.

E. CONNATIFOLIUM K 2:103 f 51. B

- 1:525 as *chorisianum*. Cur 1:143 as *Krynitzkia Chorsiana*. P 1:13 as *Allocarya C*.
E. FULVOCANESCENS G 10:91. B 1:529.
E. FULVUM A DC. B 1:526 (Wat bot king 243 = *tenellum* fide B 1:526.)
E. GLOMERATUM DC. B 1:528.
 Variety **FULVOCANESCENS** Wat. B 1:529 as sp.
E. KINGII Wat, bot king 243 t 23. B 1:528.
E. LEIOCARPUM Wat. B 1:527.
E. LEUCOPHAENUM A DC 10:129. B 1:529. P 1:58 as *Oreocarya l*.
E. MICRATHUM T. B 2:468.
 Variety **LEPIDUM** G. P 1:59 as *Eremocarya lepidia*.
E. MURICULATUM T. Wilkes exp 17: t 13. B 1:528. A 1:205 as *Cryptanthe ambigua*.
 Variety **AMBIGUUM** G. A 1:205 as *Cryptanthe ambigua*.
E. OKYCARYUM G 10:58. B 1:527. P 1:116 as *Cryptanthe flaccida*.
E. PLEBEIUM T, Pac Ry R 4:124. B 1:526 as *scouleri*.
E. PTEROCARYUM T, bot Wilkes exp 415 t 13 B. Wat, bot King 245. B 1:529.
E. SCOLERIA A DC B 1:526.
E. TENELLUM G. B 1:526.
E. TORREYI G. B 1:527.
E. RACEMOSUM Wat. G 17:226. P 1:115 as *Cryptanthe r*. A 1:207 as same.
E. COOPERI G 19:89. P 1:19 as *Allocarya Cooperi*.
E. CRYPTANTHEUM DC 10:129. P 1:111 as *Cryptanthe glomerata*.
E. KOLOPTERUM G. P 1:58 as *Oreocarya h*.
E. INTERMEDIUM G 17:225. A 1:206 as *Cryptanthe l*.
E. JAMESII T, Marcy r 294; bot Mex bound 140. P 1:57 as *Oreocarya suffruticosa*.
E. MOLLE G 18:89. P 1:20 as *Allocarya mollis*.
E. RACEMOSUM DC. P 1:115 as *Cryptanthe ramosa*.
E. ULLIGINOSUM Phil. P 1:15 as *Allocarya ulliginosa*.
E. VIRGATUM Porter, Hayden r 1870. 479. P 1:58 as *Oreocarya v*.
EROPHILA DC syst 2:356 (1821).
E. VERNA E Mey ex G arcke, Fl Deutsched 4, 35. IK as *vulgaris*. P 4:204 as type of *Draba*.

Genus *ERODIUM* L'Herit.

- L'Herit, *Geran t 1 ad 6* (1787).
 Herbs with mostly jointed nodes, opp or alt stipulate lvs, and axyl umbellate nearly regular fls: sep 6, imbricated; pet 5, hypogynous, imbricated, the 2 upper slightly sm'er; glands 5; anth-bearing sta 5, with slightly dilated fl alt with as many sterile fl: sty becoming spirally coiled after splitting away, pubescent on inner face: carpels closed.
E. BOTREYS Bertol Amoens Ltal 35. Eu. B 1:95. Z 2:128. P 200.
 Lvs oblg, pinnatifid; lobes dentate, obtuse; stipules sm: sep 4" lg: beaks of carpels 2-3" lg.
ERODIUM CICUTARIUM L'Herit.
 Type locality: European.

Ait, Hort Kew ed 1, 2:414 (1789). B 1:94. Ab 228. Br 1:208. Rosa. P 1:86. Mig. Par 200 t. Greene Cal ac b 2:392, Cruz. Da 3, Er 1:58, LA Co. Parish, Z 1:3. Guad. Magdalena Isl.

Hairy, much branched from base: lvs pinnate, lfts laciniately pinnatifid with nar acute lobes; stipules sm: ped exceeding lvs, bearing a 4-8-fld umbel: sep 1-3" lg, acute; pet bright p; tails of carpels 1-2' lg: pedicels slender, at length reflexed, fr still erect; fl not toothed. Thru Cal; NM; Mex; so Am. Alfilaria.
Geranium cicutarium L, Sp Pl 2:680 (1753).

ERODIUM MACROPHYLLUM H. & A. H & A bot Beech 327. Ab 228. Da 4. B 1:95. Br 1:202, Cruz. Baja!

Mostly nearly or quite acaulescent, tomentose with copious interspersed lg glandular hairs at least on pedicels; lvs triangular-ovate or reniform, crenate-serrate, sometimes crenately-lobed; ped exceeding lvs, accrescent, at length 1 cm lg; pet equaling the sep, dull w; carpel clavate, densely velvety-pubescent; sds smooth. Sacramento valey to SD.

ERODIUM MOSCHATUM L'Herit. Willd. sp pl 3:631. B 1:95. Ab 228. Da 4. Parish, Z 1:8. Par 200. P 1:86. Mig. Greene, Cal ac b 2:392, Cruz. Guad.

Lvs pinnate; the oblong-ovate lfts unequally and doubly serrate; stipules conspicuous; pedicels mostly sh and stout; sep 3-4 ll long; odor musky. LA. SD. Eu. **ERODIUM TEXANUM** A Gray. G. Pl Lindl 157. B 1:95. SD! Calmall! Tex.

Pubescence appressed, not glandular; lvs ovate-cordate, sm, deeply lobed, 1" lg: ped sh sep nar, 3-5" lg; carpels nar, with the slender beak 1½-3" lg.
ERYNGIUM L, sp pl 1:232 (1753). A 1:138d.

E. ARMATUM C & R, bot gaz 13:141. W 5:19. A 1:138d.

E. ARISTULATUM Jepson.
 "Prostrate, very slender, sts 10-16' in length; radicle lvs lg petioled, sh blade spinose-toothed and with a few lanceolate seg; cauline lvs opp, sessile, spinulose-serrate: rds very num, 3" in diam: bracts exceeding hd, about 5" lg, spinose at base; bractlets spinose, the body narly lanceolate, inversely sagittate-winged from base upwards, lobes of wings thus forming sinuses in each of which are borne 1-3 awns, surpassing breadth of wing: cx-lobes hyaline-margined, cuspidate, exceeded by the lg sty."—Jepson, Er 1:62-3. Lake Co, Cal.

E. ARTICULATUM Hook Lond J bot 6: 232 (1847). B 1:255 as *petiolatum*. Jepson. Er 1:63. Idaho.
E. PARISHII C & R. A 1:139 fdr. Ab 280.

E. PETIOLATUM Hook, Fl 1:259. B 1:255. Z 2:353 SF. Ore. A 1:139.
 Variety **ARMATUM** Wat B 1:125. A 1:138 as *armatum*.
 Variety **JUNCIFOLIUM** G 8:385. A 1:139 as typical.

E. VASEYI C & R, bot gaz 13:142. W 5:19.

Sts 2.5-4 dm hl, several from a com

rt and diffusely branching; lvs oblanceolate, unequally spinulose-serrate, attenuate below, bracts and bractlets similar, nar, thick, rigid, spinose and spiny-toothed, divergent, 12-15 mm lg, forming a spinose burr-like hd; fr with ovate-oblongeolate cuspidate-acuminate ex-lobes sh'er than sty. Monterey Co, Cal.

ERYSIMUM L, Syst ed 1 (1735). A 1: 122d.

E. ALPESTRIS Rydb Torr cl b 28:277 (1901). M 1:144 as *Cheiranthus alpestris*.

E. ANEMOPHILUM M 1:51. Monterey Co, Cal.

E. ARBENICOLA Wat 26:124. P 3:131 as *Cheiranthus a.*

E. ARKANSANUM Nutt, T & G Fl 1: 95. P 3:135 as *Cheiranthus arkansanus*.

E. ASPERUM DC syst 2:506. Hook Fl 1:64 t 22. Br 1:201 Cruz. Da 2. B 1:39. Par 136. A 1:123. P 1:133 as *Cheiranthus asper*.

Variety **ALPESTRIS** Ckl, Torr cl b 18: 168. M 1:144 as *Cheiranthus alpestris*.

E. CALIFORNICUM Greene, Er 3:69. A 1:123 as *asperum*.

E. CAPITATUM Greene, Fl Fr 269. P 1:131 as *Cheiranthus capitatus*.

E. CHEIRANTHOIDES L, sp pl 661. P 1:138 as *Cheiranthus turritoides* Lam.

E. ELATUM Nutt, T & G Fl 1:95. P 1: 135 as *Cheiranthus elatus*.

E. GLABERRIMUM H & A, bot Beech 323. B 1:41 as *Sisymbrium junceum* Bebb. P 3:127 as *Schoenocrambe linifolia*.

E. GRANDIFLORUM Nutt, T & G Fl 1: 96. Par 136 t. B 1:36 as *Cheiranthus asper*. P 3:131 as *Cheiranthus capitatus*. M 1:146 as *Cheiranthus grandiflorus*.

Type locality: "Sand hills of Point Pinos, in the vicinity of Monterey, Upper Cal."

E. INCONSPICUUM Mac M, Metas p 268. P 3:134 as *Cheiranthus inconspicuum*.

ERYSIMUM INSULARE Greene. Torr cl b 13:218. P 1:85 Mig. A 1:96 fdr. Br 1:207 Rosa. P 1:131 as *Cheiranthus insularis*.

E. LINIFOLIUM Jones, Cal ac pr, sr 2, 5:622. P 3:127 as *Schaenocrambe linifolia*.

E. OCCIDENTALE Rob, Syn Fl 1:144. P 3:132 as *Cheiranthus occidentale* (Wat 23:261). Ore. Wash.

E. OFFICINALE L, sp pl 660. = *Sisymbrium officinale* fide IK (A 1:123, 124 as same).

According to Greene (P 3:130) this is the type of the genus *Erisimum*, and the only sp yet known. Ab 169.

E. OBLANCEOLATUM Rydb, Torr cl b 31:557. M 1:144 as *Cheiranthus oblanceolatum*.

E. PABVIFLORUM Nutt, T & G Fl 1: 96 not Pers. P 3:134 as *Cheiranthus inconspicuum*.

E. NEVADENSE M 1:52. Nevada Co, Cal.

E. RADICATUM Rydb, Torr cl b 31:558. M 1:144 as *Cheiranthus radicans*.

E. PINNATUM Walter. A 1:124 as *Sisymbrium pinnatum*.

E. PUMILUM Nutt, T & G Fl 1:95. B 1:39. P 3:133 as probably *Cheiranthus*

asperillum.

E. SYRTICOLA Sheldon, Torr cl b 20: 285. P 3:136 as *Cheiranthus syrticola*.

E. WHEELERI Rothr, Wheeler's R 6: 64. P 1:135 as *Cheiranthus Wheeleri*.

Genus **ERYTHEA** S. Watson.

ERYTHEA ARMATA Watson.

B 2:212, 485. A 1:346d.

ERYTHEA EDULIS Watson.

B 2:212. Greene, Cal ac b 1:227. Guad.

Genus **ERYTHRAEA** Pers.

Renealm ex Borck in Roem arch 1 (1): 28 (1796).

Herbs, mostly ann or bien, with sessile or amplexicaul lvs, and pink or y fis in cymes or spks. tubular, 4-15 lobed or 4-5-divided, the lobes keeled; cor salverform, 4-5-lobed, lobes spreading, contorted, convolute in bud; sta 4-5, inserted on base of cor-tube; fl sh. filiform; anth linear or oblg, becoming spirally twisted; ova 1-celled, the placentae sometimes intruded; sty filiform; stig 2-lobed; cap oblg-ovoid or fusiform, 2-valved; sd-coat reticulated. Canchalagua of the native Californians.

E. CHEIRONOIDES G B 1:479. Mex. (of T, in bot Mex bound 156 t 42 = *venusta* fide B 1:479).

ERYTHRAEA DOUGLASSII A. Gray.

G 1:480. Br 1:214, Rosa. Greene, Cal ac b 2:407, Cruz. Bloch, Er 2:40, Canchalagua, notes medicinal value. A 1: 201 fdr. Ore. Idaho. Ut. SP! Baja!

Erythraea tenella Nuttall, ms, Gray. Bot Cal 1:480.

Erythraea elata Nuttall, ms, Gray. Bot Cal 1:480.

Erythraea Nuttallii Watson, Bot King Exp 276, in part. *Erythraea exaltata* Coville, CNH, 4:150, Panamint mts.

Cicendia exaltata Grisebach, in Hooker, Fl Bor Am 2:69 (1838), wrongly characterized fide Gray.

Type locality: between the Kettle Falls and Narrows, of the Columbia river, N. W. C."

Oregon; Idaho; Utah; Baja!

E. ELATA Nutt. G B 1:480 as *E. Douglasii*.

E. EXALTATA Cov 150, 251, based on *cicendia exaltata* Hook Fl 2:69 t 157. (1838). A 1:202 as *E. Douglasii*.

E. FLORIBUNDA Bth 322. B 1:480. Or, Fl So & Low Cal 7 = *E. Douglasii* fide Parish Z 5:116.

ERYTHRAEA MUHLENBERGII Griseb. Grisebach, Gen e. sp Gent 146. B 1:480. Z 2:364. Bth 322. SF: Baja (Br).

E. NUTTALLII Wat, bot king 276 t 29 (in part = *E. Douglasii* fide B 1:480). A 1:201 s. Cov 150, 239. Nev. Idaho. Ut.

E. RAMOSISSIMA Pers, syn 1:283. Eu. Asia. B 1:480, Pa.

E. SPERCIOSA G. B 1:479. Mex.

E. TENELLA Nutt. B 1:480 as a dwarf state of *E. Douglasii*. A 1:201 s.

E. TRICANTHA Grisebach Gent 146. B 1:479. 2:464. Jepson, Er 1:12. Parish, Z 5:116 (as probably not Cat).

E. VENUSTA G. B 1:479. Cov 150. A 1: 344d. Par 224 t. Or, W 5:12. Ha 102. Ab 304. Da 11. Z 2:165.

ERYTHRINA CRISTI-GALLI Linn.
ERYTHROCOMA Gifts 1:175.
E. AFFINIS Gifts 1:175 Alberta.
E. ALIENA Gifts 1:179. Chih.
E. ARIZONICA Gifts 1:179. Ar.
E. AUSTRALIS Gifts 1:176. Colo.
E. BREVIIFOLIA Gifts 1:176. Ut.
E. CAMPANULATA Gifts 1:178. Wash.
E. CANESCENS Gifts 1:178.
 "Stouter than *E. campanulata*, sometimes taller; lvs as sh, broader, canescently soft—villous and sparsely pilose; lfts obovate-cuneate, with 3-5 seg or teeth mostly broad, oval, obtuse but with sm abrupt cusp-like termination; sts mostly 3-fld: cx-tube very sh, bractlets sm, com $\frac{1}{2}$ as lg as the ovate-lanceolate seg; pet obovate-spatulate; plume hardly more than 1' lg."—Gifts 1:178. Northern Sierra Nevada, Cal. Ore?
E. CILIATA Gifts 1:177 based on Geum c (Pursh). Colo; Wyo; Mont.
 Variety **ORNATA** Gifts 1:178. Wash.
E. CINERASCENS Gifts 1:175. SDak.
E. DISSECTA Gifts 1:177. Colo.
E. FLAVULA Gifts 1:177. Wyo.
E. GRISA Gifts 1:178. Ar.
E. TRIDENTATA Gifts 1:179. Ar.
E. TRIFLORA Gifts 1:175 based on Geum t (Pursh). Ill; Wis; Minn; N & S Dak.

Genus ERYTHRONIUM Linnaeus.

ERYTHRONIUM ALBIDUM Nutt.
ERYTHRONIUM AMERICANUM Kr-G
ERYTHRONIUM CALIFORNICUM
ERYTHRONIUM CITRINUM
ERYTHRONIUM GIGANTEUM Lindl.
 var 140 l. B 2:170 as
ERYTHRONIUM GRANDIFLORUM
 Pursh Par 142. Parry, Wyo 15. Br Colo 28. B 2:170. 171s.
ERYTHRONIUM HARTWEGI S. Wat.
 B 2:170.
ERYTHRONIUM HOWELLII
ERYTHRONIUM MONTANUM
ERYTHRONIUM NUTTALLIANUM
ERYTHRONIUM PROPULLANUS A. Gry
ERYTHRONIUM PURPURASCENS
 B 2:171. Z 2:166.
E. REVOLUTUM B 2:170. 171 s.
ERIOPHYLLUM PRINGLEI A. Gray.
ERIOPHYLLUM WALLACEI A. Gray.
ERIOPHYLLUM LANOSUM A. Gray.
ESCHSCHOLTZIA CALIFORNICA
 Cham. Ab, SCAB 1:89, "Sierra Madre: Chatworth Park, LA Co, per."
E. PENINSULARIS Greene. Ab, SCAB 1:89. the com sp. LA Co, ann."
E. HYPECOIDES Bth. Ab, SCAB 1:89, Saddle Peak, Monica mts.
E. STRICTA P 5:215, 236d.
E. LEPTANDRA P 1:170d et 5:215, 237.
E. CONFINIS P 5:215, 237d.
E. KYLOBRIZIA P 5:215, 238d.
E. ANGULARIS P 5:215, 238d.
E. ABSINTHIIFOLIA P 5:215, 239d.
E. NITROPHILA P 5:215, 240d.
E. PROCERA P 5:215, 241d.
E. MACRANTHA P 5:216, 242d.
E. SANCTARUM P 5:216, 243d.
E. SCARIOSA P 5:216, 243d.
E. RIGIDA P 5:216, 244d.
E. Recta P 5:216, 245d.
E. CALOSPERMA P 5:216, 246d.
E. REVOLUTA P 5:216, 247d.

E. FLORIBUNDA P 5:216, 247d.
 Variety **GORGONICA** P 5:247d.
ESCHSCHOLTZIA TENUISECTA Greene
EUCLISIA Gifts 1:82 based on Streptanthus sp.
E. ALEDA Gifts 1:83 (S: a P 1:62).
E. AMPLEXICAULIS Gifts 1:84 (Caulanthus a, Wat 17:364).
E. ASPERA Gifts 1:83 (S: a, P 3:225).
E. HAKERI Gifts 1:84.
 "Habit of *E. glandulosa*, and about as large, stouter, more sparsely hispidulous and hairs much sh'er; lvs and their teeth equally gland-tipped: cx sh'er, its sep less acute and less connivent, colored very dark and dull p; pet nar, also dark p save as to the w and strongly crisped nar margin; upper pair of sta exerted quite beyond pet, united to near summit by fl, their anth of less than 1-3d the size of the other 4, these last in very sh fl and borne scarcely beyond summit of cx."—Gifts 1:84. Near Bethany, on the plains of the upper San Joaquin, Cal.
E. BIOLETTII Gifts 1:83 (S:B, P 2:225).
E. GLANDULOSA Gifts 1:82 (S:g, Hook, Ic.) Type of genus.
E. HISPIDA Gifts 1:83 (S: h, G 6:184).
E. MILDREDAE Gifts 1:83 (S: M, Greene, Fl Fr 260).
E. NIGRA Gifts 1:83 (S: niger, Greene, T cl b 13:141).
E. ELATICE Gifts 1:84.
 "Stout ann, erect, branched above, com 2° hl: lowest lvs 2-4' lg, laciniately lobed or pinnatifid, lobes not gland-tipped, both faces of lf as well as base of st hispid, not even the nar auriculate-clasping cauline ones glab, but these merely dentate: racemes lax; bilabiate cx and cor r-p; upper pair of fl united to above middle, their anth much reduced; pod 3' lg, ascending, straight or slightly curved upwards."—Gifts 1:84. Santa Lucia mts, Cal.
E. PULCHELLA Gifts 1:83 (S: p, P 2:225).
E. SECUNDA Gifts 1:83 (S: s, Greene, Fl Fr 261).
E. VESICULOSA Gifts 1:83 (S: v, Greene, Er 3:99).
EUCLISIA VIOLACEA Greene.
 "Doubtless ann and larger," perhaps 2° hl or more, but only upper lvs and fig branches known, these perfectly glab, glaucescent; lvs lance-linear and sagittate-clasping, remotely dentate: racemes several, slender, fls slenderly pedicellate: cx bilabiate, the 3 upper sep connivent together at tip, obtusely keeled, of a rich vio or r-p; cor as strongly bilabiate, the large upper pet with w-margined and rather wide limb, cor otherwise like cx as to color: sta in 3 very unequal pairs; upper pair of fl completely united and anth greatly reduced; pods 3' lg or more, straight, ascending, very nar."—Gifts 1:83. Middle Cal.

Genus EUCLISIA Zuccarini.

Cx-tube oblg; limb 5-lobed, persistent; pet 5, united at base and inserted on cx-throat; sta num; fl filiform, adnate to pet-base, decid with them in a ring; ova sh-conical at summit, 1-celled; sty

5-angled, 5-cleft, lobes oft twisted: ovules very num, covering the 5 prominent expanded placentae: cap obovate, very many-seeded, opening by 5 valves at the sh-conical summit: sds minute, longitudinally striate. Ann or bien herbs, armed with stinging hairs and barbed pubescence; lvs alt, cordate or ovate, petioled, lobed and serrately toothed; fls y, pedicelled, in terminal cymes.

Treated by Bentham & Hooker as a section of *Mentzelia*.

EUCNIDE CORDATA Kellogg.

Mentzelia cordata Kell Cal ac pr 2:33; *Hesperian O 1890* with col plate. Baja.

EUCNIDE URENS Parry.

Parry, Am nat 9:144 (1875). B 1:237.

Stout, low, very hairy and pubescent: lvs broadly ovate, 1-2" lg, cordate or rounded at base, obscurely lobed, coarsely toothed, the upper sessile, the lower on rather sh petioles: fls large, on pedicels 3-6" lg in terminal cractleate cymes: cx-lobes lanceolate, 6-10" lg, pet twice longer, broadly spatulate, abruptly acuminate, hairy at apex, unite at base into a tube 3" lg; fl equalling cx-lobes: sty stout, cleft to middle: cap broadly obovoid, ¼" long, opening by 5 erect valves as in the other species; sds num, linear-oblong, a fifth ll lg, marked by longitudinal striae.

Mentzelia urens Parry, in hb, G 10:71 (1874).

Type locality: "rocky ravines of the Colorado near the confluence of Williams river," and "near St. George, Southern Utah."

Utah, Santa Maria, Baja Cal (Br).

Genus **EUCRYPTA** Nuttall

Erect paniculately branched viscid ann. with sm racemose fls: cx 5-parted, sinuses naked: cor sm, tubular-campulate, appendages 0: cap globose, 1-celled, with 2 dilated placentae lining pericarp, 2-valved, 8-seeded, 2 sds remaining in each valve between the pericarp and the placentae after dehiscence: sds corrugated or smooth.

Nut. Phil ac J, ns, 1:158 (1847). = *Ellisia* fide IK.

E. CHRYSANTHEMIFOLIA Greene, Cal ac b 1:200 based on *Ellisia* c. Ab 321. Baja. Greene, Cal ac b 2:407 Cruz. P 1:91 Mig.

E. FOLIOSA Nutt, Gamb 159. B 1:505 as *Ellisia chrysanthemifolia*.

E. MEMBRANACEA Bth. Quintin (Palmer). SF.

E. FANICULATA Nutt, DC 9:292 Greene, Cal ac b 1:200. B 1:505 as *Ellisia chrysanthemifolia*.

E. UJOPHUS PARISHII C & R.

One-2" hi: lvs ternate, on petioles 2-4" lg, with linear-lanceolate lfts 1-3" lg 2-5" wide, terminal lfts more or less distant; uppermost lvs simple: umbel 8-10-rayed, with "canty inv or 0, and involucl of 2-6 narly lanceolate bractlets 2" lg: rays ½-1" lg; pedicels 2-4" lg: fr ovate or oblong, 1½-2" lg, ½" broad: oil-tubes 2-4 in the intervals, 6 on the commissural side."—C-R 112 f 124. Ha 98. SBer mts, Jac (Parish).

Pimpinella Parishii C & R, bot gaz 12:

157.

Genus **EUNONYMUS** Tournefort.

Sep and pet 4 or 5, widely spreading: sta as many, very sh, on a broad angled disk: ova immersed in the disk, 3-5-celled: sty sh or 0: cap 3-5-lobed and 3-5-valved, loculicidal, coriaceous, colored, oft warty: sds 1-4 in each cell, covered with a fleshy r aril. Shrubs, with 4-angled branches, opp petioled serrate glab lvs, and fls in loose cymes on ax peds.

E. ATROPURPUREUS Jacq, Hort Vindol 2:55. (Hook Fl 1:119 = occidentalis fide B 1:98).

E. OCCIDENTALIS Nutt, ex T, Pac Ry R 4:74. B 1:98. 2:438.

EUONYMUS PARISHII Trelease.

"weak shrub, 8-10" hi; ends of twigs flattened; buds 6-10 mm lg; lvs glab, elliptical-ovate, finely crenate serrulate, obtuse or blunt-pointed, abruptly contracted and cuneate at base; ped 2 i lg 3-7-fid; fls about 6 mm in expanse; otherwise similar to *E. occidentalis*. (S. B. & W. F. Parish, No. 957)."—Trelease, St Louis ac tr 5:354 (1899). Ha 93. Burning bush, Spindle tree. Smith mt, SD Co (H. C. Orcutt).

Genus **EUPATORIUM** Tournefort.

E. ABORIGINUM P 4:277.

E. AGREATOIDES P 4:275, 278

E. ANGUSTATUM P 4:277.

E. ARIZONTICUM P 4:280.

E. ABOMATUM P 4:275, 279.

E. CANNABINUM C. Bauhin (1623).

Greene, Er 1:42. P 4:243.

E. CEANOTHIFOLIUM P 4:275.

E. CORDATUM P 4:275.

E. EUONYMIFOLIUM P 3:31.

E. EUBYBIAEFOLIUM P 4:275.

E. FRASERI P 4:275.

E. GRANDIFLORUM Hook Fl 2:26. Greene, Er 1:53.

E. HYSOPIFOLIUM P 3:177.

E. INCISUM P 3:180 S.

E. JUCUNDUM P 3:180.

E. KAELLIAEFOLIUM P 3:31.

E. MEMORALE P 4:278.

E. OCCIDENTALE B 1:299.

E. ODOREATUM P 4:275

EUPATORIUM PASADENENSIS Parish

E. SAGITTATUM G. B 1:299.

E. TRACYI P 4:275.

E. URTICAEFOLIUM P 4:275.

E. VIBURNIFOLIUM P 4:276.

Genus **EURYPTERA** Nuttall.

T & G Fl 1:629. = *Peucedanum* fide IK. A 1:274d.

E. HASSEI C & R. Ab 291, Sierra Madre canyon (Hasse).

Cauliscent, stout, 6 dm hi or more, glab and somewhat glau, from a lg slender woody rt; lvs biternate on very long petioles (sometimes 2.5 dm, including petiole); lfts broadly ovate with cuneate base, irr lobed, coarsely mucronate-toothed, 2.5-10 cm lg, becoming 6 cm broad; umbel long-peduncled, equally 8-18-rayed; bractlets varying from rather short linear-setaceous to oblanceolate, foliaceous, entire or toothed and much exceeding the pedicels; rays 5-10 cm lg; pedicels 12-16 mm

lg.
EURYPTERA LUCIDA Nutt.
 Nuttall, T & G, Fl 1:629.
 Abrams, Fl LA 290.
 Pt. Loma, SD! Baja Arizona.
 A 1:276d. B 1:269 as *Peucedanum Euryptera*. T. bot Mex bound 70 t 27.
 Genus **EUTHAMIA** Cass.
 Erect, glab, per, very lfy more or less distinctly corymbose branched herbs, with nar entire pellucid-punctate lvs, and sm hds clustered at ends of the branches: inv bracts firm, imbricated, glutinous: ray fs about twice as many as disk fs, all permanently y: ak sh, turbinate, villous pubescent.
 Ell, sketch 2:391 in syn (1824)=*Solidago* fide IK.
E. CAMPOBUM P 5:74.
E. CAROLINIANA Greene, Torr cl mem 5:321. P 5:76.
E. CHRYSATHAMNOIDES P 5:76.
E. GRAMINIFOLIA Nutt Gen 2:162. P 5:72. = *S. lanceolata* fide IK.
E. GYMNOSEPMOIDES P 5:75.
E. FLOREBUNDE P 5:74.
E. MEDIA P 5:74.
E. MICROCEPHALA P 5:79.
E. MICROPHYLLA P 5:79.
E. MINOR P 5:78.
E. NUTTALLII P 5:73.
EUTHAMIA OCCIDENTALIS Nuttall.
 Somewhat paniculately branching, 1-2 m hl; lvs lanceolate-linear, obscurely 3-nerved: inv bracts linear-lanceolate, acute; rays 16-30; disk-fs 8-14, their sty tips obtuse.
 Ab 397.—"Frequent in low ground and along streams in our valleys and foothills. A.-N." = *Solidago occidentalis* fide IK.
E. PULVERULENTA P 5:75.
E. REMOTA P 5:78.
E. SCABRA P 5:80.
E. TENUIFOLIA Ell, Sketch 2:392 in syn. P 5:77. = *S. tenuifolia* fide IK.
EUSTOMA EXALTATUM Griseb.
 Sber Co (Parish 431); Cantiles! son, Er 1:10, 12.
 Genus **EUPHORBIA** Linnaeus.
EUPHORBIA MELANADENTIA T, Pac Ry R 4:135 (1857).
 Type locality: "low or wet places near San Gabriel, Cal, 22 Mr 1854."
 Synonymy (fide Ab, SCA b 1:68):—*E. cinerascens* var: *appendiculata* E et *E. polycarpa vestita* Wat, B 2:73.
EVAX ACAULIS Greene.
 "Stout and low, the very sh branches horizontal: lvs with sh blade and greatly elongated petiole: hd glomerate at ends of all the branches, none in the axils. Moist plains near Antioch, and southward. Ap-Je."—Greene, Man 184.
EVAX INVOLUCRATA Greene.
 "Stout, strictly erect, simple, or rarely with 1 or more ascending lg branches from base, 8' hl or more; hds only in a terminal hemispherical cluster $\frac{3}{4}$ ' broad, surrounded by a conspicuous whorl of 15 or 20 lvs, these with spatulate-obovate cuspidate blade $\frac{1}{2}$ ' lg, only a third of the length of the slender petiole, this abruptly dilated at base to half the width of blade; cauline lvs shorter and nar-er. Plains of the lower Sacramento;

collected only by the author. My."—Greene, Man 185.
 = *Psilocarpus caulescens* Bth fide IK
EVOLVULUS.
E: OREOPHILUS Gifts 1:151. NM.
ELYMUS ORCUTIANUS Vasey.
ELYMUS PARISHII Davy & Merrill.
 Genus **FAGONIA** Linnaeus.
FAGONIA CALIFORNICA Benth.
FRANCA Michel. = *Frankenia* fide IK.
F. MANIFOLIA Greene, Man 38. = *Frankenia* g.
GAERTNERIA Medic Phil bot 1:45 (1789). = *Franseria* fide IK.
G. ACANTHICARPA Britton. Ab 413.
G. BIPINNATIFIDA OK. Ab 413.
G. TENUIFOLIA OK. Ab 412.
 Genus **GAILLARDIA** Fougeroux.
 Fouger, Ac Sc Par mem, 1786: 5 t 1-2 (1788).
G. ACAULIS G 10:73. B 1:392.
G. ARISTATA Pursh Fl 2:573. B 1:392.
G. PINNATIFIDA T, NY Lyc ann 2: 214. B 1:392.
G. FALGIATA P 5:57.
G. LUTEA P 5:57.
 Genus **GALIUM** Linnaeus.
 L, Gen ed 1, 24 (1737).
 Bedstraw. Ann or per herbs or rarely suffrutescent, with 4-angled slender sts and branches, apparently verticillate lvs, and sm w, g, y, or p fs, mostly in axy or terminal cymes or panicles: fs perfect or rarely dioe: ex-tube ovoid or globose, limb minutely toothed or o: cor rotate, 4-lobed: sta 4, alt with cor-lobes; fi sh: ova 2-celled; ovules 1 in each cavity: sty 2, sh; stlg capitate: fr biglobular, dry or fleshy, smooth, tuberculate or hispid, separating into 2 indehiscent carpels.
G. ACUTISSIMUM G 7:350.
 B 1:286 as *stellatum*.
G: ANDREWSII G 6:537. B 1:286. Da 8. Er 1:12. Ab 379. A 1:177d.
G. ANGULOSUM G 11:74. B 2:453. Guad? A 1:54 fdr. Z 1:112, 138.
G. ANGUSTIFOLIUM Nutt, T & G Fl 2:22. Par 30. P 1:203 Cedros. Greene, Cal ac b 2:400 Cruz. Br 1:211 Rosa. Ab 378. B 2:285. Da 8. A 1:178d.
GALIUM APARINE L.
 Greene Cal ac b 2:400 Cruz. Br 1:211 Rosa, Da 8. B 1:284. A 1:141d. Par 30.
 Variety **VALLANTII** Koch. A 1:141.
G. ASPERRIMUM G, Pl Fendl 60. B 1:284. NM. Ar (Wat, bot King 134 = variety *asperulum* fide B 1:284).
 Variety **ASPERULUM** B 1:284. Nev.
G. BIFOLIUM Wat, bot King 134 t 14. B 1:283.
G. BLOOMERI G 6:538. B 1:285. = multiflorum fide IK.
 Variety **BRESUTUM** G, B 1:285. Sierra valley, Cal (Lemmon).
G: BOLANDERI G 7:350. B 1:284. 2:453.
G. BOREALE L, sp pl 108. B 1:285. Ore.
G. BRANDEGEI Z 2:230.
G. BUXIFOLIUM Greene, Cal ac b 2: 150, 400 Cruz. P 1:88 Mig. Br Z 1:112 as *Catalinense*.
G. CALIFORNICUM H & A, bot Beech 349. Ab 379. Z 1:138. A 1:178. B 1:283. 2:452. Br, 1:225 (cites *flaccidum* as a synonym).

GALIUM CATALINENSE A. Gray.**GALIUM CULBERTSONII** Greene.

"Rigid herbaceous per, with, nearly simple st about 1° hi from horizontal subligneous ristocks at least partly subterranean; angles of st as well as margin and midvein of lvs, minutely villous-hispid, a more minute and partly appressed pubescence between angles of st: lvs in 4's, of firm texture, less than ½ lg, oval, but ending in a very prominent cusp: fls few, minute, gl'sh: frs (Minature) apparently baccate, on deflexed pedicels of ¼-½ lg, to the unaided eye appearing glab, but under a lens seen to be sparsely and minutely hispidulous-hairy."—Gifts 1:80. south fork of the Kaweah river, Tulare Co, Cal, J. D: Culbertson.

GALIUM FLAUCIDUM Greene.

Cal ac b 2:400 Cruz. P 1:34. A 1:55 fdr.

Z 1:138 as Californicum.

GALIUM GRANDIS McClatchie.

A 1:55 fdr. Ab 379.

G. HYPOTRICHUM G 6:538. B 1:286 as multiflorum.

G. MARGARICOCCUM G 13:371. B 2:458 as terule form of Bolanderi.

G. MATTHEWII G, 19:80. Cov 118.

GALIUM MIGUELENSE Greene.

P 1:34, 88 Mig. A 1:55 fdr, 178 as Nuttallii (fide Z 1:138).

G. MULTIFLORUM K 2:94. Cur 1:138.

Cov 118. Ha 121. B 1:285. A 1:142.

Variety **FARVIFLORUM** Parish. A 1:42 fdr.

G. NUTTALLII G, Pl Wright 1:80. Br 1:203 Cruz, 211 Rosa (cites Miguelense as a synonym). Par 31. Ab 379. Da 8.

B 1:283. 2:453. Z 1:138. A 1:178d.

GALIUM OCCIDENTALE McClatchie.

A 1:55 fdr.

GALIUM PUBENS A. Gray.

B 1:285. 2:453.

Baja! to Yosemite valley.

GALIUM ROTHROCKII A. Gray.

Cautilles mts! Arizona.

GALIUM SICCATUM Wright.

A 1:56 fdr. Ab 378.

GALIUM SPURIUM Linn.

Da 8. Er 1:59 LA Co.

GALIUM STELLATUM Kellogg.

Calamajust, Baja (Er); SD Co! Utah;

Arizona.

K 2:94. B 1:286. Cur 1:138. Cov 118,

Panamint mts.

G. SUFRUTICOSUM Nutt. B 1:283 et.

A 1:178 as Nuttallii.

G. TICTORIUM L, sp pl 106. A 1:141.

= trindum fide IK.

Variety **DIVERSIFOLIUM** Wright. A 1:

142 fdr.

Variety **SUBMONTANUM** Wright. A 1:

141 fdr.

G. TRICOCARPUM DC, Prod 4:600. B

1:285.

G. TRIFIDUM L, sp pl 105. B 1:284. A

1:178.

Variety **PUSILLUM** G. A 1:178.

Variety **SUBEIFLORUM** Wiegand. A 1:

178d. Ab 378.

G. TRIFLORUM Michx Fl 1:80 (1803).

B 1:284. Cov 118, valley of the Kaweah

river. Alk. Japan. Ala. So Cal (Parish).

G. WRIGHTII G, Pl Wright 1:80. Par-

ish, Er 1:97, San Antonio mts, 7000°

alt (McClatchie).

GALVESIA [Galvesia Domb ex Juss Gen 119 (1789)].

G. FRUTICOSA J. F. Gmel, Syst 937.

Peru.

G. JUNCEA G 22:311. P 1:206 Cedros.

G. LUCIDENSIS Domb, ex Chav, mon Ant-

tirrh 180. B 1:551. = fruticosa fide IK.

GAMBELLA Nutt, Phil ac J ns, 1:149

(1847).

G. SPECIOSA Nutt, lc, t 22. B 1:551 et

Br, Z 1:112 as Antirrhinum speciosum.

Cat. Guad.

Genus GARRYA Douglas.

Evergreen shrubs with 4-angled branchlets, opp entire coriaceous lvs, sh petioles connate at base, and dioe apetalous fls in axy aments, solitary or in 3's between the decussately connate bracts: ex of pist fls 4-parted, with linear valvate seg: sta 4, with distinct fl: disk and ova 0: stam fls with ex-limb shly 2-lobed or obsolete: disk and sta 0: ova 1-celled: ovules 2: sty 2, stigmatic on the inner side, persistent: berry ovoid, 1-2-seeded. Silk-tassel tree.

G. BUXIFOLIA G 7:349. B 1:276. Z 1:94

as probably fremontii.

G. ELLIPTICA Lindl, bot reg t 1686.

B 1:276. Z 2:355. Par 376 t.

G. FLAVESCENS Wat Am nat 7:301. A

1:191 fdr. B 1:276.

Variety **PALMERI** Wat. A 1:191. Ab 294

as Veatchii var. Palmeri.

GARRYA FREMONTII Torr.

Jac (Hall 99). Jepson, Erythra 1:12.

T. Pac Ry R 4:136. Par 376. C & E, bot

gaz 15:95. Z 1:94 (as Veatchii -), 2:

157. B 1:276. 2:452.

G. LINDHEIMERI T Pac Ry R 4:1:36.

Z 1:94 as ovata.

G. OVATA Bth 14. Mex.

G. PALLIDA Eastwood. A 1:191d. Ab

294.

G. VEATCHII K 5:40 (1873). C & E,

bot gaz 15:95. Ha 100. McClatchie, Er

2:122, Echo mts. LA Co. Cur 1:133. P

1:203 Cedros. A 1:41d. Parish Z 5:73

Gabriel mts.

Variety **FLAVESCENS** Z 1:94 (*G. flavescens* Wat).

Variety **UNDULATA** Eastwood.

Lvs elliptic or elliptic-ovate, obtuse

or aristate at apex, cuneate at base,

margins undulate; fr densely clustered,

concealing upper bracts; ex-teeth hid-

den in dense wool and some distance

below base of sty. Ab 294, Mt Wilson

and Mt Lowe.

Variety **PALMERI** Eastwood.

An erect, branching shrub, 18-25 dm

hi; branchlets sparsely pubescent with

close appressed silky hairs when young,

becoming smooth with age; petioles sh,

2-6 mm lg; lvs coriaceous oval or obli-

ovate, slightly undulate or entire, acute

at apex and aristate, rounded or cune-

ate at base, glab or nearly so above,

densely tomentose beneath with matted

hairs, 2.5-5 cm lg; bracts prominent,

acute or acuminate, lower foliaceous; fr

cuneate at base, lower sh-pedicelled,

densely silky, becoming glabrate; cx-

teeth prominent and close to base of

sty. Ab 294. Cuyamaca.

G. WRIGHTII T, Pac Ry R 4:136.

GAULTHERIA Kalm ex L, Diss Chen 20 (1751).
G. MYRSINITES Hook, Fl 2:35. B 1:454. Parry, Wyo 18.
G. SHALLOM Pursh Fl 1:283 t 12. B 1:455. Par 49. Z 2:263.
GAURA L, Diss Chen 47 (1751).
G. HETERANTHA T, Pac Ry R. 4:87. B 1:234 as *Heterogaura* Californica.
G. PARVIFLORA Dougl, Hook Fl 1:208. B 1:234. Baja.
GAYOPHYTUM A Juss in Ann Sc nat 25:18 t 4 (1832). A 1:334d.
G. CAESIUM T & G Fl 1:514. B 1:221 as racemosum.
GAYOPHYTUM DIFFUSUM T. & G. T & G Fl 1:513. B 1:221. Da 6.
GAYOPHYTUM LASIOSPERMUM Greene A 1:39 fdr. Ha. 97. Trelease, Mo bot gard r 5:109 t 17.
G. NUTTALLII T & G Fl 1:514. B 1:221. = racemosum fide IK.
GAYOPHYTUM PUMILUM S. Watson. Wat 18:193. Ha 97. Ab 273. Bear. Trelease, Mo bot gard r 5:114 t 22.
G. RAEMOSUM T & G Fl 1:514. B 1:221.
G. RAMOSISSIMUM T & G Fl 1:513. B 1:221. Z 2:162. Ab 272. A 1:334d.
G. STRICTUM G 7:340. B 1:233 as *Boisduvallia* Torreyi (= *oenothera* T fide IK).
GENTIANA Tourn ex L syst ed 1 (1735).
G. ACUTA Michx Fl 1:177. B 1:481 as *amaeilla* var: *acuta*.
G. AFFINIS Griseb, Gen 289. B 1:482 (G 8:398 = *sceptrum* var: *humilis* fide. B 1:483).
 Variety **OVATA** G, B 1:482 (2:462 as *Oregana* E).
G. AMARELLA L, sp pl 230.
 Variety **ACUTA** E, B 1:481 based on G: *acuta* Michx. (Sber mts, Parish 311).
G. ANISOSEPALA P 3:309.
G. BRACHYPETALA Bunge, in Norev mem soc nat Mosc 1:225 t 11 f 3. B 1:481 as *serrata* = *detonsa* fide IK.
G. BRACTEOSA P 4:180.
G. CALYCOSA G, Pac Ry R 6:86. B 1:482, as *Newberryi*.
G. CALYCOSA Griseb, Gen et sp Gent 292. Z 2:165. Par 336 t.
G. DETONSA Rottb, Act Hafn 10:254 t 1 f 3. B 1:481 as *serrata*.
 Parry, Wyo 16. IK as valid sp.
G. DISTEGIA P 4:182.
G. DOUGLASIANA Bong, Ac Petersb mem 2:156. P 3:81.
G. GLAUCA Pall, Fl Ross 1 (2) 104 t 93 f 2. Sib.
 Variety *Paulonse* K 7:115. Cur 1:143 "not in herb."
G. HETEROSEPALA E. St Louis ac tr 2:215 t 8. P 4:183.
G. HUMILIS Stev, Mem sc nat Mosc 3:258. Asia. Ckl W 6:11. Parry, Wyo 4, 7.
G. INTERRUPTA P 4:182.
G. MENZIESII Griseb, Gen 292. B 1:483 as *sceptrum* var: *humilis*. P 3:82.
G. NEWBERRYI G 11:84.
 B 1:482. Z 2:165.
G. OREGANA E ex G syn Fl 2 (1): 122. B 2:464.
G. PABYI E St Louis, ac tr 2:218 t 10. Nev. Colo. B 1:482. P 4:181.
G. REMOTA P 4:182.

G. SCEPTRUM Griseb, Gen et sp Gent 293. B 1:483.
 Variety **HUMILIS** E, B 1:483.
G. SEITIGERA G 11:84.
 B 1:482.
G. SIMPLEX G, Pac Ry 5:87 t 16.
 B 1:481.
G. SERRATA Gunner, Fl Norveg 2:101. B 1:481. Ckl W 6:11. = *detonsa* fide IK.
GEOTHALLUS.
G. TUBEROSUS Campb, bot gaz (Ja 1806). SD Liverwort.
GERAZA T & G, Am ac pr 1:48 (1847). = *Encelia* fide IK.
G. CANECENS T & G, lc 49. B 1:351 as *Encelia eriocephala*.

Genus GERANIUM Linnaeus.

Herbs with stipulate, palmately lobed, cleft or divided lvs and axyl 1-2-fid peds; fls regular, 5-merous; sep imbricated; pet hypogynous, imbricated; sta 10, generally 5 shorter; sty persistent, naked on inner surface, becoming recurved; carpel opening along inner face.
G. ALBIFLORUM Hook Fl 1:116 t 40; bot map t 3124. B 1:94 as *Richardsonii*.
 Variety? **INCISUM** T & G Fl 1:206. B 1:94 as sp.
GERANIUM CAESPITOSUM James. NM. Ar Mts northern Baja (Or 924). Slender, diffusely branched, with sm broadly lobed lvs, finely pubescent. B 1:94. Z 2:112.
GERANIUM CAROLINIANUM Linn.
 More or less spreading, 15-30 cm high, loosely gray pubescent and glandular; lvs incisely 3-5-parted, 3-5 cm broad; seg cuneate, more or less deeply toothed or dissected; peds 2-fid, about 2 cm lg; pet rose-p, 4-5 mm broad; beak of fr villous or glandular; carpels villous-hispid, com black; sd reticulate. British Am. SD!
 B r 1:202. Cruz. B 1:94. Da 3. P 3:172. A b 227. Br Z 1:113 Cat.
G. ERIANTHUM Lindl, bot reg 28: t 52. B 1:94 as *Incisum*.
G. FREMONTII T, ex G, Pl Fendl 26. Z 2:112.
G. INCISUM Nutt, ex T & G Fl 1:20. Par 220. B 1:94. 2:438. Z 2:161.
G. LANGLOISII P 3:171. La.
G. RICHARDSONI F & M, Ind Sem Petrop 4:37 (1837). Hook Fl 1:116. Cov 76. B 1:94. Z 2:112. Ab 227.
 Sts 3-6 dm hi, lvs thin, 5-12 cm broad, incisely 3-5-parted; fl 18-20 mm broad, w or lavender with rose-p veins.
GERARDIA L, Gen ed 1, 181 (1737).
G. DECEMLOBA P 4:51.
G. HOLMIANA P 4:52.
G. LANCEOLATA P 4:101.
G. TENUIFOLIA P 4:52, 101.
G. GALVSIANA P 5:138.
G. FRUTICOSA Pursh Fl 2:423 t 18. B 1:556 as *Pentstemon Menziesii*.
GEUM L, syst ed 1 (1735).
G. ANEMONOIDES Willd sp pl 2:1117. P 4:49 as *Sieversia* pentapetalata.
G. AUKLANDICUM P 4:225.
G. CALTHIFOLIUM Sm in Rees Cyc 5 n 13. P 3:81 NM.
G. CILIATUM Pursh Fl 1:352. P 4:50 as *Sieversia c = triflorum* fide IK.
G. GLACIALE Fisch in mem Mosc 2: 187 t xi f 20 (1809). P 4:49 as *Sieversia*

glacialis.

- G. MACROPHYLLUM** Willd, En 557. B 1:176.
G. ROSSII Seringe in DC 2:553. P 4:49 as *Sieversia* R.
G. ROTUNDIFOLIUM Langed, DC 2:15. as *Sieversia* t. B 1:176.
G. SCOPULORUM P 4:148.
G. SERICEUM P 3:172. 4:50 (as *Sieversia sericea*), 225. Nev. Mont.
G. STRICTUM Soland in Ait Hort Kew ed 1. 2:217. P 4:148.
G. TRIFLORUM Pursh, Fl 2:736. P 4:50 as *Sieversia* t. B 1:176.
G. TURBINATUM Rydb, T cl b 24:91. P 4:50 as *Sieversia* r.
GILIA Ruiz & Pavon, Prod Fl Per 25 t 4 (1794). A 1:344d.

GILIA.

Ab 314. A 1:7d.

- G. ACNILLANFOLIA** Bth, bot reg sub t 1622. Par 304 t. Ab 314. B 1:497. Da 11. A 1:346d. [Lindl, bot reg t 1622, et Hook, bot mag t 3440 = *multicaulis* fide B 1:498.]
G. AGGREGATA Sprang, syst veg 1: 626 (1825). B 1:496. 2:465. Z 2:165. Par 366 t. Cov 155 Mono Co.
G. BRANDEGII G 11:85. Br Colo 228.
G. BOLANDERII G 8:263. B 1:490. 2:465.
G. BREWERI G 8:269. B 1:494. P 1:137 as *navarretia* B.
 Span hi or less, at length much branched and diffusely tufted, minutely glandular-puberulent throat: lf-divisions acerose, mostly entire: fls in lfy hds: cor y, hardly longer than the slender-subulate ex-lobes; cx-tube very sh: ovules and sds mostly solitary. Placer Co to Sierra Co, 6000-8000' alt. (Brewer, Bolander). So Cal (Parish 1841.—See also *G. pungens*); Nev; Wyo.
G. CAMPANULATA G 8:279. B 1:499.
G. CAPILLARIS K 5:46. Cur 1:142. Jepson, Er 1:15. Z 2:165. B 1:488 as *leptalea* G.
G. CONGESTA Hook Fl 2:75. B 1:496. Variety **OBESIFOLIA** G, B 1:496.
G. COTULAEFOLIA Steudel, Nom ed 2. 1:683. B 1:493. P 1:132 as *Navarretia cotulaefolia*.
G. CREBRIFOLIA Nutt, Phil ac J ns, 1:156. B 1:496 as *congesta* var: c.
GILIA DEBILIS Wat.
 "Slender, 1-2' hi, lfy above; pubescence minute or hirsute; lvs alt, ½-1' lg, oblg, attenuate into a sh petiole, entire, or some of them broader and 3-lobed; bracts entire, resembling the lvs, twice longer than cx; fls nearly sessile; cx-teeth ovate-triangular, sh'er than tube; cor funnel-form, 8" lg, with elongated tube and deeply lobed limb, light-p; the sta upon the throat, exserted; cap 1" lg, the cells 1-seeded; sds without mucilage or spiracles.—Ut (Wheeler). Without the pinnatifid pungent lobing of the lvs and bracts which is usual in the section."—Wat, Am nat 7:302 (My 1873). Section *Navarretia*.
G. DENSIFLORA Bth. B 1:491.
 Span to 2' hi, rather stout and strict: lf-divisions num, filiform, rather rigid, in somewhat distant apparent whorls: w or rose-p cor-tube little lf at all exceeding the villous-hirsute bracts and cx;

cor lobes near ¼' lg, obovate. SF southward.

Leptosiphon densiflorus Bth, hort soc tr 1834 t 18. Lindl bot reg t 1725. Hooker, bot mag t 3578.

Gilia grandiflora Steud & Benth.
Leptosiphon grandiflorus Bentham, bot reg.

Gilia Leptosiphon Steud, Nom.

Variety **ELONGATA** Gray.

SBer (Parish 314); mts SD Co.

G. DENSAFOLIA Bth, in DC Prod 9:311.

Ab 316. B 1:495. Da 11. A 1:176d.

G. DEPRESSA Jones ex G 16:106. Z 2: 250.

G. DIANTROIDES Endl, Atakt bot t 29.

DC 10:314. Hook, bot mag t 4876. B 1: 490. Da 11. Par 222 t. Br 1:204 Cruz.

2:254 et. A 1:175. 176, as *Linthus dianthiflorus*. Br, Z 1:114. Ha 104. Fringed

Gilia. *Fenzlia dianthiflora*, Bth bot reg;

F: speciosa et conjuua Nutt, Gamb 157.

G. DIVARICATA Nutt, Gamb 155. Da 11.

B 1:494. Guad. P 1:136 as *Navarretia*

d. G. syn fl 2:135 as a slender form of

Collomia giloides.

G. DUNNII K, Pac Rural Press 31 My

1879. Cur 1:142 as *Loeselia effusa* G.

G. FILICHAULIS T. G 8:270. syn fl 2 (1):

142. P 1:134 as *navarretia* f. B 1:494.

G. FILIFOLIA Nutt, Gamb 156. Greene.

Cal ac b 2:407 Cruz. B 1:495. Da 11. A

1:176d.

G. FILIFORMIS Parry ex G 10:75. B 1:

499.

G. FILIPES Bth 325. B 1:490 as *pusilla*

var: *californica* G.

G. FLOCCOSA G 8:272. B 1:495. Da 11.

A 1:176d.

G. FLOREBUNDA G 8:267. B 1:492. A 1:

177.

A ft hi or more, bushy, slender, corym-

bose at summit: lf-divisions acerose, ½'

lg, nearly smooth: fls cymose-clustered,

delicately scented, some rather slender-

pedicelled: ovules 4 in each cell. So

Cal; Or; Baja mts!

G. GILIOIDES Greene. A 1:177d. Ab 315.

G. FLUTIGNA Phil, in *Linnaea* 30: 196.

Chili.

Da 11. Ha 104. Br Z 1:114 Cat.

Collomia glutinosa Bth.

G. GRACILIS Hook, bot mag t 2924. B 1:

488 as *collomia gracilis* Dougl. P 1:141

as *Phlox gracilis*. P 3:300 as *Microsteris*

gracilis.

G. GRANDIFLORA G 17:223. Par 184.

Z 2:165. 232. B 1:491 as *densiflora*.

G. HARKNESSII Curran, Cal ac b 1:12.

Z 2:232.

G. HOOKERI Bth, DC Prod 9:316. B 1:

493 as *pungens*.

G. HOWARDI Z 2:250.

G. HETERODOXA Greene, Cal ac b 1:10.

P 1:134 as *navarretia* h.

G. HETEROPHYLLA Dougl, bot mag t

2895. G. syn fl suppl 408. P 1:128 as

Collomia h. Z 2:165.

G. INTERTEXTA Steud. Nom ed 2, 1:

683. B 1:493. P 1:131 as *Navarretia* i

(Hook Fl 2:76).

G. KENNEDYI Porter, bot gaz 2:77. B

2:465 as *Parryae*.

G. LARSENII G 11:84. B 1:497.

G. LATIFLORA G, Syn Fl 2:147. B 2:

466. Ha 104. SD & LA Co.

Variety **EXILIS** G. Ab 315. A 1:177d.

GILIA LATIFOLIA S. Watson.
Am Nat 9:347. So Ut Cov 156, Panamint mts.

CD (Parish 253).
GILIA LAXA Vasey & Rese.
Quintin (Palmer).

G. LEMMONI G, B 2:465. Da 11. Ha 104. P 2:257 et. A 1:175, 177 as *Linanthus* L.

GILIA LEPTANTHA Parish.
A 1:78 fdr.

G. LEPTOMERIA G 8:278. B 1:498. Z 2:232. Wat, bot king 270 t 26 f 6, 7.

G. LEUCOCEPHALA G 8:269, syn f 2 (1):142. B 1:494. P 1:131 as *Navaretia* l.

G. LINIFLORA Bth, bot reg sub t 1622. B 1:489. Z 2:95, 364. A 1:175, 177 as *Linanthus* l.

Cal. common; Baja! SD! SBer (Parish 462).

Variety **PHARNACEOIDES** Gray.

Da 11. =*Linanthus* p.

Similar to the type except in the reduced size, a span hi, with capillary branches, the sometimes pale flesh-colored cor about 4 li in diam. Ore; Ut; BC; Baja! SD! thru the Rocky mts.

Gilia pharnaceoides Hooker, Fl 2:74t 161.
G. LONGIFLORA Z 2:250.

G. LONGITUBA Bth 324, 325. A 1:175 as *Linanthus parviflorus*. M 1:43 as *Linanthus longituba*. =G. *micrantha* fide IK.

G. LUTEA Steudel, Nom ed 2, 1:681. B 1:491 as *micrantha* (A 1:175 as *Linanthus parviflorus*).

G. LUTESCENS Steudel, .om ed 2, 1:681. B 1:495. 2:465. A 1:175 as *Gilia floccosa*.

GILIA MACULATA Parish.
A 1:89 fdr.

G. MELLITA P 1:71, 72, 134 (as *navaretia mellita*).

GILIA MICRANTHA Stend.

Throughout So Cal; Baja! LA.

Steud, nof 1:684. P 1:91 Mig. B 1:491. Da 11. A 1:175 as *Linanthus parviflorus*.

G. MICROMERIA G 8:279. B 1:499.

G. MILLEFOLIATA F & M, Sem Petr 35 (1838). B 1:498 as *multicaulis*. Greene, Er 3:103.

G. MINIMA G 8:269. B 1:494. Z 2:250. P 1:131 as *Navaretia* m.

G. MINUTIFLORA Bth, in DC 9:315. B 1:499.

GILIA MULTICAULIS.

Bth, bot reg t 1622. Ab 314. Greene, Cal ac b 2:407 Cruz. B 1:497. Da 11. A 1:74, 346.

GILIA NEVINII A. Gray.

Br 1:204, 214, Z 1:114.

Cat. Cruz and Rosa (Br).

G. NUDICAULIS G 8:266. B 1:492. Parry, Wyo 7. Cov 556, White mts, Cal. P 3:304 as

GILIA ORCUTTII. Parry.

Day ac pr 4:40. Baja! A 1:78 fdr.

G. PALIDA M 1:43. Sonoma Co, Cal.

GILIA PARRYAE A. Gray.

Br 2:465. Z 2:77.

Mohave (Parry); Kern Co.

G. PARVULA P 1:72, 134 (as *Navaretia* p). Rydb, N Y bot gard mem 1:320 (1900) =*Gymnosteris parvula* fide M 1:3.

G. PHARNACEOIDES Bth, bot reg sub

t 1622. B 1:489. Ha 104. P 2:254 as *Linanthus pharnaceoides*. =*liniflora* fide IK.

G. POLYCLADON T, bot Mex Bound 147. B 1:496. Z 2:232.

G. PROSTRATA G 17:223. Da 11. A 1:169 et. P 1:131 as *Navaretia* p.

G. PUBESCENS Steudel, nom ed 2, 1:684. P 1:133 as *Navaretia* p.

G. PULCHELLA Dougl ex Bth, bot reg sub t 1622. B 1:496.

G. PUSILLA Nutt, Phil ac J ns, 1:156 (1847. B 1:496 Texas.

GILIA PUNGENS Benth.

Oregon to Ubl, Baja (Br). Arizona.

Z 2:165. B 1:493. (Hook, bot mag t 2947 =*squarrosa* fide B 1:493; (P 1:133 as *Navaretia squarrosa*.) Ha 105. Parry Wyo 5.

A span to ft hi, bushy; more or less viscid-pubescent, or nearly glab; rigid lvs little spreading or erect; cor w or rose-p; the lobes nar'er and half as large as in *Californica*; anth borne in throat, obliq; ovules 8 or 10 in each cell.

Ore; Nev; Ar; Baja.

Cantua pungens T. N Y Lyc an 2:221.

Variety **HALLII** Milliken, Univ Cal pub bot 2:48. M 1:146 as *Leptodactylon Hallii*.

Variety **Hookeri** Gray.

Ha 105?—So Cal (Parish 1841).

Gilia Hookeri Bentham.

Variety **SQUARROSA** G, 8:268.

Lf-divisions subulate, stouter, soon spreading or squarrose-recurved. Nev.

M 1:146 as *Leptodactylon patens* (not *Gilia squarrosa* H & A).

Variety **TENUILOBA** Milliken, Univ Cal pub bot 2:43. M 1:146 as *Leptodactylon tenuilobum*.

G. PUSILLA Bth, bot reg sub t 1622. B 1:489. A 1:175 as *Linanthus* p.

Variety **CALIFORNICA** G 8:263. Cor 3" lg, throat oft brownish, cx 1½" lg; ped oft 1' lg. Cal, Nev, Ut. Bth 325 as filipes.

G. SCHOTTII G, bot king 267. B 2:466. P 3:30 as *Langloisia* S.

G. SESSEI Don, G 17:223. P 1:128 as *Collomia heterophylla*.

G. SETOSSISSIMA G 8:271. B 1:489. 2:465. P 3:30 as *Langloisia* s.

G. SINUATA Dougl ex Bth in DC 9:313. =*parviflora* fide IK. B 1:498 as *inconspicua* var: S.

G. SQUARROSA H & A, bot Beech 151. B 1:493. P 1:133 as *Navaretia* S.

G. STAMINEA Ab 314. A 1:344d.

G. STRICTA Liebmann, Ind sem hort Hafn (1853). B 1:489 as *multicaulis* var: *tenera*.

G. SUBRUDA Tex G 8:276. B 1:497.

GILIA TENELLA Benth.

B1:491. Da 11. Z 2:165. A 1:174 as *Linanthus bicolor*.

Fuget Sound to SBer Co (Parish 313).

G. TENUIFLORA Bth, bot reg sub t 1622. A 1:168d B 1:498. Da 11.

Variety **ALTISSIMA** Parish Ab 315. A 1:169 fdr.

Variety **LATIFLORA** G, B 1:498. B 2:466 as *latiflora* G. A 1:169 fdr. Da 11.

GILIA TENUILOBA Parish.

A 1:8 fdr. M 1:146 as *Leptodactylon tenuilobum*.

G. TRICOLOR Bth, bot reg sub t 1622. B

1:498. Par 292. Parish, Er 6:90 (Antelope valley, Davidson), Cal.
G. TRIFIDA Bth, in Hook Kew J 3:291 (1851). B 1:496 as pumila.
G. VEATCHII Parry, Cal ac b1:198. Green, Cal ac b 1:198 Cedros (Veatch 1859). P 1:205.
G. VIOLAHA M 1:56. Nevada Co, Cal.
G. VIOGATA Steudel, nom ed 2, 1:684. B 1: 495. Da 11. Ab 316. A 1:176, 169d. Variety **FLOREBUNDA** G. Ab 316. A 1: 169d.
G. VISCIDULA G 3:269. B 1:494. Bth 325; A 1:169 et. P 1:133 as navarretia v. Variety **HETERODOXA** G, syn fl supp 409. P 1:134 as navarretia h.
G. WATSONI G 3:267. B 1:492.

Genus GITHOPSIS Nuttall.

Slender Ann with rather sm linear-oblong coarsely toothed sessile lvs; fls simply terminating the branches or becoming lateral, erect, all alike; ex-tube club-shaped, strongly 10-ribbed, adnate to the summit of the ovary, its limo of 5 long and linear foliaceous lobes; cor tubular-campanulate, 5-lobed; fil short, dilated at the base; anther long, linear; ova 3-celled; stigma 3-lobed; cap club-shaped, coriaceous, crowned with the rigid ex-lobes of its own length, strongly striate-ribbed, many-seed, opening when the somewhat persistent base of the sty falls away by a round hole in its place; sds fusiform-oblong.

Nutt. Am phil sc tr ns, 8:258 (1843).
G. CALYCINA Bth 321. B 1:446 as specularioides.
GITHOPSIS DIFFUSA A. Gray. G 17:221. Da 10, Er 2:84 Cucamonga mts. (Parish); Vaca mts, south. A 1:6d.
G. PULCHELLA Vathe, in Linnaea 38: 714. B 1:446 as specularioides.
G. SPECULARIODES Nutt, lc 8:258. Ab 387 Monica (Hasse). A 1:107d. B 1: 446.
GLANDULARIA J F Gmel, syst 920 (1791). = Verbena.
G. BIPINNATIFIDA Nutt, Phil ac J 2: 123. B 1:609 as V. b.
G. CAROLINENSIS Gmel lc. = V. aubletia.

Genus GLAUX Linnaeus.

L, syst ed 1 (1735). A 1:198d.
GLAUX MARITIMA Linn.
 Sea Milkwort; in saline soil round the northern hemisphere.
 L, sp pl 207. A 1:198. B 1:469. Z 2:636.
GLOSSOPETALON G, Pl Wright 2:29 t 12 B (1853).
G. NEVADENSE G 11:73. B 1:108. 2:439.
G. SPINESCENS G, lc. B 1:108. Z 2:228. Er Colo 234. SBER mts (Parish 1291).
GLOENOFORUS
G. CONCHOIDES M 1:22.
GLYCERIA R Br, Prod 179 (1810).
G. AIROIDES Steud, syn Pl Gram 287. Japan. [Thurb, bot Wilkes exp 490, 491 = Atropis distans fide B 2:308.]
G. ANGUSTATA Thurb, bot Wilkes exp 490, 491. B 2:308 as Atropis distans.
G. BULBOSA Buckley, Phil ac pr 1862, 95. B 2:304 as Melica fugax.
G. DISTANS Reichenb Ic t 151, 152. B 2: 308 as Atropis d.

G. FESTUCAEFORMIS Reichenb Ic t 151, 152. B 2:308 as Atropis distans.
G. FLUTTANS R Br, Prod 179. Australia. B 2:307.
G. GLUMARIS Griseb in Ledeb Fl Ross 4:392. B 2:313 as Poa g.
G. LEPTOSTACHYA Buckley, Phil ac pr 1862, 95-6. B 2:308 as pauciflora.
G. MARITIMA Reichenb, lc. B 2:308 as Atropis distans.
G. MICHAUXII Kunth, Rev Gram 1:118, 343 t 85. B 2:308 as nervata.
G. MICROTHECA Buckley, Phil ac pr 1862, 95-6. B 2:308 as pauciflora.
G. NERVATA Trin, st Pet mem st 6, 1: 365. B 2:307.
G. PAUCIFLORA Presl, Rel Hoenk 1:257. B 2:308. Da 19. Wat, bot King 384.
GLYCERIA REMOTA Fries.
 San Bernardino mts (Parish 1661).
GLYCOSSMA Nutt, ex T & G Fl 1:639 (1840). = Myrrhis.
G. AMERIBUUM G 8:386. B 1:262.
G. BOLANDERI G 8:386. B 1:262. 2:451. = M: B fide IK.
G. OCCIDENTALE Nutt, ex T & G Fl 1: 639. B 1:262. = M: oc fide IK.
GLYPHOCARPA (Moss).
G. BAUBERI Hampe, Linnaea 30: 457. B 2:400 as Bartramia Menziesii.

Genus GLYCYRRHIZA Linnaeus.

Liquorice; per herbs with glandular-viscid herbage, odd-pinnate lvs and minute stipules; fls y'ish-w, in axly peduncled spk; cx 5-cleft, with the 2 upper lobes sh'er or partly united; sta monadelphous or diadelphous, the alt anther sm'er; ovary 2-many-ovuled; sty sh and rigid, curved at tip; pod sh, flattened, prickly, few-seeded, indehiscent.
G. GLUTINOSA Nutt, T & G Fl 1:298. B 1:144 as lepidota var; g. Ab 224. Jepson. Er 1:14 near Blue Lakes.
 Erect or decumbent, 6-9 dm hi, nearly glab and viscid with minute sessile resinous dots, or glutinous by a villous or hirsute glandular pubescence; lfts 13-19, oblg-lanceolate, 2.5-5 cm lg; stipules ovate-acuminate to lanceolate, persistent; spikes oblg, 2.5-4 cm lg, on peds a little sh'er; pod bur-like. LA Co, below 4000'.
GLYCYRRHIZA LEPIDOTA Pursh. B 1:143, 2:442. Da 5. Parry, Wyo 9. SBER (Parish 400; W. G. Wright).
Genus GLYPTOPLEURA D. C. Eaton.

GLYPTOPLEURA Eaton, bot King 207 t 20 (1871).
G. MARGINATA Eaton, lc. B 1:431. Ut. Mohave! Nevada. (
G. SETULOSA G, B 1:431. Ut. Mohave (Parry). Utah.
GNAPHALIUM L, Gen ed 1, 250 (1737). A 1:187d.
G. ALBATUM M 1:141.
GNAPHALIUM BICOLOR Biol. A 1:60fdr.
G. CALIFORNICUM DC. A 1:187d. Er 1:12. B 1:341 as decurrens var: C. Ab 410. Par 63.
G. CHILENSE Spreng. Ab 410. Ha 128. Da 9. A 1:188d. Cotton-batting plant.
GNAPHALIUM DECURRENS Ives. Ives, Am J sci 1:380. B 1:341. Da 9. Par 63.

New England; British Columbia to Mex-

ico; Baja.

GNAPHALODES Tourn.

G: AMPELOBA Greene, Man 183. =
Micropus amphibolus G.

G: CALIFORNICA Greene, Man 183. =
Micropus californicus F & M.

Genus GODETIA Spach.

Spach, hist veg Phan 4:386 (1835). =
Oenothera fide IK.

Simple or branching erect ann with
alt lvs; fls mostly in lfy racemes or
spk cx-tube above the ova obconic or
sh-funnelform; ret 4, broad and sessile,
entire, emarginate, or 2-lobed, varying
from phlox- or lilac-p or rose-color to
nearly w; sta 8, those opp the pet sh'ter;
anth basifixed; ovary 4-celled; cap ovate
to linear, mostly 4-sided, somewhat cori-
aceous, often longitudinally ribbed, 4-
celled, 4-valved; sds in 1 or 2 rows,
more or less cubical or quadrangular,
com obliquely pointed at one end, the
opp end obliquely truncate and with a
densely fimbriate-toothed or tuberculate
margin; angles oft prismatic, rendering
the sd strikingly similar to that of
Mentzella.

G. ALBESCENS Lindl, bot reg, misc 61
(1841). B 1:229, 2:448. =OE: a fide IK.

G. AMOENA G Don in Sweet, Hort Brit
ed 3, 237. =OE: a fide IK. B 1:230. Par
246 t. LA (Davidson).

G: AMOENA Lilja. Jepson, Univ Cal
pub bot 2:325.

Variety **ALBICAULIS** Jepson, Univ Cal
pub bot 2:329.

Variety **Concolor** Jepson, Fl W Mid Cal
334 et Univ Cal pub bot 2:328.

Variety **LINDLEYI** Jepson, Univ Cal
pub bot 2:329 based on Oenothera L of
Douglas.

G. BILOBA Wat, B 1:231. =OE: b fide
IK.

Greene, Fl Fr 222. Jepson, Fl W Midd
Cal 333, Univ Cal pub bot 2:333.

G: BLASDALEI Jepson, Univ Cal pub
bot 2:330 fd. SF.

G. BOTTAE Spach, in Nouv Ann Mus.
Par 4:393 (1835). B 1:231. Da 6. Par
246. Ab 267. A 1:165d, 166. =OE: B
fide IK.

Jepson, Univ Cal pub bot 2:330.

Variety **USITATA** Jepson, Univ Cal pub
bot 2:332.—"Stig sh-oblg or quadrate;
cap com sessile or nearly so, thick, rather
obviously 8-ribbed. So Cal; rather
com. SBer, Parish, No. 3672."

Variety **CYLINDRICA** Jepson, Univ Cal
pub bot 2:332 fd. Fresno Co, Cal.

G: DEFLEKA Jepson.

"Substrictly branching or simple, 2-5
dm hi, st more or less twisted or flexu-
ous; lvs thickish, narly oblg, some taper-
ing to apex, sh'ly petioled, 2-8 mm
broad, 3-6 cm lg, remotely denticulate,
the teeth minute but more or less salient;
herbage almost glab; fls spicate;
cx-buds large, 2.8 cm lg, before anthesis
borne on abruptly deflexed sessile ovar-
ies; cx-tip not free in bud, the united
lobes turned to one side under the open
cor; pet lilac, sprinkled with crimson
dots, cuneate-obovate, abruptly sh-
clawed, truncate or evenly shallowly re-
tuse at summit, 2.5-3 cm lg; sta sub-
equal, nearly or quite 1/2 length of pet;

sty com exceeding sta; stig peltate or
somewhat saucer-shaped, undulately 4-
lobed; ova slender, w with fine sh hairs;
cap apparently 4-sided but mature fr
not known."—Jepson, Univ Cal pub bot
2:332.

Type specimen at Kew: "Sandy plains
of LA." W Lobb, 1854 (?).

G: FURFURMA Don. Jepson, Univ Cal
pub bot 2:344.

Variety **ELMERI** Jepson, Univ Cal pub
bot 2:345.—"Fls loosely spicate below
the dense terminal cluster of young
buds; pet broadly ovate, dark r in the
dried spec, 1.4 cm lg; cap stout and rather
sh.—SBER, Elmer, no 3972."

Variety **PROCEA** Jepson, Univ Cal pub
bot 2:346.—"Slender, tall (5.5-7.5 dm hi),
simple or with few sh slender branch-
lets; fls sm, pet 5 or 6 mm lg.—Berke-
ley, Bioletti, J 1891."

Variety **LACUNOSA** Jepson, Univ Cal
pub bot 2:346.—"Tall (4 or 5 dm hi),
freely branching, upper portions of
branches angled (!) or compressed (!);
fls congested at ends of branches; pet
3-1.3 cm lg. Oakdale, San Joaquin val-
ley, WLJ (lvs acute); Douglas, probably
Monterey Co (lvs obtusish, or in Herb.
Lindley, acutish), branches strict, slen-
der, naked except at tip!"

G: DELICATA Abrams, T cl b 32:539.
Jepson, Univ Cal pub bot 2:352. Campo
and Potrero.

G. QUADRIVULNERA Spach, hist veg
Phan 4:389. Ab 267. B 1:230, 2:448. Da
6. Br 1:203 Cruz, 210 Rosa. A 1:165d.
=OE: g fide IK.

Jepson, Univ Cal pub bot 2:340.

Variety **APICULATA** Jepson, Univ Cal
pub bot 2:341.—"Pale, slender; buds
strongly apiculate.—Howell Mt, WLJ no
2441."

Variety **VACENSIS** Jepson, Univ Cal
pub bot 2:341.—"Oft branched at base,
sts slender; fls very remote; cap slender,
3 cm lg. Vaca mts, WLJ."

Variety **DAVYI** Jepson, Univ Cal pub
bot 2:341.—"Lvs all or mainly oblg and
mostly obtuse, about 1.2 cm lg; midrib
of valves prominent, ribs 0 or 4.—Point
Reyes, Davy, no 6701."

Forma **FLAGELLATA** Jepson, Univ Cal
pub bot 2:341.—"Simple or with few
elongated very slender whip-like branch-
es. 3 1/2-6 dm hi, fls very remote.—Vaca
mts, WLJ, 12 Je 1893."

Forma **SETCHELLIANA** Jepson, Univ
Cal pub bot 2:341.—"Branching from
base; young pts very canescent; sty
longer than sta; cap sh, densely sh-
villous.—Santa Cruz mts, Setchell &
Jepson, 20 Je 1896."

Variety **HALLII** Jepson, Univ Cal pub
bot 2:341.—"Freely branching, 6 dm hi;
pet ovate, with an abrupt sh sm point,
light pink with a sharply defined deep
p or r'ish wedge-shaped spot at apex;
stig very sh, subquadrate; ova and cap
hairy; ribs filiform.—Box Springs, Riv-
erside, Hall, no 6241."

Variety **RUBRISSIMA** Jepson, Univ Cal
pub bot 2:342.—"Pet roundish ovate, 9-
13 mm lg, uniformly deep r'ish-p ovar-
ies canescent; cap strigulose-pubescent.
—Box Springs mt, Riverside, Hall, no
6240."

G. EPILORIOIDES Wat, B 1:231. Ab 268. Da 6. Greene, Cal ac b 2:398 Cruz. A 1:166d. =OE: e fide IK.
B 1:231. Jepson, Univ Cal pub bot 2:343.
G. ARNOTTII T & G Fl 1:503. Jepson, Univ Cal pub bot 2:346.
G. SPARSIFOLIA Jepson, Univ Cal pub bot 2:347 fd.

Type locality: "San Joaquin valley at Tracy, Benj. Cobb, 10 Ap 1900."
G. GRANDIFLORA Lindl, bot reg 1841 misc 61. Par 246. B 1:229. =OE: Whitney! fide IK.

Jepson, Univ Cal pub bot 2:347.
 Synonymy: *Oenothera grandiflora* Wat 8:596. OE: Whitney! G 7:340, 400.

G. DUDLEYANA Ab 267. A 1:165 fdr. Jepson, Univ Cal pub bot 2:334.
G. ARCUATA Jepson, Univ Cal pub bot 2:335 based on *oenothera* s, K 1:58.

Synonymy: *G. hispida* Wat 8:599, 609 fide Jepson.
G. HANSENI Jepson, Univ Cal pub bot 2:336.

Type locality: Armstrong's station, Amador Co, 5000', Hansen, no 1090, in 1895. Type in Herb Kew.

G. VIMINEA Spach, hist veg phan 4: 388. Ab 267. B 1:230. A 1:166d. =OE: v fide IK.

Jepson, Univ Cal pub bot 2:336.
 Variety **CONGDONII** Jepson, Univ Cal pub bot 2:338.—"Three to 4.5 dm hi; buds loosely pilose; ex-tips slender and very distinct; pet y at base.—Hetch-Hetchy, W. J. Congdon."

Variety **INCERTA** Jepson, Univ Cal pub bot 2:339.—"Very lfy, 2-4 dm hi; pet deep crimson, 1.2-2 cm lg; cap abundant, 8-ribbed; stig oval.—Yosemite valley."

Variety **MARGARITAE** Jepson, Univ Cal pub bot 2:339.—"Buds and fls few and widely scattered on the very slender sts; color scheme in dried specimens seemingly very different from type; ex-tube very slender, 9-14 mm lg, seg more or less cohering in anthesis.—Margarita valley, S Luis Obispo Co, Mrs. R. W. Sumner."

G. PARVIFLORA Jepson, Univ Cal pub bot 2:339 based on *Oenothera viminea* Douglas var: *parviflora* H & A, bot Beech 342 (1841).

G. GODDARDII Jepson, Univ Cal pub bot 2:342.

Variety **MIGUELITA** Jepson, Univ Cal pub bot 2:342.

Forma **CAPPATA** Jepson, Univ Cal pub bot 2:342.

Genus *GRINDELIA* Willd.

GRINDELIA CUNEIFOLIA Nutt.
 Variety **PHARNACEVIDES** Gray.
GRINDELIA GLUTINOSA Dunal.
GRINDELIA PROCEA Greene.

"Late-aestival and autumnal sp. Herbaceous per. Strictly erect, 5-7' hi, simple up to the corymbose-paniculate summit, the stout w st scabro-puberulent, plant otherwise glab, slightly glutinous; lower lvs unknown; upper cauline lanceolate, attenuate-acute, entire, 2-3' lg; inv sm, low-hemispherical; bracts with appressed base and sh slender recurved tips; rays sh; pap-awns 2. Bottom lands of the lower San Joaquin, in places inundated in spring and early summer."

—Greene, Man 172.

GRINDELIA PALUDOSA Greene.

"About 5' hi, sterile lfy shoots 1' hi or more, surviving the winter, the plant otherwise herbaceous; herbage glab except the scabrous-ciliolate lf-margins; only the inv glutinous; lvs slightly fleshy, oblq-lanceolate to spatulate-oblq, 2-3' lg, conspicuously serrate, at least those of sterile shoots with a broad cordate-clasping base, the lobes surrounding the st: inv squarrose; ak with prominent turgid angles, those of ray triquetrous, of disk compressed; awn 2 only, even in ray, stout, strongly flattened. Abundant in brackish marshes of Suisun Bay, Ag-O."—Greene, Man 172.

GRINDELIA SQUARROSA Dunal.
 Cuyamaca! Texas, Montana, Minn.

Genus *GUTIERREZIA* Lagasca.

GUTIERREZIA CALIFORNICA T. & G.

Cantilles! SF. Arizona.

GUTIERREZIA EUTHAMIAE T. & G.

Montana to Mexico. Cantilles! CD.

Variety **MICROCEPHALA** A. Gray.

So Cal—Texas, Mexico, Baja.

GUTIERREZIA LARICINA Greene.

"Planta humilis, propemodum herbacea potius quam suffruticosa, e basi multicaulis, caulibus adscendentibus erectisve, 10-18 cm altis, usque ad inflorescentiam foliolosisimis; foliis primordialis 2 cm longis, anguste linearibus deflexis, ceteris multitis axillaribus crebre fasciculatis, omnibus saturate viridibus, undique mureculato-scaberulis; capitula mediocria numerosa, in summo caule corymboso-paniculata; involucri obconici bracteis 12-16, adpressis, obtusis, apice manifestim herbaceo-increpatis; flores radii 3-5, disci circa 5; pappi paleis circa 7, oblongis, acutis, achenio villosis aequilongis."—Greene in Sonderabdruck aus Fedde, Repertorium 7:195 (1909).

Type locality: CD!

GUTIERREZIA LINEARIFOLIA Lag.

HELIANTHESTRUM OCCIDENTALE.

"Stout, 2-4' hi, erect, parted above into several stoutish very erect pedunculate monocephalous branches; lvs lanceolate, 6' lg or more, thickish and somewhat fleshy, almost gummy to the touch, and with some tomentose pubescence; rays showy, ¼' lg; disk brownish-y; pap-paleae ovate-lanceolate, tapering into a long awn. Suisun marshes. JI-O."—Greene, Man 202.

HELIANTHELLA MAJUSCULA G lfts 1:48. NM.

HELIANTHUS CALIFORNICUS DC.

SF: Baja! along streams.

HELIANTHUS GRACILENTUS A. Gray

SBer Co; SD Co; Baja; dry hills.

HELIANTHUS PETIOLARIS Nutt.

Baja to Oregon; Texas.

HEMIZONIA CITREINA Greene.

"Lowest lvs opp, oblq-lanceolate, 3-nerved, obtusish, glandular-pubescent, not lanate; hds at first few, in a simple corymbose-panicle; fls lemon-y; tips of inv-bracts sh and broad; bracts of receptacle joined into a cup; ak with inconspicuous stipe. Northern part of Marin Co, a vernal sp. fig in Ap and My."—Greene, Man 194.

HEMIZONIA CLEVELANDI Greene.

"Lower lvs narly linear, 1-nerved, silky-lanate as in H: luzulaefolia; racemose or spicate fig branches villous with lg spreading hairs: fl w: ak narly as in luzulaefolia. Common from Marin and northern Napa Co. to Ore."—Greene, Man 194.

H: BEERMANNI Greene.

"Viscid and pubescent, heavy-scented, 1-3' hi: minute lvs of fig branchlets scattered; bracts of hemispherical inv viscid-pubescent and beset with stalked glands; terminal gland inconspicuous: disk-fls 10-15. Mt Diablo and southeastward. Ag-O."—Greene, Man 195.

H: KELLOGGII Greene.

"Hirsute below, loosely panicleate above, 1-3' hi, the hds on slender pedicels: lower lvs pinnately parted: inv $\frac{1}{4}$ ' hi; bracts glandular on back: ray ak with a slender curved beak; pap of sterile ones of disk lg, almost equalling cor, lacerately truncate and united into a tube from base almost to summit. Abundant in fields of grain on the lower San Joaquin from Antioch southward."—Greene, Man 195.

BESPERODORA Gifts 1:173 with *Bigelovia Menziesii* var: *scopulorum* (Jones, Cal ac pr, sr 2, 6:692) as type.

H: SCOPULORUM Gifts 1:173.

H: HALLII Gifts 1:173 based on *Aplopappus* H (G).

HEUCHERA.

HEUCHERA ELEGANS Abrams, SCA: b 1:67 fd. 1:89, Wilson's Peak; Mt Lowe (H: rubescens of local lists not of T).

Type locality: Martin's Camp, LA Co.

H: LEPTOMERIA Gifts 1:112 NM.**H: FACHYPODA** Gifts 1:111.

"Rhizome stout, subligneous, strongly invested by a coat of dead lf-bases: lvs very sm, in a compact tuft, firm, more or less pubescent on both faces, suborbicular, hardly $\frac{1}{2}$ ' broad, petioles about as lg: slender wiry scapes 6 or 8' hi including inf, p, scaberulous and slightly glandular: panicle 3-5' lg, subracemose and more or less definitely unilateral, the few fld branches remote: cx somewhat gibbously turbinate, tube glandular, this and the oblg obtuse g-tipped seg of about = legh: sta and pet of about = length and well exerted."—Gifts 1:111. Lone Pine, Inyo Co, Cal, 7000°.

HEUCHERA RUBESCEUS T. Ab, SCAB 1:89, Mt San Antonio, LA Co.

H: VERSICOLOR Gifts 1:12. NM.

HEPPOCASTANUM Tourn ex Rupp. = *Aesculus*.

H: CALIFORNICUM Greene, Man 73. = *Ae: C*.

HOFMEISTERIA PLURISETA A. Gray.

CD: Utah; Arizona; Baja (Br).

HOLOZONIA Greene, Man 199.

H: FILIPES Greene, R. = *Lagophylla* f (G). fide IK.

HORKELIA PLATYCALYX Rydb. Ab, SCAB 1:89, Indian Hill, Claremont, LA Co.

H: SERICEA Rydb, Ab SCAB 1:89, Balena harbor, edges of sand dunes, LA Co.

HYMENOPAPPUS.

H: PARVULUS Gifts 1:150. Colo.

ISOCOMA.

ISOCOMA ARGUTA Greene.

"Branches 6-10' hi, more or less pubescent or hirsute below, glabrous above, lfy throat; lvs diminishing upwards, the lowest 1' lg, all broadly oblanceolate, of coriaceous texture, with saliently spreading coarse and acute or mucronate teeth: hds $\frac{1}{2}$ ' hi, turbinate, 12-15-fld: inner pap-bristles distinctly flattened and tapering very gradually from base to apex. Subsaline plains east of the Vaca mts, in Solano Co, Jepson."—Greene, Man 175.

I: BEACTEOSA Greene.

"Stout, apparently only suffutescent, but 2' hi, with many loosely fastigiate lg branches all very sparsely hispidulous: lvs sm for the plant, oblg-oblanceolate, entire or with a few spinulose-serrate teeth, those of the fig branches num but reduced to sm sessile oblg entire acute bracts: cymes mostly of few and pedicellate hds: inv turbinate, bracts much imbricated, subquadrate oblg, ending in an abrupt g tip thickened by a large gland, and with a terminal spinescent cusp or mucro."—Gifts 1:170. Tulare Co, Cal. Madronvo.

I: DECUMBENS Gifts 1:172.

"Branches a * lg, very slender, decumbent, sparsely lfy and lvs very sm, narly oblanceolate, sharply serrate-toothed: hds much scattered, about 3 at the end of each slender branchlet and all pedicellate; inv sm, turbinate, bracts imbricated, oval or oblg, acute, their g tips villous-pubescent: ak nar-turbinate, very silky; pap of coarse rigid unequal bristles."—Gifts 1:172. SD—Greene thinks = *Isocoma* sp x *Corethrogyne* sp.

I: BREMOPHILA Gifts 1:171.

"Branches 1 $\frac{1}{2}$ ' hi, stout, glab, parted in the middle to form a loosely fastigiate panicle of cymose corymbs: lower lvs spatulate-oblanceolate 2' lg, obtuse, remotely subserrate-toothed, glab, punctate, those of panicle all reduced, linear, entire: inv not sm, turbinate, their bracts glab, not viscid, subquadrate-oblg; obtuse, only inconspicuously and sh'ly g-tipped, tips of inner with a large low gland on back."—Gifts 1:171. CD (Or 2223).

Suffrutescent, 2-3' hi fls bright chrome y. Dos Cabezas 1 N 1890, now Imperial Co, Cal—identified as *Bigelovia veneta*.

I: LATIFOLIA Gifts 1:172.

"Very stout sts densely lfy and villous-arachnoid, the cobwebby wool extending to bases of broad sessile lvs, these spatulate-obovate, $\frac{1}{2}$ - $\frac{3}{4}$ ' lg, $\frac{1}{2}$ ' wide below summit, coarsely and closely serrate-toothed all around except at base: hds many, rather large, forming a dense cymose panicle or thyrus; inv sh-turbinate, of not very many bracts, these sh, mostly obtuse."—Gifts 1:172. Cruz.

I: TUFUCANTHEMIFOLIA Gifts 1:171.

"Branches stout, tortuous, lfy, with large foliage up to the ample compound cyme of large hds, scaberulous and viscid: lvs 2' lg, broadly oblanceolate, obtuse, coarsely and closely serrate-toothed, scaberulous above, somewhat villous-arachnoid and viscid beneath: hds glomerate in 2's or 3's at ends of

branches and branchlets of cyme, large, with broadly subterbinate inv many-bracted, bracts with broad obtuse g and glandiferous tips: ak"—Gifts 1:171. Warner's SD Co!

I: MICRODONTA Gifts 1:171.

"Branches stout, scabrous, densely lfy up to ample cymose panicle of rather large hds: lvs sm; about ¼' lg, spatulate-oblg, entire below middle, subserrate-denticulate near apex, whole margin more or less scabrousciliate, both faces glab; branches of panicle lg and lfy, lvs little reduced: inv turbinate, their many bracts with lg scaberulous g tips and abruptly as well as almost pungently acute. Santa Maria, Cal (Mrs. Blochman)." Gifts 1:171.

I: CALYPTELLA Gifts 1:171.

"Plant evidently large, the lg branches striate, loosely villous-hairy, lfy up to the ample compound cyme of rather large hds: lvs 1-1½' lg, linear-lanceolate, entire, very acute, of thin texture, glab, light g: inv broadly turbinate, glab, not viscid, the g herpaceous tips of bracts large, elliptical: limb of cor remarkably sh."—Gifts 1:171. Jamul, SD Co.

I: PEDICELLATA Gifts 1:170. Tex.

I: EUSEYI Gifts 1:70. Ar.

I: SEDOIDES Gifts 1:172 based on *Bigelovia veneta* var: *sedoides* (Greene, Cal ac b 2:400).

I: TENUISECTA Gifts 1:169. Ar.

I: VILLOSA Gifts 1:172.

"Sts extremely robust but decumbent, parted above the middle into a broad panicle of many and compact cymose corymbs, st and branches very lfy and softly villous with lg spreading somewhat viscid and arachnoids pubescence: lvs of main st 1' lg or more, spatulate-oblg, obtuse, coarsely serrate, sparsely villous, viscidulous, those of branches not ½ as large, oft subentire: hds not of the largest, very many and crowded; inv turbinate, bracts much imbricated, pungently acute, the g tips conspicuous but bearing no gland."—Gifts 1:172. So Cal.

ERYTHRAEA UTAHENSIS G, Syn Fl 2 (1): 427. Parish, SCAB 2:83, Ord mt, Mohave.

Eritrichium halopterum submolle G, lc 394.

Cryptanthe submolliis Cov 166. Panamint Mts.

ERYTHRAEA Neck, Elem 1:81. Gifts 1:8 (takes as types: *Eupatorium aromaticum* L and *Ageratum altissimum*). Based on *Eupatorium* sp as cited by Greene.

K: ABORIGINUM Gifts 1:8 based on E: a (P 4:277).

K: ACUTA Gifts 1:11 fd.

K: ALTISSIMA Gifts 1:8 based on *Ageratum* a (L, sp pl 839).

K: AMPLISSIMA Gifts 1:10 fd. Jalisco, Mex.

K: ANGUSTATA Gifts 1:8 based on E: a (P 4:277).

K: ARIZONICA Gifts 1:9 based on E: a (P 4:279, 280).

K: AROMATICA Gifts 1:8.

K: BETULAEFOLIA Gifts 1:10 fd. Chih.

K: BORREALIS Gifts 1:8 based on E: b (Greene, *Rhodora* 3:83).

K: CALOPHYLLA Gifts 1:11 fd. Saltillo, Mex.

K: CEROSEFOLIA Gifts 1:8 based on E: c (Muhl in Willd sp 3:1755).

K: HERBACEA Gifts 1:9.

K: INCARNATA Gifts 1:8 based on E: i (Walt, Carol 200).

K: JUCUNDA Gifts 1:8 based on E: j (P 3:180).

K: LAETA Gifts 1:11 fd. Mex.

K: MELISSOIDES Gifts 1:8 based on E: m (Willd sp 3:1754).

K: MEMORABILIS Gifts 1:8 based on E: n (P 4:278).

K: PARVIFOLIA Gifts 1:12 fd. Saltillo, Mex.

K: PAUPERCOULA Gifts 1:9 based on E: p (G 17:205).

K: ROTHEROCKII Gifts 1:9 based on E: R (G, Syn Fl 2:102).

K: RUFA Gifts 1:10 fd.

K: SUBINTEGRA Gifts 1:10 fd. Mex.

K: TRYSIFLORA Gifts 1:9 fd. Chih.

K: TRACYI Gifts 1:8 based on E: t (P 4:278).

K: VIBURNIFOLIA Gifts 1:8 based on E: v (P 4:276).

LACINIARIA FORMOSA G lfts 1:149. Colo.

LAOTHEA Raf, Fl Tell 3:53. Gifts 1:90.

L: ANGUSTIFOLIA Gifts 1:91 (K 2:104 sub *Chlorogalum*).

L: DIVARICATA Gifts 1:91 (Kunth, Enum 4:682 sub *Chlorogalum*).

L: LEICHTLINII Gifts 1:91 (Baker, Gard Chrm 1874; 689 sub *Chlorogalum*).

L: PARVIFLORA Gifts 1:91 (Wat 14: 243 sub *Chlorogalum*).

L: POMERIDIANA Raf, Fl Tell 3:53 based on *Scilla* p (DC) = *Chlorogalum* p.

L: PURPUREA Gifts 1:91 (Br, Z 4:159 sub *Chlorogalum*).

LAPPALA

L: LEUCANTHA Gifts 1:152, NM.

LASALLA Gifts 1:5 (type: *Aster sericeus*).

L: MUTALLII Gifts 1:5 based on *Aster montanus* Nutt not of Allioni.

L: PNYLLOLEPIS Gifts 1:5 based on *Aster* p of T & G.

L: SERICHA Gifts 1:5 based on *Aster* s of Vent.

LASTENIA Cav.

L: BURKII (Greene) Greene, Man 204.

L: CABNOZA (Greene) Greene, Man 205.

L: CORYSANTHA (Greene) Greene, Man 204.

L: CORYSOSTOMA (F & M) Greene, Man 205.

L: CONJUGENS Greene, Man 204.

L: FREMONTI (T) Greene, Man 204.

L: GRACILIS (DC) Greene, Man 205.

L: MACRANTHA (G) Greene, Man 205.

L: MICROGLOSSA (DC) Greene, Man 205.

L: PLATYCARPHA (G) Greene, Man 205.

L: TENELLA (Nutt) Greene, Man 205.

L: ULIGINOSA (Nutt) Greene, Man 205.

L: HIRSUTULA Greene.

"Pap seldom if ever o; ak somewhat cuneate. Stout and low, from a strictly ann rt, mostly branching very freely; the whole herbage rather roughly sh-

hirsute; lvs broadly linear, oft with saliently projecting scattered teeth, the lower conspicuously connate, sheathing the st; inv-bracts obovate, obtuse or acutish; rays obliq; ak mostly very smooth, rounded at summit, manifestly compressed; pap of 2 brownish very slender-subulate aristiform bristles. Plentiful on open rocky and grassy hills along the seacoast from Marin Co. southward. My. Je.—Greene, Man 206.

LEPIDUM ACUTIDENS Ab. SCAB 2:41 based on L: dictyotum var? acutidens G 12:54.

Type locality: Yreka, Cal.

LEPIDUM LASIOCARPUM Nutt. Ab. SC Ab 1:89, sand dunes, Ballona harbor, LA Co.

LEPTURUS CYLINDRICUS Trin. Ab. SCAB 1:87, Mesmer, LA Co.

LOTUS CUPREUS Greene.

"Low, slender flaccid and nearly glab per, the decumbent sts only 5-8' lg, lfy thruout; lowest lvs of but 3 cuneate-obovate truncate or retuse lflets, the lflets of the others 5-7 and cuneate-obliq, acutish; stipules of all sm, herbaceous, more or less distinctly ovate; umbels little exceeding lvs, lowest bractless and only 1 or 2-fld, others with 3 or 4 fls subtended by an unifoliate bract quite like the ordinary lflets; ex turbinate, the triangular subulate teeth sh'er than tube; cor sh. not longer than the breadth of the broad banner which greatly surpasses the other pet, these all at first dingy-y but at length copper color"—Gifts 1:74. Hackett's meadows, Cal, at 8600'.

LUPINUS CULBERTSONII Greene.

"Low, per, not alpine, neither depressed nor compactly tufted, but subscaulescent, 6-10' hi, with decidedly thinnish foliage and scarcely canescent with a sparse pilose or villous hairiness; petioles lg and slender, lflets 5-7, almost elliptic obliq, cuspidately acute, 1/4" lg or more; ped scapiform, bearing the lg raceme just above the foliage com with a solitary lf toward the base; racemes 2-4' lg, crowded and obscurely verticillate; cor rich p, less than 1/4" lg, banner little sh'er than the other pet, keel nar, slightly falcate; retrorse-cillolate."—Gifts 1:78. Forks of the Kaweah river, Cal, at 8000'. J1 1904 (J: D: Culbertson).

LUPINUS DASYPHYLLUS Greene.

"Per, the stout simple sts strongly striate, villous, very lfy; lvs large, shepetioled, the lance-linear lflets (basal ones cuneate-obliq, very obtuse) 2' lg, acute, rather loosely villous-hirsute on both faces; racemes sessile, 4-6' lg, the large fls obviously verticillate, their lg linear densely villous bracts not caducous; ex & pedicels densely lg-villous; cor 1/2" lg, p'ish, banner sm-er than the other pet, keel nar and little curved, naked, or with a few loose hairs above the middle. Farwell Gap, Cal, at 10,000'. 3 Ag 1904, J. D: Culbertson."—Gifts 1:73.

LUPINUS GRACILIS Agardb. Ab SCAB 1:89, San Fernando mts, LA Co.

LUPINUS HYPOLASIUS Greene.

"Low alpine per not caespitose, the

stoutish sts very lfy and suberect from the branches of the sh caudex; petioles slender, lflets 5-7, very unequal, all broad and obtuse, cuneate-obliq, 1/4-1/2" lg, appressed-villous above, densely villous-tomentose beneath; racemes sh, subsessile, the sh ped stout; whorls of fls 3 or 4; cor p, 1/4" lg, pet equal, keel falcate, retrorse-cillolate above the middle."—Gifts 1:74. Farwell Cap, Cal, C: A: Purpus.

LUPINUS HYPOLEUCUS Greene.

"Sm tufted alpine per, the multicapitulos caudex scarcely woody, the lg petioles and scarcely lg'er sts slender, canescently villous, as also the lvs above; lflets 7-9, unequal, somewhat elliptical, the largest 1/2" lg, densely w-villous beneath and that face somewhat concave; racemes sh, of about 3 whorls of middle-sized deep-p fls, the pet subequal, keel not much curved, retrorsely villous-cillolate from below the middle almost to apex."—Gifts 1:74. Near the summit of White Chief Peak, Cal.

MACHAERANTHES

M: CICHORIACEA Gifts 1:148. Colo.

M: SPECTABILIS Gifts 1:148. Colo.

MACRONEMA

M: BOLANDRI Greene.

Synonymy—Linosyris. Bolandri G 7: 354 et Chrysothamnus B (Greene, Er 3: 114) fide Gifts 1:81.

MALVASTRUM

M: DIGITATUM Gifts 1:154. NM.

MALVEOPSIS Presl. = Sphaeralcea fide IK.

M: ARCUATA Greene.

"Size and general habit of fasciculata, but stouter; lvs 1/2 as large, obtuse and with inconspicuous rounded lobes, very strongly rugose-velvety and white-tomentose beneath; interruptedly spicate flg branches stout, strongly recurved, the fl-fascicles all on one side; cor merely pinkish; carpels densely stilate-tomentose. Eastern slopes of the Coast Range back of Belmont; wrongly referred to M. marrubioides in the Flora Franciscana."—Greene, Man 66.

M: FASCICULATA OK cx Greene, Man 66.

M: FERRONII Greene, Er 1:171, Man 66. = S: Lindheimeri fide IK.

MELICA IMPERFECTA

Variety **MIGNON** Scribn. Ab, SCAB 1:89, canyon near Chatsworth Park, LA Co.

MENTHA ARVENSIS L.

Variety **CANADENSIS** Parish, SCAB 8:7, "common at lower alt" than var: glabrata.

Variety **GLABRATA** Fernald, G man Ed 7, 711, Parish, SCAB 8:7, SBer mts.

MESORHANTHUS Gifts 1:89. Type: M: barbiger.

M: BARBIGER Gifts 1:89 based on Streptanthus barbiger Greene.

M: PALLAS Gifts 1:90.

"Slender glab, glau ann freely branched above base, 1-2' hi; lvs 7; fls subsessile and fr'g spikes lg and lax; fls sm, the spreading or recurved tips of sep very lg, equalling or even exceeding the sm dark-r w-edged pet; only upper pair of sta =sep, their fl united to summit, their anth very sm; pods very nar, compressed but slightly torulose, 1 1/2" lg,

curved downwards on very sh spreading pedicels: sds oval, little compressed, marginless."—Gifts 1:90. Near St Helena, Cal.
M: VIMINEUS Gifts 1:90. Near Lakeport, Cal.

"Size and habit of *M: fallax*, equally glab and glau: lower lvs narly oblanceolate; upper lance-linear, those of branches narly linear, all entire: fls more showy in lg loose spikes: cx with comparatively sh and w-petaloid tips greatly exceeded by the rather ample w pet; pods ?"—Gifts 1:90.

MICROSEMIA Gifts 1:89.
M: POLGALOIDES Gifts 1:89 based on *Streptanthus p* (G).

MIMULUS LATIDENS Greene.
 "Ann, slender, com much branched from base, 3-10' hi, glandular-puberulent: lvs ovate to ovate-lanceolate, ½-1 lg, 3-5-nerved, entire or sparingly toothed, sh-petioled or sessile: pedicels as lg as fl, in fr much longer: cx oval; 3-6" lg; teeth triangular-ovate: cor 3-5" lg, nearly regular, but limb very sm. w; throat y'ish. Rich low plains of the lower Sacramento and southward. Ap. My."—Greene, Man 278.

MITOPHYLLUM Gifts 1:88.
M: DIVERSIFOLIUM Gifts 1:88 based on *Streptanthus diversifolius* Wat, and "doubtless including *S: linearis* Greene."

MONARDELLA ODORATISSIMA Benth Wash—SD Co! Nevada; Utah, Ha U III.
MONARDELLA PRINGLEI A. Gray. Colton, Cal (C. G. Pringle).

MONARDELLA THYMIFOLIA Greene. Cedros Island (Greene).

MONARDELLA VILLOSA Benth.
MEMACLADUS ADENOPHORUS Parish, SCAB 3:28 fd.

NUTTALLIA
N: DAVIDIANA Baillon. Gifts 1:110.
OCLEMEHA

Gifts 1:4 (type *Aster acuminatus*).
O: ACUMINATA Gifts 1:4 based on *Aster acuminatus*.

O: NEMORALIS Gifts 1:5 based on *Aster nemoralis* Ait.
OKYS Tourn.

O: LUTEA "J Bauh (1651); Tourn (1700); Lam (1778)."—Greene, Man 71 = *Oxalis corniculata* L.

O: OREGANA Greene, Man 71. = *Oxalis* O.

PARASSIA CERRATA Piper Er 3:128 (1899). Ab, SCA b 1:67.

Type locality: Sber mt.

PECTIS
F: TAKIFOLIA G lfts 1:148, NM.

PEDICULARIS
F: ANGUSTISSIMA Gifts 1:151 NM
F: MOGOLLONICA Gifts 1:151 NM.

PERSICARIA [Tourn] L. syst ed 1 (1735). = *Polygonum* fide IK. Gifts 1:23.

F: FUSIFORMIS Gifts 1:24 based on *Polyg: f* (Greene, Er 1:259).

F: OMISSA Gifts 1:24 based on *Polyg: o* (P 5:200).

F: FALLAX Gifts 1:24 based on *Polyg: f* (P 5:200).

F: ARCUATA Gifts 1:24 based on *Polyg: a* (P 5:201).

F: CAREYI Gifts 1:24 based on *Polyg: C* (Olney, R I Pl 29).

F: HARTWRIGHTII Gifts 1:29 based *Polyg: r* (Sheldon, Minn bot studies
F: AMPHIELA S. F. Gray, Nat Arr Brit Pl 2:268. = *Polyg: a* fide IK. Gifts 1:24.
F: MACULOSA S F Gray, lc 269. Gifts 1:24 as type of genus.

F: FLUTANS Gifts 1:26 based on *Polyg: f* (Eaton & Wright bot 368), 106.

F: FURFURATA Gifts 1:27 fd. Lassen Co, Cal.

F: CANADENSIS Gifts 1:28 fd. Galt, Ont.

F: MESOCHORA Gifts 1:28. Minn; Ia; Ind.

F: PLATTENSIS Gifts 1:29. Wyo.
F: SUBCORIACEA Gifts 1:30. Wyo.

F: LAETEVIRENS Gifts 1:31. Colo.
F: PSYCHROPHILA Gifts 1:31. Colo..

F: OREGANA Gifts 1:31. Ore.
F: INSIGNIS Gifts 1:32. Sber mts.

F: FISTULOSA Gifts 1:32. Ar.
F: REMOTA Gifts 1:34. Me.

F: NOVAE ANGLIAE Gifts 1:34 (Mass), 108.

F: LAURINA Gifts 1:35. Ohio.
F: RIGIDULA Gifts 1:24 based on *Polyg: r* (Cheldon, Minn bot studies 1:14). 39d.

F: LUDOVICIANA Gifts 1:29 based on *Polyg: L* (Meisn in DC 14:116).

F: PLANTAGINEA Gifts 1:40. Ia.
F: WARDII Gifts 1:40. Colo.

F: OTOPHYLLA Gifts 1:41. Tex.
F: ABOIGINUM Gifts 1:41. Okl.

F: LANGLOISII Gifts 1:41. La.
F: CUSICKII Gifts 1:42. Ore; Wash; Id.

F: FRANCISCANA Gifts 1:42. SF.
F: HESPERIA Gifts 1:43. San Mateo Co, Cal.

F: ALISMAEFOLIA Gifts 1:44. Cal.
F: OPHIOPHILA Gifts 1:44. Ar.

F: BOTHEROCKII Gifts 1:45. Ar.
F: ABSCESSA Gifts 1:46 (Mass), 108 as *P: Hartwrightii*.

F: ASCLEPIADEA Gifts 1:46. Minn.
F: NEBRASCENSIS Gifts 1:47. Nebr.

F: AMMOPHILA Gifts 1:47. Minn; Wis.
F: PORTERI Gifts 1:35. Pa.

F: COCCINEA Gifts 1:24, 35d, based on *Polyg: c* (Muhl in Willd Enum 428), 106. Variety *ASPHELLA* Gifts 1:36. NY.

F: PRATINCOLA Gifts 1:36. Ind; Ill; Ia; Mo.

F: SPECTABILIS Gifts 1:37. Ill; Kans.
F: LONGOPHYLLA Gifts 1:37. Ind.

F: GRANDIFOLIA Gifts 1:37, 49d. Ia; Minn; Wis.

F: PROPIQUA Gifts 1:39 S Dak.
F: MUBICULATA Gifts 1:47. Colo.

F: HOMALOSTACHYA Gifts 1:48. Nev.
F: VILLOSLA Gifts 1:49. Id.

F: CEBLANICA Gifts 1:49. Wash.
F: ANDREWSSII Gifts 1:109. Conn.

F: COVILLEI Greene.

"Stout, erect, several ft hi, leafy with large lanceolate acuminate lvs ascending on sh stout petioles of an l or even less; blades of all but the uppermost 6-8' lg, nearly 2' wide, slightly canescent on both faces with fine appressed oft tortuous hairs, the midvein beneath beset with stouter appressed hairs bristly above a tubercular base; ped beset with very slender gland-tipped hairs; spikes 2-3½' lg, their bracts canescently strigulose and with some sh gland-tipped hairs intermixed; rounded ak slightly

obovate."—Gifts 1:44.

Type locality: Near Visalia, Cal.
FERTILE MON CEPHALOPHORUS
 Greene.

"Subspecific to *P. procerus*; low and stout, herbaceous save as to the horizontal superficially seated subliguous rt stock, the strongly decumbent fig sts 4-8" hi, glab below, as are also the obovate or spatulate subcoriaceous basal lvs, but upper pt of st and infl, even to cor, sparsely and slenderly glandular-hairy; cauline lvs in 3 pairs, all of oblg outline, rather larger than basal ones, all entire, middle pair com with a few fis in axils, summit of st crowned with a dense globose and capitate cluster; sep thin, lance linear; cor less than 1/2" lg, straight and narly tubular, with sm limb of sh sub-equal rounded seg; color p'ish."—Gifts 1:79, Summit Lakes, at 11,000', Tulare Co., Cal.

P. OBOVATUS Gifts 1:163.

"More than 1" hi, stout sts rigidly erect above a merely sh decumbent base; plant wholly glab, of a light g, not glau; basal lvs 3 or 4" lg, oblanceolate, acutish, the cauline in about 4 pairs, lanceolate, sessile, 2 or 3, lg, sh'er than internodes; infl lg and interrupted, the axyl clusters about 5 or 6 pairs and all but uppermost on pedicels 1 1/2-1" lg; sep mostly quadrate-oblg, some obovate-dilated, all subulate-pointed and with nar oft erose scarious margins; cor p. sm for the plant, 4" lg, ascending, not deflexed as in the allied *P. confertus*; tube broad, nearly cylindric."—Gifts 1:163. Pine Ridge, Fresno Co. Cal.

P. DEPRESSUS Gifts 1:162.

"Akin to *P. confertus* but low, caespitose, with very stout woody branches 1-3' lg clothed with sm entire coriaceous lvs 1/2" lg, elliptical, on sh stout petioles, the 2 or 3 cauline pairs subsessile; infl depressed-capitiform, the rather few cor large for the plant, tubular, with sh not very irr limb; sep subquadrate-oblg, glandular pubescent."—Gifts 1:162. White Mts, Mono Co. Cal.

P. PROPINQUUS Gifts 1:166. Ore.

P. PRODUCTUS Gifts 1:166. Ore.

P. ELLIPTICUS Gifts 1:167. Wash.

P. VERONICAEFOLIAS Gifts 1:167. Id.

P. ALBERTINUS Gifts 1:167. Alberta.

P. LASSENIANUS Gifts 1:164.

"Akin to *P. confertus*, almost wholly herbaceous, stout, erect, 1" hi, light g and glab; lowest lvs oblanceolate, cauline in 4 pairs, ovate to oblg-lanceolate, 2" lg, sessile and half-clasping by a broad PRACELIA.

P. BUPHASTIS Gifts 1:152. NM.

PRALARIS LEMMONI Vasey. Ab, SCA b 1:89, Inglewood, LA Co.

PHLOX L.

A—more or less matted; lvs sh and crowded.

P. CANESCENS T & G.

Very densely caespitose and lanate-canescant; lvs subulate.

P. COVILLEI Nelson.

Less densely caespitose and canescant than *P. canescens*; lvs ovate to lanceolate.

PHLOX DOUGLASHII Hook.

Fl 2:73. B 1:486. Cantilles' Parry, Wyo 6, 11, 14. Parish, Z 5:74 San Antonio mts (Hall). Par 264 t.

Loosely or somewhat densely tufted, not canescant; lvs acerose; cx-sinuses not replicate.

Variety **LONGIFOLIA** G. Ore, Nebr, SD mts (Parish 424).

PHLOX AUSTRO-MONTANA Coville. Coy 151. Ha 106.

Loosely tufted; cx-sinuses replicate. B—not matted; lvs lg, not crowded.

P. ADSURGENS T.

Branches ascending; lvs broad-lanceolate to ovate.

PHLOX DOLICANTHA A. Gray.

Branches nearly erect; lvs nar-lanceolate, not exceeding 4".

So Cal (Parish 1838).

PHLOX LONGIFOLIA Nutt.

B 1:482, 2:464. Parry, Wyo 5.

Erect; lvs linear, 1-2" wide.

Variety **PUBERULA** E: Nelson. Lvs and fis smaller than in type.

Variety **STANSBURYI** A. Gray.

G 8:255. Cov 152.

Panamint mts, Cal. Nev.

Phlox speciosa var. *Stansburyi* T Bot Mex B 145 (1859).

Type localities: "gravelly hills near the Organ mts, NM," and "San Luis mts."

Baja mts! British Columbia; N. M.; Utah.

P. OCCIDENTALE Durand.

Erect, glandular-viscid above; lvs nar-oblg, tapering at both ends.

P. STANSBURYI Heller.

Erect, canescant; lvs nar-lanceolate to linear, margins cartilaginous.

Synonymy: *P. speciosa* var. *S* of T. *P. longifolia* var. *S* of G.

P. MESOLEUCA Gifts 1:152. NM.

PINUS MURRAYANA Balf, Ab, SCA b 1:87, "summit of Mt San Antonio, LA Co."

PINUS TUBERCULATA

Parish. SCAB 2:155, Jac?

PLANTAGO FASTIGIATA Morris, T cl b 27:116. Parish, SCAB 8:7, CD.

P. VIRGINICA L.

Variety **LONGIFOLIA** G. Syn Fl 2 (1): 392. Parish, SCAB 8:7, Orange Co.

PLANTAGO XERODEA Morris, T cl b 36:515 based on *P. picta* Morris non Colenso.

PLANTAGO BIGELOWII G. Pac Ry R 4:117. B 1:612. Morris, T cl b 36:524.

PLANTAGO ELONGATA Pursh, Fl 2: 729 (1814). Morris, T cl b 36:525.

Range: Assinibola; N and So Dak; Nebr; Okl; Mont; Colo; Ut.

Synonymy (fide Morris T cl b 36:525): *P. pusilla* Decaisne, pro parte in DC 13: 696. *P. Bigelowii* Wat, bot king 5:212 (non G). *P. pusilla* var. *macrocarpa* E, bot gaz 8:175 (non Steud). *P. pusilla* G, pro parte, syn Fl 2 (1):392 (non Nutt). *P. elongata* Auct Am plur, pro parte. *P. myosuroides* Rydberg, NY bot gard mem 1:369.

PLANTAGO HETEROPHYLLA Nutt.

Am Phil sc tr sr 2, 5:177 (1837).

Range: NJ; Pa; Dela; Md; NC; SC; Ga; Fla; Ill; Ky; Tenn; Ala; Miss; Mo; Ark; La; Tex; Cal; Baja.

Synonymy (fide Morris, T cl b 36:529):

P: caroliniana Pursh (?) Fl 1:98 (non Walter). P: pusilla Decaisne, pro parte, DC 13 (1): 696 (non Nutt). P: perpusilla Decaisne, in DC 13 (1): 697. P: Californica Greene, Cal ac b 1:123 (non P: Durvillae var: Californica F & M). **PLANTAGO PUSILLA** Nutt, Gen 1:100 (1818). Morris, T cl b 36:527.

Range: Mass; RI; Conn; NY; NJ; Pa; Dela; Md; DC; Va; SC; Ga; Fla?; Ill; Ky; Tenn; Ala; Mo; Ark; Kans; Tex; Wash; Ore; Cal.

Synonymy (fide Morris, T cl b 36:527): P: maritima Barton, Prod Fl Phil 26 (non L). P: hybrida Barton, comp Fl Phil 2:214; Fl N Am 3:77 t 98 f 1. P: linearifolia Muhlenberg? Cat, ed 2, 16, nomen nudum et T, Fl US 185. P: pusilla Decaisne, pro parte, in DC 13 (1): 696. P: elongata Auct Am plur (non Pursh).

Variety **ENGELMANNI** Morris, T cl b 36:528, based on Var: major E, bot gaz 8:175 (non P: major L).

Type locality: near Atoka, Indian Territory.

FLEIOCARDIA Glfts 1:85, based on Streptanthus sp. P: tortuosa, type.

F: BREWERI Glfts 1:86 (S:B, G ex Greene, Fl Fr 259).

F: FOLIOSA Glfts 1:86 (S:f, P 3:226).

F: GRACILIS Glfts 1:86 (S:g, Eastwood, Cal ac pr, sr 2, 2:285).

F: HESPERIDIS Glfts 1:86 (S: h, Jepson, Er 1:14).

F: OBSCULATA Glfts 1:86 (S: o, Greene, Fl Fr 2:58).

F: SUPPITESCENS Glfts 1:86 (S:s, Greene, Er 1:147).

F: TORTUOSA Glfts 1:86 (S:t, K ex Greene, Fl Fr 258).

F: MAGNA Glfts 1:87.

"Stout glab glau ann branched from near base 2° hi: lowest lvs spatulate-obovate, 3' lg 1½ broad, coarsely dentate, the broad triangular teeth not callosus-tipped, those subtending the branches sh'er, cordate-ovate, obtuse, entire or nearly so: fis not seen: fr'g raceme lg, lax, the pedicels 1-1½ lg, stoutish, ascending: pods very lg and slender, 3-4½ lg, subterete, scarcely torulose, straight and ascending or sub-falcate-recurved, tipped with a prominent sty: sds sm, oblg-linear marginless."—Glfts 1:87. SBer mts, 4900° (W: G: Wright).

F: FENESTRATA Glfts 1:86.

"Low slender glab glau ann, branched from base, 6' hi; proper foliage 0 in the very mature specimens, a few sm ovate cordate-clasping entire bracts on branches: ex very sm, deep p: cor large for the plant, pet with well developed broadly obovate limb and slender claw, the whole of a faint rose-color beautifully fenestrate with delicate dark-r veins: pods slender, straight, acute, 1½ lg, spreading or deflexed, not strongly compressed, lightly torulose: sds oval, thickish, marginless."—Glfts 1:86. Tehipite valley, Fresno Co, Cal.

PNEUMONANTIS Gleditsch in Mem ac Berl 5:130 (1751). = *Gentiana* fide IK. Glfts 1:88 as valid.

F: AFFINIS Glfts 1:71 based on G: a (Griseb).

F: BIGLOVII Glfts 1:71 based on G:B (G).

F: BRACHIOSA Glfts 1:71 (G: b, Greene).

F: CALYCOSA Glfts 1:71 (G: c, Griseb).

F: CLAUVA Glfts 1:71 based on G: c (Raf. Med Fl 1:210), et *Dasystephana Andrewsii* Small.

F: FLAVIDA Glfts 1:71 (G: f, G of 1846), et G: alba G of 1848 (not G: alba Muhl, a nomen nudum).

F: FORWOODII Glfts 1:71 (G: F of G).

F: GLAUCA Schm, Roem Archw 1 (1): 10. Glfts 1:71 (G: glauca Pall).

F: INTERRUPTA Glfts 1:71 (G: i, Greene).

F: LATIFOLIA Glfts 1:71 (*Dasystephana* l. Small).

F: LINEARIS Glfts 1:71 (G: l of Froel).

F: MENKESII Glfts 1:71 (G: M of Griseb).

F: MERRERI Glfts 1:71 (G: N of G).

F: OCHROLEUCA Don. Glfts 1:71. G: o, Froeb. *Dasystephana villosa* (L) Small.

F: OREGANA Glfts 1:71 (G: o, E).

F: PABYI Glfts 1:71 (G: P of E).

F: PABYFOLIA Glfts 1:71 (*Dasystephana* p. Small).

F: PLATYPETALA Glfts 1:71 (G: p, Griseb).

F: PORPHYRIO Glfts 1:71 (G: p, Gmel). *Dasystephana* p. Small.

F: PUBERULA Glfts 1:71 (G: p, Michx). *Dasystephana* P. of Small.

F: REMOTA Glfts 1:71 (G: r, Greene).

F: RUBEYI Glfts 1:71 (G: R, Greene).

F: SAPONARIA Glfts 1:71. Schm. Glfts 1:71 (G: S, of L; *Dasystephana* S, of Small).

F: SCEPTRUM Glfts 1:71 (G: s, Griseb).

F: SETIGERA Glfts 1:71 (G: S, G).

F: SPATHACEA Glfts 1:71 (G: s, Kunth)

POLYGONUM KELLOGGII Greene, Fl Fr 134. Parish, SCAB 8:7, SBer mts, Bear, etc.

PORPHYEA.

F: LACINIATA Ag.

Forma **UMBELLICALIS** Ag.

F: LEUCOSTICTA Thur.

F: PERFORATA J. Ag.

Forma **SEGREGATA** Setchell & Hus.

Forma **LANCEOLATA** Setchell & Hus.

F: NEROCYSTIS And.

F: NALADUM And.

F: AMPLISSIMA Setchell & Hus.

F: MINIATA Ag.

Forma **CUNEIFORMIS** Setchell & Hus.

F: TENUSSIMA Setchell & Hus.

F: ABYSSICOLA Kjellm.

F: VARIEGATA Kjellm.

F: OCCIDENTALIS Setchell & Hus.

QUERCUS ENGELMANNI

Parish, SCA b 2:156 cites Q: oblongifolia. Rydb. NY bot gard b 1:224, as to SD Co specimens, as this sp.

QUERCUS LOBATA Nee. Ab, SCAB 1:89, Chatsworth Park, LA Co.

Q: WISLIZENI A. DC. Ab, SCAB 1:89, frequent on the coast slope of the Sierra Madre mts. *** Parish, SCAB 2:155. Ab, SCAB 3:1.

RADICULA Dill, Gen 121 (1719). Glfts 1:113. (*Nasturtium* et *Roripa* sp).

R: SINUATA Glfts 1:113 (Nutt sub N).

R: KESSIFLORA Gifts 1:113 (Nutt sub N.)
R: LYRATA Gifts 1:113 (Nutt sub N.)
R: OBTUSA Gifts 1:113 (Nutt sub N.)
R: RADICULA OBTUSA G. lfts 1:113. Parish, SCAB 8:7, Bluff lake. Nasturtium obtusum Nutt, T & G Fl 1:74.
R: POLYMORPHA Gifts 1:113 (Nutt sub N.)
R: LIMOSA Gifts 1:113 (Nutt sub N.)
R: CURVISILLIQUA Gifts 1:113 (Hook sub Sisymbrium).
R: SPHAEROCARPA Gifts 1:113 (G sub N.)
R: CURVITES Gifts 1:113 (P 3: sub Roripa).
R: OCCIDENTALIS Gifts 1:113 (Greene, Fl Fr sub N.)
R: DIOTYOTA Gifts 1:113 (Greene, Fl Fr sub N.)
R: MULTICAULIS Gifts 1:113 (P 3:—sub Roripa).
R: TENNERIMA Gifts 1:113 (Greene, Er 3:—sub Roripa).
R: CALYONA Gifts 1:113 (E sub N.)
R: MUTTALLII Gifts 1:114 (Rydb sub Roripa).
R: ALPINA Gifts 1:114 (Rydb sub Roripa).
R: WALTERI Gifts 1:114 (Ell, Sk sub Sisymbrium).
R: COLUMBIAN Gifts 1:114 (Howell sub Roripa).
R: PACIFICA Gifts 1:114 (Howell sub Roripa).
R: RAMONA PACHYSTACHYA Ab, SCA b 1:63, based on Audibertia incana pachystacha G. Syn Fl 2:461 (1888); A: p of Parish, Er 6:91 (1898). Type locality: Bear.
R: RHAMNUS.
R: FASCICULATA Gifts 1:63. NM. . . .
R: URSINA Gifts 1:63. NM.
R: CASTOREA Gifts 1:64. Ar
R: CUSPIDATA Greene.
 "Allied to ursina and castorea and to R: tomentella but sm'er, the tomentose pubescence different, coarser, looser and with lg'er and hirtellous hairs intermixed rather copiously, especially along the veins: lvs $\frac{1}{2}$ -2! lg, oval to elliptical, abruptly and oft cuspidately acute, sharply saliently and closely serrulate, those of vigorous shoots with even some coarse serratures below the cuspidate apex: fis very copious, in dense cymes from all the axils, 5-merous, the triangular cx-teeth lg'er than tube: fr not seen, said to be well flavored and edible."—Gifts 1:64. Foothills of the mts in Kern Co, Cal.
R: OBTUSISSIMA Greene.
 "Decid shrub with sh rigid densely lfy and finely puberulent branchlets, these dark r-p the first season, afterwards grayish and glabrate: lvs sm, $\frac{3}{4}$ -1 $\frac{1}{4}$ ' lg on very sh and slender petioles, of a light g on both faces, thin, glab above, puberulent on the veins beneath, these prominent, of elongate obovate outline cuneately tapering at base, at apex very obtuse, even oft almost truncate, minutely serrulate: umbels nearly sessile each maturing a single dark-p fr large for foliage, 3-seeded."—Gifts 1:64. Sisson, Cal.
R: BOEIDIUM Gifts 1:143 based on Rhus microphylla (E) as type.

R: MICROPHYLLUM Gifts 1:43. Tex.
R: GLABELLUM Gifts 1:143. Tex.
R: VESTITUM (Engler) Gifts 1:144. Tex.
R: EUGULOSUM Gifts 1:144. Tex.
R: BERTUSUM Gifts 1:144. Chih.
R: POTOSIUM Gifts 1:144. San Luis Potosi, Mex.
R: CINEREUM Gifts 1:144. Near Durango, Mex.
R: ISSA BRANDEGEEI Eastwood, Cal ac pr; sr 3, bot 2:242 fd, t 23 f 1 g, lb.
R: SIDES CEREUM Dougl. Ab. SCAB 1:89, Mt San Antonio, LA Co.
R: ISSA MALVACEUM
 Variety **VERIDIPOLIUM** Ab, SCA b 1:67 based on "R: glutinosum of local lists, not Bth", LA Co, with 1. Ab SCA b 1:89, Gabriel mts above 3000'; Monica mts.
R: SCUPHAM Eastwood, Cal ac pr; sr 3, bot 2:242 fd, t 23 f 2a, 2b.
R: INDECCORUM Eastwood, Cal ac pr; sr 3, bot 2:243 fd, t 23 f 3a, 3b.
R: ASCENDENS Eastwood, Cal ac pr; sr 3, bot 2:244 fd, t 23 f 4a, 4b.
R: HIRTPELLANUM Eastwood, Cal ac pr; sr 3, bot 2:245, t 24 f 6a, 6b.
R: GLAUCESS Eastwood, Cal ac pr; sr 3, bot 2:245 fd, t 24 f 7a, 7b.
R: OLIGACANTHUM Eastwood, Cal ac pr; sr 3, bot 2:246 fd, t 24 f 8a, 8b.
R: SERICEUM Eastwood, Cal ac pr; sr 3, bot 2:246 fd, t 24, f 9a-f.
R: HYSTRIX Eastwood, Cal ac pr; sr 3, bot 2:248 fd, t 24 f 10a-d.
R: RORIPA Gesner. = Nasturtium fide IK.
R: DIOTYOTA Greene.
 "Stout, erect, 2-4' hl, hirsute-pubescent; racemes rather dense: pods ovate lanceolate; valves firm in texture, with strong tortuous midvein and anastomosing veinlets; partition thick, favose-reticulate. Marshes of the lower Sacramento."—Greene, Man 20.
R: LYRATA Greene, Man 20 based on Nasturtium lyratum Nutt (= N: curvisilliqua Nutt fide IK.)
R: PALUSTRE Greene, Man 20 based on n: palustre Leyss.
R: TENNERIMA Greene, Er 3:46. Cal.
ROSA MOHAVENSIS Parish, SCA b 1:87 t 7, based on R: californica var: glabrata Parish.
 Genus **SAGITTARIA** Linnaeus.
 Per aquatic or marsh herbs with tuber-bearing or nodose rtstocks; lvs with nerves connected by num veinlets: scapes erect, decumbent or floating: fis mon or dioe, borne near the summit of the scapes in whorls of 3s, pedicelled, the stam com uppermost, whorls 3-bracted: perianth seg 6, outer 3 herbaceous persistent and reflexed or spreading in the pist fis: sta num, inserted on the convex receptacle; anth 2-celled, dehiscent by lateral slits: pist fis with num distinct 1-ovuled ova and sm persistent stig: ak densely aggregated in globose hds, compressed; sds curved; embryo horseshoe-shaped. Arrowhead.
R: ANIFOLIA Nutt. Parish, Er 3:58, "Buff Lake, alt 7400", SEer mas." M 3:109 NDak.
 Variety **DIMORPHA** Lunell. M 3:111 fdr.
 Variety **MONOMORPHA** Lunell. M 3:111 fdr.

Variety **POLYMORPHA** Lunell. M 3: 111 fdr.
 Variety **STRICTA** J G Smith, Mo bot gard r 6:7 t 1.
 Variety **CUNEATA** Lunell. M 3:109.
S. CALYCINA Da 18. A 1:89 as *Populotocarpus californicus*.
S. CALYCINA E, bot Mex bound 212. Ab 17, as *Lophotocarpus* Cal.
S. CHINENSIS Sims, Parish. Z 1:122, Sber. Z 1:176. B 2:201, cult in Cal, by Chinese.
S. CUNEATA Sheldon. M 3:112 as *arifolia* var. C.
SAGITTARIA LATIFOLIA Willd.
 Rtstock slender; scapes 0.2-1 m hi, angled; lvs very variable, ovate-sagittate to linear, acute, lobes more or less divergent acuminate; fls mon with the lower verticils pist or dioe, 2-4 mm wide; pet w; sta num, 25-35; fl glab; pist pedicels sh'er than stam; ak broadly winged on both margins, 3 mm lg, with a lateral horizontal or curving beak, ¼ one-third its length.
 Ab 18.—"Occasional on margins of ponds about L.A."
S. VARIABILIS E. Ab 18 as *latifolia*. B 2:201.
 Genus **SALAZARIA** Torrey.
 Cx at first campanulate or oblg, with 2 entire lips and no gibbous projection on back, in fr much enlarged, globose-inflated, thin and bladdery, reticulated, closed; cor. sta, etc, as in *Scutellaria*: upper sty-fork 0. Monotypic.
S. MEXICANA T, bot Mex bound 133 t 39. B 1:604. Named in honor of Senor Salazar, Mex bound commissioner. Cov 176.
 Type locality: Chih, ravines near the Rio Grande.
 Mohave! Baja; Nevada; Utah; Arizona.
SALIX L., syst ed 1 (1735). A 1:359d.
S. ARCTICA Pallas. Alk. etc. B 2:90.
 Variety **PETRAEA** And. B 2:90. Cal.
S. ARGOPHYLLA Nutt, Sylv 1:71 t 20. B 2:85 as *longifolia* variety a. Ab 102. A 1:359d.
S. ARGUTA And, DC 16 (2): 206. B 2: 84 as *lasianдра*.
 Variety **LASIANДРА** And, lc. B 2:84 as l. var. *typica*.
S. AUSTINAE Bebb. B 2:88. Plumas Co.
S. BABYLONICA L, sp pl 1017. And, Z 1:41. Weeping willow. cult.
S. BIGELOVII T, Pac Ry R 4:139. And, Sal mon 163 f 94. DC 16 (2): 255. B 1:86 as *lasiolepis* var.
S. BRACHYCARPA Nutt Sylv 1:69. B 2: 85 as *longifolia* var. *argophylla*?
S. BRACHYSTACHYS Bth 336. B 2:87 as *flavescens*.
S. BREWERII Bebb. B 2:88.
S. CALIFORNICA Bebb. B 2:89, 483.
S. BAKERI Seem. M 3:69.
S. CAPREOIDES And, Sal. Bor.-Am 11. B 2:87 as *flavescens*.
S. CASCADENSIS M 3:9 based on *tenera* DC 16 (2): 288 not A. Br.
S. CYCLOPHYLLA And, in Vet ac Handl Stock 6: n 1, 138 (1867).
 Variety **PELLITA** And, DC 16 (2): 244. B 2:87 as *sitchensis* var. *angustifolia* Bebb.
S. CORDATA Muhl, in Ges Nat Fr Neue Schr 4:236. B 2:85. M 4:72.

Variety **MACKENZIEANA** Hook. Ha 70. Sargent, Silva 9: t 479.
 Variety **WATSONI** Bebb.
 "Should probably be merged with variety *Mackenzianum*."—Hall.
 Southern California. (Parish 1785).
S. COULTERI And. B 2:90.
S. CUNEATA Nutt, Sylva 1:66. B 2:87 as *sitchensis*.
S. EXIGUA Nutt, Sylva 1:75. B 2:85 as *longifolia* var. *exigua*. A 1:360d. Ab 102.
 Variety **VIRENS** Rowlee. Ab 102. A 1: 360d.
S. FENDLERIANA And, Sal Bor-Am 115. B 2:84 as *lasianдра* var. F.
S. FLAVESCENS Nutt. Sylva 1:65. B 2: 86.
S. FLUVIATILIS Nutt Sylva 1:72, 73. B 2:85 as *longifolia*.
S. GEYERIANA And, Salmon 86 f 50. DC 16 (2):226. B 2:87.
S. GLAUCA L. B 2:89.
 Variety **VILLOSA** And. B 2:89.
S. GLAUCCPS And, DC 16 (2): 281. B 2: 89 as *glauca* var. *villosa*.
S. HARTWEGI Bth. B 2:86 as *lasiolepis* var.
S. HINDSIANA Bth 335. B 2:85 as *sessilifolia* var. H.
S. HOPPMANNIANA H & A, bot Beech 159. B 2:84 as *lasianдра*.
S. HUMILIS Marsh, Arb 140. B 2:86.
 Variety **HARTWEGI** And. Sal mon 236. B 2:86.
S. LAEVIGATA Bebb. B 2:83. Ab 100. A 1:360d. Br 1:216 Rosa. Greene, Cal ac b 2:412 Cruz. Bebb. Am nat 8:202. Cov 198. M 3:81.
 Type localities: "Santa Cruz, Ukiah, Alameda Co. Cal."
 Throughout Cal; Ore; Guatemala.
 Sber (Parish 545); Cruz; Rosa. Da 16.
 Variety **ANGUSTIFOLIA**: "Lvs nar'er, taper pointed, falcate, 3 or 4' lg, 9" broad near roundish base, approaching *S. nigra*."—B 2:84. Yreka, Cal.
 Variety **CONGESTA**: "Aments sh, densely fld, scarcely exceeding the ample lvs of ped; cap globose-conical, sh'ly pedicelled."—B 2:84.
SALIX LASIANДРА Benth.
S. LASIANДРА Bth 336. B 2:84. Da 16. Z 1:41. Ab 100. A 1: 361d.
 Da 16. San Francisco.
 Variety **FENDLERIANA** Bebb. B 2:84. Parish, Er 3:60 Bear.
 Variety **LANCIFOLIA** Bebb. B 2:84. Da 16. Sber. (Parish 546). A 1:361d.
 Variety **TYPICA** B 2:84.
S. LANCIFOLIA And, Sal mon 34 f 23. B 2:84 as *lasianдра* var. *lancifolia*.
SALIX LASIOLEPIS Benth.
 Tree or large shrub, 4-8 m hi, lvs oblg or somewhat broadest above the middle, obscurely and irr serrulate, dull g above more or less gray-pubescent beneath, 12-20 mm broad, 5-7 cm lg, on petioles 5-10 mm lg; aments appearing before the lvs, suberect; stam 2-4 cm lg; sta 2; pist 2.5 cm long or less; cap acute, smooth, sh-pedicelled; sty rather sh; stig erect. erect.
 Type locality: "Ad ripas fluviorum Salinas et Carmel prope Monterey, Cal." Bth 335, Cov 199. Ha 71. Ab 101. Arroyo willow. Da 16. B 2:86. Greene, Cal ac b 2:412, Cruz. A 1:361.

SBER (Parish 675); Baja; Cruz; Da 16. San Francisco.

Variety **REGILOVII** Bebb. B 2:86 (S. Bigelovii T.)

E. LEXMONI Bebb. B 2:88.

Variety **MELANOLEPIS** B 2:88.

Variety **MACROSTACHYS**. B 2:88.

Variety **SPHAROSTACHYA**. B 2:88.

SALIX LONGIFOLIA Muhl.

LA; Cruz; CD; Baja.

Muhl, Neue Schrift Gesell Naturf Freunde Berlin 4:238 (1803). Br, Colo 229. Cov 199. Mex, La. A 1:361. B 2:84. Greene, Cal ac b 2:412 Cruz. DC 16:214.

Type locality: "ad Susquehannam" (near the Susquehanna river, Pa).

Lvs varying from linear to lanceolate, lg-acuminate, tapering at base, sessile or nearly so, 3-4" lg, 1-6 (cm 2-3)" broad; margin remotely mucronate-dentate or entire; stipules soon decid: aments linear-cylindric, borne on lateral lfy branchlets of the season, oft clustered at extremity: scales y'ish, villous, dentate, decid: cap oblg-conical, obtuse, sh'ly pedicelled, com tomentose; stig large, sessile.

Variety **ARGYROPHYLLA** And. B 2:85.

Kongl Sven Aked Handl, ser 4, 6:55 (1866). Da 16. Cov 199 near Visalia.

Type locality: on "one of the branches of the Oregon, the river Boisee, toward its junction with the Shoshonee."

Salix argyrophylla Nutt, Sylv 1:71 (1842-53).

Variety **EXIGNA** Bebb. B 2:85.

S. LUCIDA Muhl, Ges Nat Fr Neue Schr 4:239.

Variety **MACROPHYLLA** And, DC 16 (2): 205. B 2:84 as *lasianandra* var. *lanatifolia*.

S. LUTA Nutt, Sylva 1:63 t 19. B 2:86 as *cordata*.

S. MACROCARPA Nutt, Ore. B 2:88.

S. MACROSTACHYA Nutt Sylva 1:72. B 2:85 as *longifolia*. Ab 101.

Shrub or sm tree, 1-6 m hi, oft in dense thickets; bark light brown, cinereous, young branches villous: lvs 5 cm lg, 1 cm wide, sessile or nearly so, oblanceolate or nar'ly elliptic, acute at both ends, more or less villous-pubescent; stipules 0; aments on sh lfy lateral branches, 2-3 cm lg, densely fid, oblg; scales densely villous all over, oblg; fl crisp villous upon the lower half; cap clothed with lg lax hairs, closely sessile; sty evident; stig divided, linear.

Ab 101. Suggests that *S. Parishiana* is a synonym.

Variety **LEUCODENDROIDES** Rowley.

Shrub 1-3 m hi; lvs 10-12 cm lg, 1 cm wide, densely w tomentose on both sides, largest remotely denticulate; aments cylindric, 4-5 cm lg, otherwise as in type. Ab 102, SBER valley.

S. MICROPHYLLA Schlect, H & A bot Beech 310 t 70. B 2:85 as *taxifolia*.

S. MONICA Bebb. B 2:90.

SALIX NEVADENSIS.

"Aments sh, 6-8" lg, appearing with the lvs, ascending on lfy peduncles; scales oblg, obtuse, glab or subsilky in the male aments, light-colored; sta 3, free; capsules glab even when young, on pedicels $\frac{1}{2}$ " lg; sty 0; stig sh and thick; lvs lance-linear, $\frac{1}{2}$ -1" lg on fl'ng

specimens, acuminate, entire, silky-tomentose; stipules very minute. A slender shrub, 3-4' hi, with light-colored bark and y'ish foliage, growing in dry, sandy soil. It differs from *S. Hindsiana* in its more reduced habit, its silvery pubescence, narrower, more scarious, lighter-colored and glab scales, more slender and smoother capsules, and thicker and sh'er stigmas. At the base of the Washoe mts, near Carson City (1093 Watson), and in Central Nevada (Wheeler).—S. Watson. Am nat 7:302 (My 1873). B 2:85.

SALIX NIGRA Marsh. B 2:83.

Variety **VALLICOLA** Dudley.

"Tree 8-12 m hi, with dark, rough bark; lvs g on both surfaces, glabrate, nar'ly lanceolate, 5-12 cm lg, 8-12 mm wide, closely serrulate, acute or acuminate, nar'ed at base to petioles 4-6 mm lg, which are quite puberulent or nearly glab at maturity; stipules lanceolate when well developed, the larger 8-10 mm lg, all glandular toothed, oft with similar glands on lower surface and on serratures of young lvs; aments expanding with lvs, terminating the sh lateral branches, stam 3-6 cm, pist 2.5-5 cm lg; sta 5-11, their fl tomentose below; bracts pale, obovate or roundish,, usually very tomentose; sty sh; stig 2, lobed; cap ovoid, glab or more or less pubescent, mostly 4-5 mm lg, from slightly longer to twice the length of the smooth pedicels. "The largest willow in southern Cal. Frequent along the Santa Ana River from Santa Ana to SBER; also along the San Diegoito and SD rivers in SD Co. The type of this heretofore undescribed willow is the author's No. 3256, collected along the Santa Ana river near Orange."—Ab 100.

SALIX PARISHIANA Rowley.

Slender shrub, 1-3 m hi; young twigs cinereous strigose; lvs linear-lanceolate, minutely and remotely denticulate, 5-7 cm lg, 3 mm wide, silky-anescent when young, glab and somewhat coriaceous when mature, veins few but prominent; stipules 0; aments on lg lfy ped, 2-3 cm lg, upper lvs of branch much surpassing ament; fls dense; scales w, densely villous all over, oblg, acute; fl scanty hairy at base; cap densely villous, oblg, closely sessile; sty distinct; stig linear. SBER (Parish). Ab 101.

S. FENDLERIANA L, sp pl 1016. Eu.

Variety **CAUDATA** Nutt, Sylva 1:61 t 18. B 2:84 as *lasianandra* variety, *Fendleriana*.

S. SCOULERIANA Barratt, Hook Fl 2: 145. B 2:87 in part as *flavescens*.

S. SENSILLIFOLIA Nutt, Sylva 1:66. B 2:85.

Variety **HINDSIANA** And, Sal mon 56 f 37. B 2:85. A 1:361.

SBER (Parish 640).

S. SITCHENSIS Sanson, Bong Veg Sitcha. B 2:87. P 3:76. M 3:148 fdr.

Variety **ANGUSTIFOLIA** Bebb. B 2:87.

S. SPECIOSA Nutt, Sylva 1:58 t 17. B 2:84 as *lasianandra*.

S. STAGNALIS Nutt, Sylva 1:66. B 2: 87 as *flavescens*?

S. SUBCORDATA And. B 2:90.

S. TAXIFOLIA HBK. B 2:85.

S. TENERA And, DC 16 (2): 288. B 2: 90. Cascade mts. M 3:9 as *Cascadensis*.
S. VILLOSA Hook, Fl 2:144. B 2:89 as *glauca* var. *villosa*.

Genus **SALSOLA** Linnaeus.

SALSOLA TRAGUS L.

Genus **SALVIA** Linnaeus.

Herbs or suffrutescent plants, aromatic and bitter, with clustered com showy fls: cx bilabiate, its upper lip 3-toothed or entire, the lower 3-cleft: cor deeply 2-lipped, erect, entire, emarginate or 2-lobed, com concave, the lower spreading, its middle lobe oft emarginate: anth-bearing sta 2, posterior pair 0 or rudimentary; fl com sh; connective of anth transverse, linear or filiform, bearing a perfect anth-sac on its upper end, its lower end dilated, capitate or sometimes bearing a sm or rudimentary anth-sac: ova deeply 4-parted; sty 2-cleft: nutlets smooth, com developing mucilage and spiral tubes when wetted.

S. APIANA M 3:144 based on *Californica* Jepson (not Br), *Audibertia polystachya* Bth.

S. AURICULATA Und. Z 1:101 Tampico, Mex.

S. BALLOTAEFLORA Bth, Lab Gen et sp 270. B 1:600. Tex, Mex.

S. BERNARDINA Parish. A 1:107 fdr.

S. CALIFORNICA Br 2:197. Baja (Jepson Fl 460 = *apiana*.)

SALVIA CARDUACEA Benth.

Bth, Lab G et sp 302. B 1:599. Da 14. Ab 343. Par 312 t.

(Thistle-sage.)—Rather stout erect ann, 2-5 dm hi; st with a cluster of ample sinuate-pinnatifid spinulose-toothed lvs at base, these and the whole plant woolly and thistle-like; fls in 1-4 dense hd-like verticillate clusters, these 2-3 cm broad, equalled or surpassed by the ovate-lanceolate pectinate-toothed bracts; cx lg-woolly, many-nerved; cor light blue, 2.5 cm lg; upper lip erose-denticulate and cleft; lower with a large flabelliform fimbriately many-cleft middle lobe: fil very sh; lower arm of lg filiform connective bearing a polleniferous anth-cell.

S. CAENOSA Dougl, bot reg sub t 1469. Cov 175. (*Audibertia incana*).

Variety **COMPACTA** Hall. A 1:276 s.

Variety **PILOSA** G.

S. CEDROSENSIS Greene, Cal ac b 1: 212. P 1:206 Cedros. A 1:107 fdr. Magdalena Isl. Baja.

S. COCCINEA L. B 1:599.

SALVIA COLUMBARIAE Benth.

(Chia).—Slender ann, branching and lfy below, 2-5 dm hi, naked and ped-like above, more or less grayish pubescent with rather sh reflexed hairs: lvs rugulose, 1-2-pinnatifid into toothed or incised divisions; fls in 1-several dense verticillate clusters, these about 1.5-2 cm broad, scarcely equalled by rounded bracts; bracts tipped with a slender awn, sparsely ciliate on margins: cx-lobes p'lish tipped, upper lip large, arched, tipped with a pair of partly connate sh-awned teeth; cor deep blue, hardly exceeding cx, upper lip sm, notched, the lower with sm lateral lobes and a large unguiculate transversely oval 2-lobed

middle one.

Bth, Lab 302. Da 14. B 1:599. Greene, Cal ac b 2:409 Cruz. Br 1:215 Rosa. Ab 343. Par 302. Davy. Er 1:193 tetralogical note. Ha 113. T, bot Mex bound 132.

S. FULGENS Cav, Ic 1:15 t 23. B 1:599.
S. GOSSYPIA Bth 330. B 1:599 as *carduacea*.

S. HUMILIS Greene. A 1:132 s.

S. FLATYORRELLA G 8:292. B 1:600.
S. SOMOCHENSIS Greene. A 1:132 s.

S. SPATHACEA Greene. A 1:132 s.
S. SPLENDENS Ker Gawl, bot reg t 687. B 1:599.

S. VASEYI M 3:126 based on *Audibertia* V (Porter, bot gaz 6:207). Ramona V. (Briquet, Engler & Pr Natpfl 4: 237 et M 1:59).

SAMBUCUS Tourn. A 1:191d.
S. CALLICARPA Greene. Par 42.

S. CANADENSIS L, sp pl 269.
S. MEXICANA Sargent, Sylva 5:88.

Variety **MEXICANA** Sargent, Sylva 5:88. Ha 121. Parish. Z 5:118, "not known south of Tehachapl."

S. GLAUCA Nutt, T & G Fl 2:13. G. Syn Fl 1 (2): 9. Wat bot king 134. B 1: 278. Ore to Mex, Id, Nev. A 1:191d. Ab 330. Par 41. Greene, Cal ac b 2:349

Cruz. Br 1:211 Rosa. Da 7. B 1:278. Cov 117. Bloch, Er 2:40, "Saucu", notes medical value of fls. Ar. M 3:1.

Type locality: "plains of the Oregon, near the Blue mts."

S. COERULEA Raf, Alsog Am 48 (1838). Greene, Er 2:52, "supercedes *S. glauca* Nutt."

S. RACEMOSA L. Eu. B 1:278. P 3:83. Z 1:83.

Shrubby, mostly glab: lfts 5-7, thin, oblg-lanceolate, much acuminate, very sharply serrate: cyme ovate or pyriform: fr bright red; its nutlets obscurely rugose: pith of shoots brown. Alk-Cal. Variety **PUBENS**. Atlantic states. B 1: 278.

S. PUBENS Mich. B 1:278 as *racemosa* var. n.

S. MEXICANA Presl, DC 4:322. = *glauca*? B 1:278.

S. VELUTINA D & H. Phil ac J, ns, 3:39. Pac Ry R. 5:8. M 3:1.

Genus **SAMOLUS** Linnaeus.

Brook weed. Low and glab caulescent herbs with alt lvs: fls sm, w, 5-merous, in terminal racemes: cx adherent to base of ova, mpanulate: cor nearly campanulate: sta 5, borne on tube of cor, fil sh; a 2d sr of sta represented by 5 sterile fil or staminodia inserted in sinuses of cor and alt with anther-bearing sta: cap opening at the apex by 5 valves.

S. EBRACTEATUS HBK. Baja.
SAMOLUS FLORIBUNDUS HBK.

A 1:198d.
 Abrams, Fl LA 299. Sber valley.

Samolus Valerandi L. var. *Americana* A. Gray.

Davidson, Pl LA Co 11.
 Greene, Cal ac b 1:406.

SAMOLUS VALERANDI Linn.
 P 1:470.

Variety **AMERICANUS** G. Man ed 2, 274. Da 11. Greene, Cal ac b 2:406 Cruz. A 1:199 s.

SANGUIBOEA Rupp ex L, syst ed 1

(1735) = *Poterium* fide IK.
S. ANNUA Nutt, T & G Fl 1:429. B 1:186
 as P: a.

S. MICROCEPHALA Presl, Epim bot
 202. B 1:186 as P: annuum.

S. MYRIOPHYLLA Braun & Bouche. B
 1:186 as P: annuum.

S. OFFICINALIS L, sp pl 116. B 1:186
 as P: o.

SANGUINARIA Dill ex L, syst ed 1
 (1735).

S. AUSTRALIS P 5:307.

S. CANADENSIS L, sp pl 505. P 5:307.

S. DILLENIANA P 5:307.

S. GRANDIFLORA Rose Fl III Seasons
 t 8. P 5:308 = canadensis fide IK.

S. MESOCHORA P 5:308.

S. ROTUNDIFOLIA P 5:307.

SANICULA Tourn. A 1:139d.

S. AECTOPOIDES H & A bot Beech 141.
 B 1:256.

S. ARGUTA Greene. A 1:140 fdr. Ab 279.
 SBar-SD.

S. BIPINNATIFIDA Dougl, Hook Fl 1:
 258 t 92. T, bot Wilkes exp 314. Ab 279.

B 1:256.2:451. Da 7. Er 1:6. A 1:141d.
 McClatchie, Er 2:123. Pasadena, Jepson,
 Er 1:63 Kern to Butte Co. M 3:71.

S. BIFLORATA H & A, bot Beech 347.
 B 1:257. 2:451. Ab 280.

Slender, 2-4 dm hl, from a slender
 fusiform rt: lvs twice or thrice pinnate,
 with divisions not at all decurrent on
 rachis, cuneate-oblg to ovate, incisely
 and mucronately toothed; umbel 3-4-
 rayed; inv of lf-like bracts; involucels
 of a few sm bractlets more or less
 united; fls y: fr 3 mm lg, with strong
 tubercles tipped with sh hooked bristles;
 sd-face deeply sulcate, sometimes in-
 closing a central cavity, with a central
 longitudinal ridge.

S. LACINIATA H & A bot Beech 347.
 Greene, Cal ac b 3:399 Cruz. Ab 279. Er
 Z 1:114 Cat. A 1:140d.

S. MARTIMA K, ex Wat B 2:451. Cur 1:
 138.

Greene, P 1:269, describes the type
 locality and the only one known as "a
 bit of meadow land between Alameda
 and Fruitvale, toward the bases of the
 Oakland hills," Cal, associated with
*Ranunculus Bloomer*l.

S. MENZIESII H & A. A 1:140d. Ab 278.
 P 1:269 as ann. Da 7. B 1:256, 2:451.

S. NEVADENSIS Wat 11:139. B 1:256, 2:
 451. Er 1:6. Ab 279. M 4:66.

Low, with very sh sts, the num stout-
 ish ped arising from near base, 2 dm hl
 or less; lvs ternate, the divisions oblg-
 ovate, 3-5-lobed, seg lobed or toothed;
 umbels with 3-10 rays; inv of pinnatifid
 lf-like bracts; involucels of sm, oblg
 acute, more or less united bractlets;
 fr'ng rays 1.5-3.5 cm lg; fls y, sterile
 ones on pedicels 2-3 mm lg; fr bristly
 all over, 3 mm lg; sd-face concave.

SANICULA NEMORALIS Greene.

"Erect, rather slender, a ft hl, from a
 perpendicular rt: lvs mostly radical,
 bipinnately 3-7-parted, divisions decur-
 rent upon rachis as a nar entire wing;
 the several ascending branches bearing
 compound umbels with elongated rays;
 fls few in the hd, y: fr sm, broader
 than lg, the whole surface covered with
 uncinat prickles which are strongly

fatulate-enlarged or inflated from base
 to near middle."—Greene, Er 1:6. Col-
 lected by Bolander at the Big Trees and
 in the Yosemite Valley.

S. NUDDICHAULIS H & A, bot Beech 142.
 B 1:256 as laciniata. A 1:140 as Men-
 ziesii.

SANICULA SAKATILIS Greene.

Sts many, depressed, a ft lg, from a
 fleshy napiform rt of the size of a wal-
 nut: lvs ternately pinnate, the ultimate
 seg broad, coarsely toothed; fig branches
 repeatedly dichotomous, with hds (ped-
 icellate) in all the forks: involucels sm,
 of very unequal foliaceous entire or
 toothed bractlets; pet salmon-color;
 anth y; sterile fls on lg pedicels: fr
 strongly tuberculate, the tubercles of
 upper part ending in a broadly subulate
 incurved point."—Greene, Er 1:6-7. Mt.
 Diablo.

SANICULA SEPTENTRIONALIS Greene

"Erect, slender, simple or sparingly
 branching, scarcely a ft hl: lvs few and
 sm (1" lg); radical of rounded general
 outline (as broad as lg), the ternate-
 lobed lfts obovate; cauline relatively
 longer and of more deltoid outline: um-
 bels sm of only 2 or 3 sh slender sim-
 ple rays: fls y: fr prickly throat."—
 Greene, Er 1:6. Vancouver Isl (Macoun).
S. TUBEROSA T. B 1:257. 2:451. Da 7.
 Er 1:6. Ab 280. A 1:141d.

SANTOLINA Tourn ex L, ed 1, 248
 (1737).

S. SUAVEOLENS Pursh, Fl 2:520. B 1:
 401 as *Matricaria discoides*.

SAPNUM P. Br. Br Hist Jamaica 338
 (1756).

S. ANNUUM T, Mex bound 201. B 2:72
 as *Stillingia* a.

Genus **SAPONARIA** Linnaeus.

L, syst ed 1 (1735).

S. OFFICINALIS L, sp pl 408. Eu. B
 2:454.

SAPONARIA VACCARIA Linn.

L, sp pl 409. Eu. B 2:434.

SARACHA Ruiz & Pavon, Prod 31 t 34
 (1794).

S. ACUTIFOLIA Miers, Ann & Mag Nat
 Hist, sr 2, 3:449. B 1:540 as *Chamaesar-
 acha coronopus?* et 541 as *Physalis lo-
 bata?*

S. CORONOPUS G 10:62. B 1:540 as
Chamaesaracha c.

S. NANA G 10:62. B 1:540 as *Chamaesar-
 achacha* n.

SARCOCATUS Nees. Neuw Reise N-Am
 2:446 (1841).

S. MAXIMILIANI Nees, lc, 447. B 2:59
 as *vermiculatus*.

S. VERMICULATUS T, Emory rec 149.
 B 2:59. = *Maximiliani* fide IK.

Genus **SARCODES** Torrey.

SARCODES SANGUINEA Torrey.

Torrey, Pl Frem 18 (1853).
 B 1:462. Ab 295. Da 10. Par 368 t. A 1:
 245d.

Coville, CNH 4:146.

Hall, U 100. Snow plant.

Genus **SARCODESTEMMA** R. Brown.

S. HETEROPHYLLUM E. T. Pac Ry R
 5:362. B 1:478. 2:464. = *Phillbertia lin-
 earis* fide IK.

S. LINEARE Decne in Bth 25. B 2:464 s.

= *Philibertia* l fide IK.
SARRATIA Moq, DC 13 (2): 233, 268 (1849). = *Amaranthus* fide IK.
S. BERLANDIERI Moq, lc 268. = A: polygonoides.
 Variety **FIMBRIATA** T. Mex bound 179. B 2:42 as A.f.
 Genus **SAXIFRAGA** Linnaeus.
 Tourn ex L, Gen, ed 1, 131 (1737). A 1: 320d.
S. AESTIVALIS F & M. B 1:195 s.
S. BRYOPHORA G 6:533. B 1:194.
SAXIFRAGA CALIFORNICA Greene. P 1:286. A 1:320 fdr. Ab 190.
S. ELATA Nutt. A 1:326 as *Therofon* elatum.
S. HETERANTHA Hook Fl 1:252 t 78. B 1:195. = *Mertensiana* fide IK.
S. HIBBACIFOLIA Porter, Hayden. R (1871) 782. (B 1:194 as *integrifolia* as to var: in G. Am J sc 33:409).
S. INTEGRIFOLIA Hook Fl 1:249 t 86. B 1:194.
S. LEUCANTHEMIFOLIA Michx, Fl 1: 260. B 1:195.
 Variety **INTEGRIFOLIA** Engler, Saxif 135. = *bryophora* fide. B 1:194.
SAXIFRAGA MALVAEFOLIA Greene. Torr cl b 9:121; Cal ac b 2:397 Cruz. Rosa. Z 1:136 s.
S. MARSHALLII P 1:159. Humboldt Co.
S. MERTENSIANA Bong; mem ac Petersb sr 6, 2:141 (1835). B 1:195. M 4:9.
S. NIVALIS L, sp pl 401. P 3:33. B 1: 194 s. Parry, Wyo 6.
S. PARRYI T, Mex bound 69. B 1:193. A 1:326d.
S. PRLTATA T ex Bth 311. B 1:193.
S. PUNCTATA L, sp pl 401. B 1:195. Ckil W 5:11.
S. PARVIFOLIA P 3:116.
S. RADULINA P 3:308.
S. RHOMBOIDEA P 3:343.
S. RANUNCULIFOLIA Hook. B 2:445. A 1:326 as *Therofon* elatum. B 1:196 as *Boykinia occidentalis*.
S. REFLEXA Hook, Fl 1:249 t 86. Br 1:203 Cruz. A 1:326.
S. TOLMEI T & G Fl 1:567. B 1:195.
S. VIRGINIENSIS Boland Cat 11. B 1: 194. P 1:286 as *Californica*. A 1:326.
SCABIOSA L, syst ed 1 (1735).
S. ATROPURPUREA L, sp pl 100. Vasil, Z 1:86, "naturalized in mts north of Pescadero," etc. = *maritima* fide IK. M 3:77.
S. MARTIMA L. Cent Pl 2:8.
SCANDIE L, syst ed 1 (1735).
S. FECTEN-VENERIS Dod, Pempt 689; L, sp pl 256. P 1:270 as naturalized in Napa valley, Cal.
SCHEUCHZERIA L, syst ed 1 (1735).
S. PALUSTRIS L, sp pl 338. B 2:199.
SOBINUS L, Gen, ed 1, 358 (1737).
S. WOLLE L, sp pl 388. B 1:109. cult.
SCHISTIDIUM B 2:377 as *Grimmia*.
S. APOCARPUM Bruch & Schimp. B 2: 377 as G: a.
S. CONFERTUM Bruch & Schimp, Bry Eu t 232. B 2:377 as G: c.
S. SUBSESSILE Bridel. B 2:361 as *Pottia* s.
SCHIZOCARBYA Spach, Nov Ann mus Par 4:325 (1835). = *Gaura* fide IK.
S. MICRANTHA Spach, lc, 382. B 1:234

as G: *parviflora*.
SCLEROCARPUS Jacq, Ic Pl Rar t 176 (1782), et act Helv 9:34 t 2 (1787).
S. EXIGUUS Smith, in Rees Cyc 31: N3. B 1:360 as *Madia filipes*.
SCLEROCHLORA Beauv, Agrost 97 (1812).
S. CALIFORNICA Munroa, Bth 342. B 2:309 as *Atropis* C.
S. PROCUMBENS Beauv. B 2:309 as *Atropis* p.
SCLEROPODIUM (Moss).
S. CASSETOSUM Bruch & Schimp. B 2:414 as *Hypnum* c.
S. ILLECEBRUM Schimp, Bry Eu t 557. B 2:415 as *Hypnum* l.
SCHEMALTZA Desvaux.
 Turpinia et Lobadium Raf. Gifts 1:128.
S. AFFINIS Gifts 1:135. Ut.
S. ANISOPEYLLA Gifts 1:136.
 "Dwarf, stout rigid sh-branched desert shrub; twigs for 2 seasons puberulent, afterwards gray, glabrate; foliage at least half-grown at fig time, sm. distinctly trifoliate but lateral lfts sm and degenerate, never — to each other in size, the largest not half the size of the terminal, this obovate-cuneiform, lightly 3-lobed and obtusely so; sm round capitate spikes many; bracts transverse-rugose in the middle, only minutely and obscurely ciliate."—Gifts 1:136. Panamint mts, Cal.
S. ANOMALA Greene.
 "Growing twigs soft-pubescent with sh mostly deflexed hairs; foliage large, as nearly quinate as that of *S. quinata*, more or less densely soft-pubescent on both faces; terminal lft of deltoid-ovate cut, 1½' lg and as wide, incisedly cleft into 3 seg all doubly crenate and obtuse; lateral lfts doubly crenate: inf seem'gly a panicle of alt divaricate sh spikes; bracts villous-tomentulose from base to summit but not ciliate: immature fr densely wavy-granular and sparsely soft-bristly."—Gifts 1:139. Butte Co, Cal.
S. AROMATICA Small. Gifts 1:129.
S. ARENARIA Gifts 1:130. Ind.
S. BAKERI Gifts 1:132. Colo.
S. BOTRYOIDES Gifts 1:138. Ar.
S. CISSODES Gifts 1:136. Ar.
S. COGNATA Gifts 1:141. Colo.
S. CSATAGIFOLIA Gifts 1:130. Vt.
S. CRENATA Gifts 1:128 based on *Toxicodendron* c (Mill, Dict n 5). Hhus suaveolens Ait Kew 1:368. Ga.
S. CRUCIATA Greene.
 "Rigidly and divergently branching, growing twigs pubescent: lvs dark g but glaucescent above, lighter beneath yet not there glaucescent, pubescent along the veins, upper face merely scaberulous: terminal lft 1' lg and same breadth in middle, somewhat cruciform above the abruptly cuneate base, showing 3 broad lobes, laterals divaricate, all more or less crenate-toothed or lobed; lateral lfts round-obovate, crenate: bracts of spike pubescent only at base, naked margin subscarious: fr waxy-granular, glab."—Gifts 1:139. SD. Co.
S. ELEGANTULA Gifts 1:136. Ar.
S. EMORYI Gifts 1:133. NM: Ar.
S. FORMOSA Gifts 1:131. III.
S. GLABRATA Gifts 1:132. So. Dak.

E. GLAUCA Gifts 1:138. Durango, Mex.
E. GLOMERATA Gifts 1:140. Id.
E. HEDERACEA Gifts 1:135. Nev.
E. HIRTELLA Gifts 1:137. Ar.
E. ILLINOENSIS Gifts 1:131. Ill.
E. LANSIOCALPA Gifts 1:141. Kans.
E. LANIOCALPA Gifts 1:133. NM. . . .
E. MALACOPHYLLA Greene.

"Branches rather stout, soft-pubescent for 2 seasons: lvs of a rather light g. villous-pubescent on both faces; terminal lft 1' fully as broad in middle above the more or less sharply cuneate base, 3-lobed, terminal lobe with 3, each lateral with 2 broad obtuse teeth or lobes; lateral lfts half as large, round-oval or obovate, crenate-lobed around summit; spikes paniced at ends of branches: bracts tomentose across base, at apex glab, even as to margin: fr sm'ish, blabose, sparsely hirsute."—Gifts 1:138. LA.

E. NORTONI Gifts 1:132. Kans.
E. OREGANA Gifts 1:140. Ore.
E. OXYACANTHOIDES Gifts 1:134. Colo.
E. PULCHELLA Gifts 1:134. Tex.
E. PUNCTICULATA Gifts 1:137. Ar.
E. QUERCIFOLIA Gifts 1:141. Kans.
E. QUINATA Gifts 1:139 based on *Rhus trilobata* var: q (Jepson, Er 1:141).
E. RACEMULOSA Gifts 1:142. Ar.
E. SABULOSA Gifts 1:135. Tex.
E. SCABERULA Gifts 1:138. Son.
E. SEROTINA Gifts 1:131. Mo.
E. SERRATA Gifts 1:129. NY., Canada. north.

E. SIMPLICIFOLIA Gifts 1:135 based on *Rhus Canadensis simplicifolia* (Greene, T cl b 16:13).
E. STRAMINEA Greene.

"Growing twigs puberulent; also foliage, but this not strongly so, glaucescent above, more so beneath: terminal lft 3-lobed and lobes crenate; laterals crenate: fls not y, only pale straw-color; bracts pubescent at base only, above glab and with margin not only naked but scarious: fr?"—Gifts 1:139. Along Lyttle Creek, LA Co.

E. SUBPINNATA Gifts 1:133. Colo.
E. TRIDOPHYLLOIDES Gifts 1:141. Okl.
E. TRILOBATA (Nutt) Gifts 1:132. Colo.
E. TRINERVATA Gifts 1:137. Ar.
SCHMIDTIA Trott, Fl Austr 1:12 t 451 (1811).

E. UTRICULOSA Sternb, Fl 2:6. B 2:267 as *Coleanthus*, *subtilis*.

SCHROENOCRAMBE P 3:127.

E. LINIFOLIA P 3:127.

E. PINNATA P 3:127.

E. PYGMAEA P 3:128.

SCHOENOLIRION Durand, Phil ac J, sr 2, 3:103 (1855).

E. ALBUM Dur, lc. B 2:159 as *Hastingsia alba*.

SCHROENUS L, Coroll Gen 2 (1737).

E. NIGRICANS L, sp pl 43. Ab 72.

SCHIZOCOTUS G 12:66 (1876). P 2: 65-67 as *Solanoa*.

E. PURPURASCENS G. B 2:463. P 2:65 as *Solanoa p.*

SCHOLLERA Schreb.

SCHOLLERA GRAMINIFOLIA Willd. B 2:187. = *Heteranthera graminea* fide IK.

SCHUBERTIA Mirb. = *Taxodium*.

E. SEMPERVIRENS Spach. B 2:116 as *Sequoia s.*

SOLLERA L, syst ed 1 (1735).

E. ASSOLENTA Ker-Gawl, bot mag t 1574. B 2:158. = *Camassia Fraseri* fide IK.

Genus **SCIRPUS**. Linnaeus.

Ann or per oft rush-like sedges with lfy sts or lvs reduced to basal sheaths: spkt terete or somewhat flattened, solitary, capitate, spicate or umbellate, com subtended by a 1-several-lvd inv: scales spirally imbricated, com all fertile or lowest sometimes empty: fls perfect: perianth of 1-6 bristles or sometimes 0; sta 2-3, sty 2-3-cleft, not swollen at base, wholly decid from the ak or its base persistent as a subulate tip: ak triangular, lenticular or plano-convex. Bulrush.

S. AMERICANUS Pers. Ab 67. LA SD.

Per by lg rt-stock; sts sharply 3-angled, with concave sides, erect, 3-12 dm hi; lvs 1-2, nar'y linear, sh'er than st, keeled; inv bract solitary, lf-like, 4-10 cm lg; spk appearing as lf lateral sessile in capitate clusters of 1-7, acute, 8-16 mm lg; scales broadly ovate, brown, oft emarginate or shar'y 3-cleft, midvein extended into a sub-itate awn, margins scarious, ciliate or glab; bristles 2-6, retrorsely barbed, sh'er than or equaling ak; sty com 2-cleft; ak obovate, plano-convex, smooth, dark brown, mucronate.

Synonymy: *S. pungens* Vahl.

S. ACICULARIS L. B 2:221 as *Eleocharis a.*

S. AFUS G 10:78. B 2:224 as *Fimbristylis a.*

S. ATROVIRENS Pers. Ab 69. B 2:219.

Per by slender rt-stocks; sts 3-angled, rather slender, lfy, 6-12 dm hi; lvs elongated, nodulose, rough on margins, 6-12 mm wide, 1-2 com exceeding inf; inv lvs com several, unequal, the longer equaling or exceeding rays; umbel 1-2-compound or rarely simple; spkt ovoid-oblg, acute, densely capitate in 6's-20's at ends of rays or raylets; scales g'ish-brown, oblg, acute, midvein excurrent; bristles 6, retrorsely barbed above, naked below, about equaling ak; sty 3-cleft; ak oblg-obovoid, 3-angled, pale brown, dull.

S. BADIUS Presl, Rel Haenk 1:193. B 2:218 as *pungens*.

S. CALIFORNICUS Britton. Ab 63.

Much resembling *Scirpus lacustris* occidentalis in habit and size; sts obtusely 3-angled; inv bract very sh, stoutly subulate; umbel compound; spkt 6-10 mm lg, oblg; scales brown, ovate, awn-pointed by excurrent midvein; bristles sh'er than ak, rather stout, strongly ciliate at least below; sty 2-cleft; ak obovate, plano-convex, nearly w or brown, nar'd above into a sh point, contracted at base, 1-1.3 mm broad *Scirpus Tatora* Kunth.

S. CAPILLARIS L. B 2:224 as *Fimbristylis c.*

S. CANNATUS G 7:392. B 2:217

S. CERNUUS Vahl. Ab 67. LA, SBar.

Sta tufted from fibrous rts, slender, 5-20 cm hi, sheathed at base; upper

sheath bearing a sh slender lf; inv bract slender, 2-20 mm lg; spkt solitary, ovate to oblg-ovate, 3-5 mm lg; scales brownish with a pale midvein, concave; bristles 0; sty 3-cleft; ak 3-angled-obovoid, the sides convex, smooth or somewhat granular, dark brown, scarcely 1 mm lg. *Scripus riparius* Spreng.

S. ORNITHOGALUS G 7:392. B 2:219.

S. LACUSTRIS Linn.

B 2:217.

Variety **OCCIDENTALIS** S. Watson.

Da 18. Ab 68.

"Tule," com along streams.

Sts stout from creeping rt-stocks, terete or rarely obscurely 3-sided, 1-3 m hi, lfless or basal sheaths bearing a sh nearly terete lf; inv bract stout, sh'er than inf; spkt num, scattered or more or less clustered in an irreg compound umbel, oblg-ovoid, 6-10 mm lg; scales broadly ovate, obtuse, com pubescent; bristles 6, equaling or longer than ak, slender, retrorsely barbed; sty 2-cleft; tk obovate, plano-convex, abruptly mucronate, grayish.

S. LENTICULARIS T. Cyp 328. B 2:219 as sylvaticus var: *digynus*.

SCIRPUS MARITIMUS Linn.

L. sp pl 51. B 2:218. Da 18. Ab 68 as robustus.

S. MICRANTHUS Vahl, Enum 2: 254. B 2:220 as *Hemicarpha subquarrosa*.

S. MICROCARPHA Presl, Rel Haenk 1: 195. B 2:219 as sylvaticus var: *digynus*. Ha 65. Ab 69. Pasadena (McClatchie).

Per; sts 6-12 dm hi, rather stout; lvs rough-margined, exceeding st; the longer inv lvs usually exceeding inf; umbel 1-2-compound; spkt 3-25 together in capitate clusters at ends of com spreading raylets, ovoid-oblg, 3-4 mm lg, acute; scales brown, with a g midvein, blunt or subacute; bristles 4, barbed nearly or quite to base, somewhat longer than ak; sta 2; sty 2-cleft; ak oblg-obovate, nearly w, plano-convex or with a low ridge on back, pointed.

S. NEVADENSIS Wat, bot King 360. B 2:217.

SCIRPUS OLNEYI A. Gray.

G. Bost J nat hist 5:238. B 2:218. Da 18. Ab 68.

Per by lg stout rt-stock; sts stout, 6-25 dm hi; sharply 3-angled with concave sides; lvs 1-3, 3-12 cm lg, or sheaths sometimes lfes; inv bract stout, erect, 1-3 cm lg; spkt appearing as if lateral, capitate in dense clusters of 5-12, oblg or obovoid-oblg, obtuse, 5-8 mm lg; scales oval or orbicular, dark brown with a g midvein, emarginate or mucronulate, glab; bristles com 6, slightly sh'er than or equaling ak, retrorsely barbed; sta 3; sty 2-cleft; ak obovate, plano-convex, brown, mucronate.

S. PALUSTRIS L. sp pl 47. B 2:222 as *Eleocharis p.*

S. PACIFICUS M 4:48.

S. PARVULUS Roem & Sch, syst 2:124. B 2:221. =nanus fide Ik.

S. FAUCIOLATUS Lightf, F 1 Scot 2: 1078. B 2:221 as *Eleocharis p.* Parish. Er 3:59 Bear.

S. PSEUDOTRIQUETUS Steud, Syn. Pl Cyp 86. B 2:218 as *Tatora*. =*riparius* fide Ik.

SCIRPUS PUNGENS Vahl.

Er 1:217 Rosa. B 2:218, s. Ab 68 s.

S. PYGMAEUS G 7:392. B 2:217 as *riparius*. = *cernuus* fide IK.

SCIRPUS RIPARIUS Spreng.

Syst 1:208. Da 18. P 1:93 Mig, 208

Cedros. B 2:217, 218 s. Ab 67 as *cernuus*.

S. ROBUSTUS Pursh, Fl 1:56 Ab 69. B 2:219 s. = *maritimus* fide IK.

Per by large rtstocks; sts stout, sharply 3-angled with flat sides, smooth, 6-15 dm hi; lvs equaling or exceeding st, smooth, 5-10 mm wide, midvein prominent; inv lvs 2-4, elongated, erect, similar to those of st, often 3 cm lg; spkt in a dense, oft compound terminal cluster of 6-20, ovoid-oblg, obtuse or subacute, 16-24 mm lg, 8-10 mm broad; scales ovate, brown, puberulent, lacerate or 2-toothed, midvein excurrent into an at length reflexed awn; bristles 1-6, sh'er than ak, or o; sty 3-cleft; ak compressed, flat on the face, convex or with a low ridge on back, obovate-orbicular, dark brown, shining, 3 mm lg.

Synonymy: *S. maritimus* B 2:218 not L.

S. BOTTLII Hoppe. B 2:218 as *pungens*.

S. SAVII Sebast & Mouri, Fl Rom Prod 22. B 2:217 as *riparius*.

SCIRPUS SETACEUS Linn.

L. sp pl 49.

Variety *Boeckeler*, Linnaea 36:500 = *riparius* fide. B 2:217.

S. SUBQUARROSA Muhl, Desc Gram 39. B 2:220 as *Hemicarpha s.*

SCIRPUS SYLVATICUS Linn.

B 2:219.

Variety **ATROVIRENS** Boeck. B 2:219 as sp.

Variety **DIGYNUS** Borch.

B 2:219. Mc Clatchie, Er 2:78 Pasadena.

S. TATORA Kunth, Enum 2:166. Da 18.

B 2:218. Ab 69. = *Californicus*.

S. TRIQUETUS T, Pac Ry R 4:153. B

2:218 as *Olneyi*?

S. VALIDUS Vahl. B 2:217 as *lacustris*

SCOLIOPUS T, Pac Ry R 4:145 t 22

(1856).

S. NIGROVITUS T. Ic. B 2:180. Par 262 t.

M 3:74.

S. KALLII Wat 14:272. B 2:180.

SCOLOPENDRIUM P 4:107.

S. VULGARIS P 3:153.

SCORONELLA Nutt. Am phil sc tr ns,

7:426 (1841). = *Microseris* fide Ik.

S. BOREALIS P 2:19, based on "*Apargia*

borealis Bong, Veg Sitcha 146; *Leontodon*

boreale DC 7:102; *Apargidium* T &

G Fl 2:474.—Ripe ak ** leave no doubt

that it belongs to Nuttall's genus *Scor-*

zonella."

S. GLAUCA Nutt. Ic. = M: *leptosepala*

fide Ik.

S. LACINATA Nutt. Ic. B 1:424 as M: 1.

S. LEPTOSEPHALA Nutt. Ic. B 1:425

as M: 1.

S. NUTANS Hook, Lond J bot 6:253. B

1:424 as M: n.

S. SYLVATICA Bth 320. B 1:424 as M:

s.

Genus **SCROPHULARIA** Tournefort.

Per strong-smelling herbs, with mostly opp large lvs, and sm fls in terminal paniced cymes or thyrses: cx 5-parted, lobes mostly obtuse: cor irreg, tube globose or oblg, not gibbous or spurred

at base, limb 5-lobed, upper lobes longer, erect, lateral ones ascending, lower spreading or reflexed; sta 5, 4 anther-bearing, didynamous, declined, 1 sterile reduced to a scale on roof of cor-tube; anther-sacs confluent into 1; sty filiform; stig capitate or truncate; cap ovoid, septoidally dehiscent; sds rugose.

SCOTOPHYLLA CALIFORNICA Linnaea 2:585 (1827). Cov 169 cosa mts, etc. Ab 359. Ha 120. Br, Z 1:112 Cat. Jepson, Er 1:23 t 4 (tetralogy). B 1:552. Da 13. Par 348 t.

Sts erect, 1-2 m hi, glab below, above finely glandular-pubescent: lvs ovate, cordate at base, serrate or incised-serrate, 6-18 cm lg; fs about 8 mm lg; col dull r. Nev; Baja!

Type locality: "Ad portum St. Francisci."

Variety **FLORIBUNDA** Greene, Man 273:—"More slender; the herbage light g; lvs more sharply deeply and incisely toothed; branches of the panicles greatly elongated and remarkably fluxuous as well as very many-fid. Hills of the interior."

SCOTOPHYLLA GLABRATA Davidson.

"Per light g glab; the whole upper part of the pl studied with microscopic glands: sts slender, 2° hi, much branched; lvs ovate lanceolate, coarsely dentate, 1-1½' lg, acuminate at apex, nar'd at base, not prominently nerved, petioles ¼' lg; fs dull p in almost leafless thyrses averaging 6' in length; bractlets mostly opp, slender ascending; cx ovate, acute sh'er than tube; cor dull, p not contracted, upper lip erect, lobes rounded, sterile sta obovate p; cap ovate acute—Ar. Mt streams at Mescal at 4000-5000' alt. This sp is readily distinguished from all other Scotophyllariae by the shape of lf and total lack of hairs on any part of plant."—Da, SCA b 1:26 f 3.

S. NODOSA L, sp pl 619. Parry. Wyo 17. B 1:552, s.

SCOULERIA Hook. B 2:377 as Grimmia.

S. AQUATICA Hook, bot misc 1:33 t 13. B 2:377 as G: Scouleri.

Genus **SCOEENUS** Linnaeus.

Ours per herbs from rtstocks, with slender erect tufted sts and slender subterete basal lvs: inv bract erect appearing as a continuation of the st: spkts sessile in capitate lateral clusters, few fid: scales imbricated in 2 rows, lower ones empty, upper bearing perfect fs: perianth of 6 scabrous or pubescent bristles: sta 3; sty 3-cleft, not dilated at base: ak more or less 3-angled, with a very sh beak.

S. MEXICANA L. Ab 72.

Sts tufted, slightly compressed, slender, 5-7 dm hi; lvs rigid, subterete, channeled, rough on margins, shter than the sts; sheaths bk; inv bract 3-5 cm lg; spkts capitate clustered, ovate lanceolate, compressed, 6-8 fid; rachis zigzag; scales ovate, acute, compressed, keeled, very dark brown; bristles 6, unequal, dilated at base, barbed above, lger than ak; ak globose-oblig, 3-angled,

w and shining.

Arrowhead Hot Springs, near SB, Parish. Otherwise known in N Am only from Fla.

Genus **SCUTELLARIA** Linnaeus.

L, syst ed 1. A 1:286d.

SCUTELLARIA ANGUSTIFOLIA Psh. Pursh, Fl 2:412. B 1:603. Par 276. A 1:237d. Cov 176. Frazier mt. Ha 113. skull-cap.

Type locality: "On the river Kooskoosky," now the Clearwater, Idaho.

Variety **CANESCENS** G. B 1:603.

S. ANTIHEMINOIDES Bth, bot reg, sub t 1493 n 35. B 1:603. 2:477.

SCUTELLARIA BOLANDERI A. Gray. G 7:387. B 1:603. A 1:237d. Ha 113. Jepson, Er 1:12.

Abrams, Fl LA 341. Moist woods, El Mou'e (Davidson).

S. CALIFORNICA G syn Fl 2 (1):381. B 2:477. Par 276.

S. GALERICULATA L, sp pl 599. B 1:603.

S. LATRIFLORA L, sp pl 598. B 1:602.

S. NANA G 11:100. B 1:604.

S. RESINOSA Wat. B 1:603 as in part antirrhinoides.

S. SANHEDEMINSIS M 1:31. Lake Co., Cal.

S. VIARUM M 1:32 Sonoma Co., Cal.

S. SIPHOCAMPYLOIDES Vatke, bot Zeit 30:717. B 1:603 as angustifolia var. canescens G.

SCUTELLARIA TUBEROSA Benth. Lab 441. B 1:603. Ab 340. Da 14. Br 1:204 Cruz. Par 276 t. A 1:237d.

SEBASTIANA Spreng, Neue Entdeck 2: 118 t 3 (1821).

S. BILOCULARIS Wat 20:374. Baja.

S. TRECULIANA Muell Arg, DC 15 (2): 1181. B 2:72.

SEDUM Tourn Ex L, syst ed 1 (1735). A 1:327d.

S. BLOCHMANAE Eastwood. A 1:90 s.

S. COTYLEDON Jacq. Eclog Pl 1:27 t 17. B 1:212 as Cotyledon caespitosa.

S. DEBILE Wat, bot King 102. B 1:210.

S. DOUGLASSII Hook, Fl 1:228. B 1:210.

S. EDULE Nutt, T & G Fl 1:560. B 1:211 as Cotyledon e. A 1:92 fdr, as Stylophyllum e.

S. FORRERI P 1:158.

S. OBTUSATUM G 7:342. B 1:209, 2:446. Ab 184. A 1:165 s, 327d as Gormanina obtusata.

S. OREGANUM Nutt, T & G Fl 1:559. B 1:209.

S. PRINGLEI Wat 23:273. P 1:225 as Forreri.

S. PUMILUM Bth 310. B 1:210.

S. RHODANTHEUM G, Am J sci, sr 2, 33:405. Parry, Wyo 7.

S. RHODIOLA DC 1 Fr 4:386. B 1:209. = roseum Scop fide IK.

SEDUM SPATHULIFOLIUM Hook. Fl 1:227. B 1:209, 2:446. Ab 184. Par 170. A 1:93d.

S. STENOPETALUM Pursh, Fl 1:324. B 1:210. Parry, Wyo 7, 14. Ckll W 5:11.

S. VARIEGATUM Wat 11:137. B 1:210. Da 6. A 1:91 as Hasseanthus variegatus.

SARCOSTEMMA R Br. Wern sc mem 1:50 (1809).

S. XETROPHYLLUM E ex T, Pacific

Ry R 5:364. = *Phyllibertia linearis* fide IK.
S. LINEARE Decne in Bth 25. = *Phyllibertia linearis* fide IK.

Genus **SELINUM** Linnaeus.

A 1:270d.

- SELINUM CAPITELLATUM** B & H.
 Gen 1:319. B 1:265, 2:451. A 1:270, 271.
 See *Sphenosciadium capitellatum*.
 Oregon; Nevada; Jac (Parish 936).
 Stem square: fls dull p, 6-8 mm long.
S. DAWSONI Coulter & Rose. W 5:19. Yukon.
S. ERYNGIIFOLIUM P 2:102. Ha 99. Coulter & Rose, mon 128 (1900) as *Sphenosciadium* e.
S. GRAYI Coulter & Rose. W 5:19. Colo. (S. Gmelini Porter & Coulter.)
S. KINGII Wat, bot king 126. B 1:265.
S. PACIFICUM Wat 11:140. B 1:265.
S. TEREBINTHINUM Hook, Fl 1:266 t 95. B 1:266 as *Cymopterus terebinthinus* T & G.
SEMPERVIVUM Rupp ex L, syst ed 1 (1735).
S. TECTORUM L, sp pl 464. Eu. B 1:208.
SENEBIERA DC mem sc hist nat Par (1799) 140 t 8, 9.
S. DIDYMA Pers, syn 2:185. B 1:48.
S. PINNATIFIDA DC lc, 144 t 9. B 1:48.

Genus **SENECIO** Linnaeus.

- Ann or per herbs or shrubs, with alt or basal lvs, and solitary corymbose or paniculate many-fl'd hds of both tubular and ray-fls or only tubular, in ours y: inv cylindric or campanulate, its principal bracts in 1 sr, distinct or united at the base, com with some sh'er outer ones: receptacle flat or somewhat convex, mostly naked: rays when present pist: disk-fls perfect, 5-toothed: ak terete or those of marginal fls somewhat compressed, 5-10-ribbed, papillose, or canescent and com emitting a pair of spiral threads after wetting: pap copious, of w scabrous or smooth capillary bristles.
S. ACCEDENS P 3:105. Colo.
SENECIO AMMOPHILUS Greene. Cape San Quintin, Baja (Greene).
S. APLECTENS G, Am J sc sr 2, 33: 240. P 4: 119. Parry, Wyo 17.
S. ANACLETUS P 4:307 based on *Toluccanus* var. *microdontus* G, syn Fl 1 (2): 388. Colo. Mex. (S. *microdontus* Heller not Baker.)
S. ANDINUS Nutt Am, phil sc tr 7:409. B 1:414. Parry, Wyo 18. Nev. = *serra* Hook fide IK.
S. ARHANACTIS P 1:220 based on *syriaticus* B 1:410 (not L). SF.
S. ARENICOIDES DC 6:426. B 1:414.
S. ASTEPHANUS P 1:174. Obispo.
S. ATRATUS P 3:105, 169. Colo. Ut.
S. ATRIFLICIFOLIUS Hook Fl 1:332. P 3:182 as *Mesadenia atriplicifolia*.
S. AUREUS L, sp pl 870. B 1:411. Variety **MULTILOBATUS** G, B 1:411. Nev. Ut.
 Variety **BALSAMITAE** T & G. B 1:412. Ore.
 Variety **BOREALIS** T & G. B 1:412. Nev.
S. BERNARDINUS Greene.
 "Tufted per $\frac{1}{2}$ -1° hi, with hoary-tomentose herbage: crowded lvs of sh

- caudex subcoriaceous, persistent thru winter, glabrate, of round-obovate outline, seldom $\frac{1}{2}$ ' lg., on slender petioles of more than 1'; lower cauline cuneate-obovate, upper spatulate, all with a few coarse teeth at least at obtuse apex: hds nearly $\frac{1}{2}$ ' hi, 3-7 in a corymb; inv nearly cylindrical, its 12-15 rather broad lanceolate bracts flocose-tomentose: rays rather ample and showy y." — P 3:298. SBER mts, 6500° (S. B. Parish), distributed as Nev-Mexicanus.
S. BIGELOVII G, Pac Ry R 4:111. P 4: 117, 118. NM only.
S. BLITOIDES P 4:123. Colo.
SENECIO BLOCKMANAE Greene.
 "Tufted per; st erect, 3 or 4° hi, simple and lfy up to the fastigate-corymbose summit; herbage glab, heavily-scented: lvs linear-alfiform, entire, 2-4' lg, recurved or deflexed: hds cylindrical, $\frac{1}{2}$ ' hi or more; rays 5-8, light y; ak hoary with a sh strigulose pubescence: pap copious, very w and soft. Plentiful along the Santa Maria river, San Luis Obispo Co., Cal. Miss Blochman; flowering in O and N."—Greene, Er 1:7.
S. BOLANDERII G 7:362. B 1:411.
SENECIO CALIFORNICUS DC.
 DC 6:426. Ab 439. Da 10. B 1:410.
 Ann glab or becoming so, slender, 1.5-4 dm hi; lvs lanceolate in outline, varying from denticulate to pinnatifid, lobes sh, obtuse, all but lowest sessile and auriculate-clasping, 2.5-5 cm lg; inv 6-8 mm hi, its bracts nar; rays oblg, 6-8 mm lg, light y; ak canescent.
 SBar to Santos!
S. CANDIDISSIMUS P 4:110. Chih.
S. CANUS Hook Fl 1:333 t 116. Parry, Wyo 14. B 1:412. P 4:111.
S. CORTHAHOIDES P 4:122. Colo.
SENECIO CEDROSENSIS Greene.
 Greene, Cal ac b 1:194. P 1:205. Cedros Island (Greene).
S. CERNUUS G. P 4:118 as *putidus*.
S. CHLORANTHUS P 4:118. Colo.
S. CINERARIA DC 6:355. B 1:410. Dusty Miller, cult. Fu.
S. CLARKEANUS G 7:362. B 1:412.
S. CLEVELANDI Greene, Torr cl b 10: 87. Jepson. Er 1:12. Clear Lake, Cal.
S. COGATUS P 4:114. Colo.
S. COLUMBIANUS P 3:170. Brit Columbia.
S. COMPACTUS Kirk, New Zeal Inst tr 12:395 (1879). of Rydb = *densus*.
S. CONDENSATUS P 3:298.
S. CORDATUS Nutt. B 1:413 as *Iugens* var. *exaltatus*.
S. CORONOPUS Nutt. B 1:410 as *Californicus*.
S. CROCATUS Rydb, Torr cl b 24:299, based on *aureus* variety *croceus* G. P 4: 114 as a *nomen nudum*.
S. DENSUS P 4:226 (*compactus* Rydb, Torr cl mem 5:342, not Kirk).
S. DIMORPHOPHYLLUS P 4:109. Colo.
SENECIO DOUGLASSII DC.
 DC 6:429. B 1:411. Cov 139. Da 10. Ab 440. Greene, Cal ac b 2:404, Cruz.
 Suffrutescent, com about 1 m hi, branching from base, w'ish-tomentose or becoming glabrate; lower lvs pinnately divided into about 5 nar'ly linear lobes, uppermost entire, all with revolute margins; hds rather few, corymbose, 10-15

mm hi; rays light y, 10 mm lg; ak hoary with a sh pubescence.

Lake Co to Baja; CD! Neb.; Texas; Cruz.

SENECIO EURYCEPHALUS T-G.

T & G, Fl Fendl 109. Jepson, Er 1:13. Da 10. B 1:411. Cov 139.

Variety **MAJOR** G. Pac Ry R 4:111. M 1:118 as sp. B 1:411. Calaveras Co, Cal. **S. EXALTATUS** Nutt, Am phil sc tr, ns, 7:410. B 1:413 as lugens var. exaltatus. P 3:171.

Variety **UNIFLOSCULOSUS** G, Pac Ry R 4:111. B 1:414 as arnicoides.

S. FENDLERI G, Pl Fendl 108. P 4:112. Wyo—NM. Ckl W 6:11. B 1:411 sub aureus.

S. FILIFOLIUS Nutt, Am phil sc tr, ns, 7:414. B 1:411 as Douglasii.

S. FLAVULUS P 4:108. Colo.

S. FLOCCIFERUS DC 6:426. B 1:410. 434 as Malacothrix saxatilis (M: obtusa fide IK).

S. FRANCISCANUS P 2:19, Mt SF, Ar. **S. FREMONTII** G, Am ac mem, ns, 4:108, NM. P 4:122. B 1:412, 618.

Variety **OCCIDENTALIS** G, B 1:118. P 4:122 as sp.

S. GIBBONSII P 2:20, mouth of Columbia.

S. GRACILIPES G. Peru.

S. GRACILIPES R & G, Am J sc, sr 3, 1:156. P 3:90 as Erechthites polypodioides. Mex.

S. GREENEI G 10:75. B 1:412. Napa Co, Cal.

S. HOLMI P 4:120. Colo, Wyo.

S. HOWELLII Greene, T cl b 8:98. P 4:111 as Purshiana. = canus fide IK.

S. HYDROPHILUS Nutt, T & G Fl 2:440. B 1:414.

Variety **PACIFICUS** P 1:220, SF. M 3:78.

SENECIO ILICETORUM Davidson.

A 1:65 fdr. Ab 439.

S. IMBRICATUS P 4:117. Alk.

S. INTEGERRIMUS Nutt, Gen 2:165. B 1:413.

S. INVENUSTUS P 4:124. Colo.

S. IONOPHYLLUS P 2:20. Kern Co, Cal.

S. LACTUCINUS Greene, Er 1:223, Wyo. P 4:121 (Colo = pagosanus).

S. LAETIFLORUS P 3:88.

S. LABAMENSIS A Nels, Torr cl b 26:483. P 4:111 as Purshianus.

S. LEMBERTI P 3:89.

SENECIO LEMMONI A. Gray.

Quintin (Or 134); Arizona (Lemmon). **S. LONGILOBUS** Bth 18. Mex. B 1:411 as Douglasii.

S. LUGENS Richardson, App Frankl 19, 20. Hook Fl 1:332 t 114. B 1:413. P 3:169.

Variety **EXALTATUS** B 1:413. Ore; Cal. (Eaton, bot king = var. foliosus.)

Variety **FOLIOSUS** G, B 1:413. Colo. Ut. **SENECIO LYONI** A. Gray.

Z 1:114. Cat.

San Clemente Island (Nevin & Lyon).

Quintin (Palmer).

S. MACCOUNTHI P 3:169. Vancouver Isl.

S. MAJUS M 1:118 (eurycephalus var. major G. Pac Ry R 4:111).

S. MENDOCINENSIS G 7:362. B 1:413.

S. MICRODONTUS Heller (vide anacletus).

S. MILLEFLORUS P 4:116. Colo.

SENECIO MOHAVENSIS A. Gray.

Mohave (Lemmon). Sonora (Pringle).

S. MUHLENBERGII Sch Bib, Fl 27:499.

P 3:182 as Mesadenia reniformis Raf.

S. MULTILOBATUS T & G, Pl Fendl 109.

B 1:411 as aureus var. M.

S. MUTABILIS P 4:113. Colo.

SENECIO NEO-MEXICANUS A. Gray.

N. M.; Arizona; SBer mts (Parish).

S. NEWCOMBII P 3:249.

S. NUTTALLII Sch Bib Fl 27: 499. P 3:183 as Mesadenia plantaginea Raf.

S. OCCIDENTALIS P 4:122 (Fremontii var. occidentalis B 1:118).

S. OVINUS P 4:110. Alberta.

S. PAGOSANUS M 1:7 (lactucinus P 4:121 (not Er 1:223)).

S. PALMERI G 11:80. P 4:111, Guad.

SENECIO PARRYI A. Gray.

SBer mts; Arizona; Mexico.

SENECIO PENINSULARIS Vasey-Rose.

Quintin, (Palmer 659).

S. PETRAEUS Klatt, Abh Nat 15:330. P 3:171.4: 110, 116.

S. PETROCALLIS P 4:116, based on petraeus Klatt. Rocky mts.

S. PETROPHILUS P 3:171; 4:116 as petrocallis.

S. POLYPODIOIDES P 3:90 based on gracilipes R & G not G (= Erechthites, fide P 3:90).

S. PORTERI P 3:186 (renifolia Porter, Fl Colo 83, not Sch Bib, Fl 28:50).

S. PUDICUS P 4:118 (cernuus G, not L). Rocky mts.

S. PURSHIANA Nutt, Am phil sc tr 7:412. P 4:111, Wyo, Colo.

S. REGIOMONTANUS DC 6:429. B 1:411 as probably Douglasii.

S. RENIFOLIUS Sch Bip, Fl 28:50 (1845), Caucasus. Porter Fl Colo 83 (1874) = Porter! P 3:186.

S. RIDDELLII T & G Fl 2:444. B 1:411 as Douglasii.

S. RUBRICAULIS P 3:89.

S. RUSBYI Greene, Torr Cl b 9:64 NM. P 4:118. M 4:80.

S. SCALARIS P 4:108. Chih.

S. SCOPULINUS P 4:117 (Bigelovii var. Hallii G. Phil ac pr 1863: 67). Colo.

S. SCORZONELLA P 3:90.

S. SERIDOPHYLLUS P 4:121. Nev. Ut.

S. SERRA Hook.

Variety **INTEGRUSCULUS** G, Syn Fl 1 (2): 382 (1884). M 3:62 SBER mts.

S. SOLDANELLA G, Phil ac pr 1863: 67. P 4:119.

S. SPARTIOIDES T & G Fl 2:438. B 1:411 as Douglasii.

S. SPATULIFOLIA K 1:56. Cur 1:140 as Layneae Greene.

S. SPHAEROCEPHALUS P 3:106, 169. Nev.

SENECIO SYLVATICUS Linn.

L, sp pl 868. B 1:410. Eu.

S. TARAXACOIDES P 4:119. 120 (amplectens var. t, G, Phil ac pr 1863: 67, in part). Colo.

S. TOUMBEYI P 3:349. Ar.

S. TRIANGULARIS Hook Fl 2:332 t 115. B 1:414.

S. TRIGONOPHYLLUS P 3:107. Cal.

S. VALERIANELLA P 4:109. Id.

SENECIO VULGARIS Linn.

Ann. puberulent or glabrate; sts slightly fleshy, 1-3 dm hi, more or less

branched; lvs clasping at base, pinnatifid, lobes and sinuses sharply toothed; hds 7-9 mm hi; bracts bk-tipped; rays 0; ak slightly canescent.
Br 1:203, Cruz. B 1:410. Da 10, Er 1:60 LA Co. Eu. Ab 439.

S. WALTERI Sch Bip, Fl 27:499. P 3: 182 as *Mesadenia ovata* Raf.
S. WARDII P 4:116. Ut.
S. WERNERIANIFOLIUS G 19:54.
P 4:111 sub *Purshianus*.
S. WEIFFLEIANUS G 19:54. M 1:118 as major.

Genus SEQUOIA Endl.

Endl. Syn Conf 197 (1847).
SEQUOIA GIGANTEA Decaisne.
Bot sc France b 1:71. B 2:117.

Giant Sequoia. Estimated to have attained a life period of four or five thousand years. 800-400' high, 80-40" in diam.

SEQUOIA SEMPERVIRENS Endl.
Syn Conf 198. B 2:116.

Redwood. A famous tree, growing near the coast only from Monterey bay to the Oregon boundary.

S. WELLINGTONIANA Seem, in Bonpl 3:27. B 2:117 as gigantea.

Genus SERICOCARPUS Nees.

Gen et sp Aster 148 (1833).

S. OREGONENSIS Nutt, Am Phil sc tr, ns, 7:302. B 1:320 as rigidus ("the state with rays conspicuous").

S. RIGIDUS Lindl, DC 5:261. B 1:320.

S. TOMENTELLUS P 1:283. 2:16 as *Aster brickelliioides*. P 3:55 as *Eucephalus* t.

Type locality: near Waldo, Ore.

SERICOGRAPHIS Nees, in Mart Fl Bras 9:107 (1847).

S. CALIFORNICA G, bot Mex bound 125. B 1:589 as *Beloperone Californica*.

SELENIPERIUM Reichb f, Bonpandia 2:116 (1854).

S. CAUDATUM Reichb, lc, 2:116.

Variety **WALSCWICZII** Z 1:128.

SERRAFALCUS Parl, Rar Pl Sic 2:14 (1840); Pl Nov 75 (1842). = *Bromus* fide IK.

S. MOLLIS Parl, Fl Ital 1:395. A 1:44 as B: hordeaceus L.

SERRATULA Dill ex L, Syst ed 1 (1735).

S. NOVEBORACENSIS L, sp pl 818. Er 1:3. = *Vernonia* n fide IK.

S. FILOSA Ait Hort Kew ed 1, 3:138.

M 1:6 s. = *Liatris spicata*.

SESELI L, Gen, ed 1, 80 (1737).

S. LHYOCARPUM Hook, Fl 1:262 t 93. B 1:268 as *Peucedanum* l.

S. TERNATUM Pursh, Hook Fl 1: 204 t 94. B 1:268 as *Peucedanum* t.

Genus SESUVIUM Linnaeus.

Sts prostrate or decumbent, fleshy with opp exstipulate lvs: fls solitary in the axils, sessile or on sh stout pedicels: cx-tube turbinate, free from the ova, lobes 5, oft p within, oblg, obtuse: pet 0; sta 5-many; fl united at base into sets: ova 3-5-celled, with as many sty: cap membranous, ovate-oblg, circumscissile at the middle: sds many, minute, smooth. Sea purslane.

SESUVIUM PORTULACASTRUM Linn. Rohrbach in Mart Fl Bras 14 (2): 310 t 70. B 1:261. Da 7.

Of wide distribution in So Cal.

S. SESSILE Pers, syn 2:39. A 1:168d.

Ab 139. = *portulacastrum* fide IK.

SITABIA Beauv, Fl Owar 2:80 (1807).

S. CALIFORNICA K 1:27. Cur 1:150.

"probably not indigenous." B 2:261.

S. CAUDATA R & S, syst 2:495. B 2: 261. (Da 31 = *Chaetochloa imberbis*

fide A 2:416.) = *setosa* fide IK.

S. GLAUCA Beauv Agrost 51 (1812). B

2:260. Da 18. A 2:416 as *Chaetochloa*

glauca.

S. ITALICA Beauv, Agrost 51. B 2:260.

S. IMBERBIS R & S, Syst 2:89. A 2:

416 as *Chaetochloa* l.

S. VIRIDIS Beauv, Agrost 51. B 2:261.

SEUBEETIA Kunth, Enum 4:475

(1843). = *Brodiaea* fide IK.

S. GROEHA Wood, Phila ac pr 1868, 172.

B 2:155 as *Brodiaea* c.

S. LAXA Kunth, En 4:475. B 2:155 as

Brodiaea l.

SEEPHERDIA Nutt, Gen 2:240 (1818).

S. ARGENTEA Nutt, Gen 2:240. B 2:62.

Parry, Pl Wyo 9. Br, Colo 227, 229.

Eastwood, Er 4:32, SBar to Kern Co,

Cal.

S. CANADENSIS Nutt, Gen 2:241. B 2:

63, Ore, NM.

S. ELAEAGNOIDES Nutt, Phila ac pr

7:50. B 2:62 as *argentea*.

S. ROTUNDIFOLIA Parry, Am Nat 9:

350. B 2:63, Ut.

SEORTIA T & G, Am J sc 1, 42:48

(1842); sr 2, 45:402 (1868).

S. CALIFORNICA Nutt in garden cata-

logs = *Actinolepis coronaria* G, fide B

1:378.

Genus **SIBARA** Greene.

P 3:11.

"Slender, erect, sparingly branching

glaucous annuals, with leaves usually

pinnately divided into very narrow di-

varicate or retrorse segments. Fls

white or purplish, small, loosely ra-

cemose. Sepals oblong, equal at base,

or nearly so. Petals unguiculate, the

ample limb spreading. Filaments flat-

tened; anthers linear-sagittate. Pods

slender, little compressed, either dis-

tinctly beaked or the stigma sessile.

Seeds oval, not winged or margined."

—Greene, pitt 3:10 (1 My 1896).

S. ANGELOBUM P 3:11.

S. BRANDEGEANUM P 3:11.

SIBARA FILIFOLIA Greene.

P 3:11. A 1:6 fdr.

S. LAXA P 3:11.

S. PALMERI P 3:12.

S. PECTINATA P 3:11.

SIBBALDIA L, sp pl ed 1, 284 (1753).

= *Potentilla* fide IK.

S. PROCUMBENS L, sp pl 284. B 1:

180. = P: *Sibbaldi* fide IK.

Genus SIDA Linnaeus.

Ours low y'ish scurfy-tomentose per

herbs: pedicels articulated: inv of 1-3

slender decid bractlets: fls cream-color:

carpels 1-seeded, indehiscent or 2-

valved: sds pendulous.

SIDA HEDERACEA A. Gray.

Sts from deep-seated tap-roots, decumbent, more or less branching, $\frac{1}{4}$ -1" lg; lvs round-reniform or ovate, dentate or serrate, $\frac{1}{4}$ -2" broad, on petioles $\frac{1}{4}$ -1" lg; fls pedicelad, axyl, solitary or in sm clusters; cx-lobes acuminate; pet $\frac{1}{4}$ " lg; carpels 6-10, triangular, attached by a straight edge to the slender axis. Abundant in subsaline soils thruout the Sacramento valley. SD; San Gregorio, Baja, CD.

Type locality: "In the interior districts of the Columbia," probably in Ore. Malva hederacea Douglas, MS, in Hooker, Fl 1:107 (1830).

S. CALIFORNICA Nutt in T & G Fl 1: 235. B 1:84 as Sidalcea humilis.
S. CRISPA L, sp pl 685. T & G Fl 1: 235. B 1:87 as Abutilon crispum.
S. ELLIOTTI T & G Fl 1:231. Z 1:271.
S. DELPHINIFOLIA Nutt in T & G Fl 1:233. B 1:84 as Sidalcea humilis.
S. DIFFUSA HBK, Nov Gen et sp 5:257. Baja: Comondu (Br).

S. HEDERACEA Tin G, Pl Fendl 23. B 1:86. Da 3. Ab 249.

S. MALVAEFLORA DC; Lindl bot reg t 1036. B 1:83 as Sidalcea m.

S. OBLIQUA Nutt. T & G Fl 1:233. B 1: 87 as hederacea.

S. TRAGLAEFOLIA G, Bost J Nat hist 6:164. Comondu, Baja (Br).

S. XANTI G. Z 1:271. Baja: Cape San Lucas; Purissima (Br.)

Genus SIDALCEA A. Gray.

Erect ann or per herbs with mostly palmately or pedately parted or deeply cleft lvs, sm stipules, and p or pink or sometimes w rather showy fls in terminal racemes or spk, not rarely polygam by abortion of anth: Inv rarely 0: cx 5-cleft: pet 5, com emarginate or truncate: stamineal column com distinctly double, the outer sr of 5 distinct 4-10 anth-bearing phalanges, the inner or terminal sr of about 10 mostly 2-ant-bearing phalanges: carpels 5-9, reniform, indehiscent. 1-seeded.

S. ASPLENIFOLIA P 3:158.
S. ASPHALLA Greene, Cal ac b 1:78 (7 Mr 1885).

"Deep g; roughish thruout with a sh stellate pubescence: sts several, simple, decumbent, leafy up to slender raceme: lvs 2-3" wide, truncate at base, or with a broad sinus, lightly 5-lobed, the broad lobes each with about 5 rounded teeth: divisions of cx triangular-lanceolate, acute: cor p, 1" lg, its lobes truncate, erose; carpels large, transversely rugose, depressed. On bushy hillsides of the lower Sierras, just below the habitat of Chamaebatia; apparently not collected before last season; found by Mrs. Curran in El Dorado Co, and by the writer on Mr. John Ramm's ranch, near Comptonville, in Yuba Co. Peculiar, at least among the per sp, in having its lvs all of precisely the same shape, the lowest and the uppermost differing only in point of size. The rough pubescence is likewise very characteristic."

S. CAMPESTRIS Greene, Cal ac b 1:76 (7 Mr 1885):

"Bristly hairs of st abundant, forked from the very base and deflexed: lvs

soft beneath with a stellate pubescence, which becomes dense on pedicels and cx: sts slightly decumbent at the very base, otherwise strict, 2-3" hi, simple: lower lvs orbicular, about 9-lobed, the lobes cuneate-obovate, 3-cleft at apex; middle and upper 7-9-parted, their seg with 3-5 linear, somewhat spreading lobes: racemes sh: pet emarginate, 1 lg, deep lilac-p: cx-lobes ovate, lg acuminate: carpels not seen."

Type locality: "Ore," dry prairies (T. J. Howell).

S. CANDIDA G. Ckl w 5:10. Colo. S. HICKMANN P 1:139, Monterey Co, Cal. Parish 3786.

SIDALCEA DELPHINIFOLIA Ge. G, Pl Fendl 19. Da 3. B 1:84 as humilis. Ab 248 as malvaeflora.

Variety HUMILIS Greene.

Davidson, Pl LA Co 3.

S. DIPLOCOYFRA G, Pl Fendl 19.— B 1:84.

Greene, Cal ac b 1:79.—"Pubescent with lg, spreading hairs: 1 or 2" hi: lvs deeply 5-9-cleft, with sharply lobed seg: fls in umbellate clusters, their pedicels subtended by 5-7-parted, linear, hispid bracts: cx-lobes lg-acuminate: pet 1" lg, emarginate: fl of outer sta united into broad, membranaceous lobes, which com enclose the inner anth: carpels glab, transversely rugose, the back with a central, longitudinal channel." Lake Co, Cal.

Variety MINOR Gray.

Greene, Cal ac b 1:80.—"Differs remarkably from type in having racemose infl, and pet marked by a dark p spot at base."

S. GLAUDESCENS Greene, Cal ac b 1: 77 (7 Mr 1885):

"Minutely stellate-pubescent, and somewhat glau thruout: sts num, decumbent, 2" hi, rather slender: lvs, even the lowest, palmately 5-7-parted, cuneate divisions 3-5-lobed or -toothed, or those of uppermost entire; raceme simple, loose. Ar. mts of NM, Colo, Mex, So Cal ly fld: divisions of ex attenuate-acuminate most only truncate: reticulations distinct and elongated lengthwise of carpels."

Type locality: "Sierra Nevada, at about 6,000' alt, and ranging from Mt. Shasta to Kern Co. Very common about Summit station, in the neighborhood of Donner Lake."

S. HARTWEGI G, Pl Fendl 20.—B 1:84.

Greene, Cal ac b 1:78: "Glab, except the pedicels and cx, which are hispidly pubescent: st 1-3" hi, mostly simple, lvs orbicular, lowest deeply cleft, upper digitately 5-9-parted: seg linear, entire, acute: spk com sh and dense: cx-lobes acuminate: carpels strongly reticulate, hispid above. Common in the Sacramento valley," Cal.

S. HIRSUTA G, Pl Wright 1:16. B 1:84 as Hartwegi.

S. HUMILIS G. Pl Fendl 20. B 1:84 Greene, Cal ac b 1:76.—"Hispid-hirsute especially on pedicels and cx: sts stout, ascending, simple, about 1" hi: radical lvs round, with open sinus; cauline 5-7-parted, their seg obtuse, 3-lobed at apex: raceme lg and loose: pet ob-

cordate, fully 1' lg. rose-p: pedicels stout: cx large, enclosing about 7 large, much depressed, distinctly reticulated carpels." Cal.

Ab 248 as malvaeflora.

S. HYDROPHILLA M 1:107.

SIDALCEA INTERRUPTA Greene.

"Size of S: ranunculacea, much more slender, apparently also rhizomatous, st and petioles loosely pilose with firm spreading hairs; herbage deep-g, but cut of the lvs much as in S: ranunculacea; fis much sm'er, in elongated and oft interrupted spikes, or even with solitary fis scattered up and down below the terminal spicate cluster: pedicels and cx-tube stellate-pubescent only, but teeth of the latter pilose: fr much depressed, the nutlets nearly or quite glab, obviously tho not strongly reticulate."—Gifts 1:75. Hackett's Meadows, Cal, 8000°.

S. MALACHROIDES G 7:322. B 1:84.

Greene, Cal ac b 1:80.—"Stout, hirsute, 3-6' hi: lvs cordate, 2-5' broad, 3-7-angled with lobes sharply toothed; bractlets subulate, caducous; fis sm, w, nearly sessile in close racemose or spicate clusters: cx-lobes triangular, acute: pet narly obovate: carpels glab, not reticulate, the back showing a more or less distinct central ridge. Rather rare, along the coast from Mendocino Co to Santa Cruz, Cal."

SIDALCEA MALVAEFLORA A. Gray.

Pl Wright 1:16. Par 204 t. P 1:86 Mig Ab 247. Ckl w 5:10. Ha 95. Br 1:202 Cruz, 208 Rosa. B 1:83. 2:437.

Vide d sub hubilis.

SIDALCEA NEOMEXICANA A. Gray. (Parish 1747).

SIDALCEA NITROPHYLLA Parish.

A 1:28 fdr.

S. OREGANA G. Pl Fendl 20. Er 1:13.

Greene, Cal, ac b 1:77.—"Sparingly hirsute below, infi stellate-tomentose, other parts of plant glab: sts 1-5' hi, paniculately branched above: foliage as in S. campestris, but the seg nar'er ex globose in fr, its seg ovate to lanceolate, acute: cor ½" or more lg: carpels very sm for the genus, smooth and glab, not in the least depressed. Very com in Ore and northern parts of Cal. The largest sp, distinguished by its paniculately branching habit, and sm cx and carpels, the latter very straight, not depressed as in the other sp."

B 1:84 as form of malvaeflora.

SIDALCEA PARVIFLORA Greene.

Ab 248. A 1:28 fdr.

SIDALCEA PEDATA A. Gray.

Low scapes ascending, pedately 6-7 parted lvs rising from a tuberous-thickened rt; pet rose-p. 8-10 mm lg; carpels smooth, glab. Bear. G 22:288.

SIDALCEA RANUNCALACEA Greene.

"Sts 1-2' hi, mostly solitary, terminating a slender superficially seated horizontal rt-stock, retrorsely hirsute from the decumbent base to near the middle; herbage of a very light g, the lg petioles and upper part of st sparsely hirsute-hairy: lvs orbicular, the lowest 7-cleft and the seg with 2 or 3 obtuse lobes, the cauline more deeply cleft and their seg acutely 3-5-lobed, those near the spike 5-parted, the seg lance-linear, entire:

spikes very sh and dense, and fis rather large: cx and pedicels densely villous-hirsute: fr?—Gifts 1:75. Hackett's Meadows, Cal., 8600°.

S. SEPTANS P 3:159.

S. SCABRA P 3:158.

S. SPICATA Greene, Cal ac b 1:76 (7 Mr 1885):

"Equably hispid-hirsute thruout, the hairs simple and not deflexed, stellate pubescence sparse, mostly confined to under surface: sts 2' hi, strict and simple, or with a few branches above: lowest lvs orbicular, sinus nar or closed, lobes and teeth shallow and well rounded; cauline parted into 7, variously incised, or oft linear, entire seg: raceme sh, spicate-crowded: pet deeply notched, about ½' lg, pinkish: pedicels very sh: cx thin, very hairy, its lobes ovate, acute or acuminate: carpels sm, depressed, pubescent but not reticulate."

Type locality: "Cisco, Sierra Nevada, Cal, 1870. Dr. Kellogg." "Also from near Donner Lake, 1883, Mrs. Curran."

S. SULCATA Cur in herb.

Greene, Cal ac b 1:79 (7 Mr 1885).

"Glab below, sparsely hirsute above, especially on cx and pedicels; about 2' hi, sparingly branching: foliage as in S. tenella: cx-lobes ovate-lanceolate, abruptly acuminate: cor sm, light p: carpels evenly reticulate on sides, back striately so, or else (by disappearance of reticulation), longitudinally about 7-sulcate."

Type locality: "near Folsom in May, and on Sweetwater creek, El Dorado Co, Cal, in Je, 1884, by Mrs. Curran."

S. TENELLA, Greene, Cal ac b 1:7.—1:79: "Rough-puberulent, or nearly glab, glaucescent; slender and branching, about 1' hi: lvs sm, lowest orbicular, 5-7-lobed, upper digitately parted; seg linear, entire; p fis in num sh racemes: cx-lobes lanceolate, acuminate: carpels not hairy, rugose- or alveolate-roughened. Com in foothills skirting Sacramento valley, Cal, first collected by Elisha Brooks."

S. VALIDA P 3:157.

S. VITIFOLIA G 7:332. B 1:84 as "a les hispid form" of malachroides.

SIDEROKYLLUM [Dill] L, syst ed 1 1735).

S. LEUCOPHYLLUM Wat. Baja.

SIEVERSIA Willdenow, Berl mag 5:397 (1811). P 4:48.

S. ANEMONOIDES Willd, Berl mag 5:397 (1811). P 4:49 as pentapetala.

S. CILIATA G Don. Gen Hist 2:528 (1832). P 4:50. Mo, Ar, Canada.

S. GLACIALIS R. Br, Parry's 1st Voyage, App 276. P 4:48. Asia.

S. PENTAPETALA P 4:48, based on Dryas pentapetala L. Asia.

S. BOSSII R Br, Parry's 1st voyage, app 276. P 4:48. Subarctic.

S. ROTUNDIFOLIA Ch & Schl in Linnaea 2:4 (1827). P 4:50. Alk.

S. SERICEA P 4:50, based on Geum sericeum P 3:172. Nev, Mont.

S. TRIFLOEA R Br; Hook bot mag t 2858. B 1:176 as Geum triflorum. P 4:50 as ciliata (as regards G Don's).

S. TURBINATA P 4:50, based on Geum turbinatum, Rydb, T ci b 24:91 (1897).

Ar, NM.

S. PARADOXA Don. B 1:176 as Fallugia p.**Genus SILENA Linnaeus.**

L, syst ed 1 (1735). A 1:264d.

S. ANGLICA L, sp pl 416. Ab 144. A 1:21d (sub Gallica).**SILENA ANTRRHINA** Linn. L, sp pl 1:419. A 1:21d. Ab 144. P 1:86 Mig, Greene, Cal ac b 2:391 Cruz, Parish Z 1:9. Guad. Br, Z 1:113 Cat; Colo 233. Da 3. B 1:63.**SILENA APERTA** Greene.

"Per, slender, erect, 2° hi or less, with but a single pair of cauline lvs near the middle, these narly linear and about 3' lg, the innermost basal ones similar to these, but the outer sh, oblanceolate, acute; both st and foliage retrorsely puberulent; cx cleft below the middle, and least in anthesis expanding to open-campanulate, only the seg herbaceous and even these with scarious margin, the broad and nearly saucer-shaped tubular part scarious, but with several g nerves; cor g'ish, twice as lg as cx and salverform, pet as to their expanded portion cuneate-obcordate; fr?"—Gifts 1:75. Hackett's Meadows, Cal. 8600°.

S. BOLANDERI G 7:330. B 1:64 as Hookerl.**S. BRIDGESII** Rohrbach, Ind Sem Berol 1867, et Monog Silene 204. B 1:66. Yosemite.**SILENA CALIFORNICA** Dur. Pl Pratt 83. Par 360 t. Jepsom, Er 1:12. Cov 70, 254. A 1:22d. B 1:64.

Type locality: "hills of Deer Creek", Cal.

S. CAMPANULATA Wat 10:342. B 1:63. 2:433.**S. CONICA** L, sp pl 418 Eu. Da 3.**S. CONCOLOR** Gifts 1:153. NM.**SILENA CONOIDEA** L.

Davidson, Erythea 1:58. Monica.

Brandegee, Zoe 1:113 Cat.

L, sp pl 418. A 1:264. Br 1:202 Cruz, "probably from Eu". A 1:74d (sub multinervia), 264.

Silena multinervia S. Watson.

S. DOBBI K 3:44, f 12. B 1:63 et Cur 132 as Menziesii.**S. DOUGLASSII** Hook Fl 1:88. B 1:66. Wash. Mont. Nev. Cal. Cuyamaca mts—Palmer (?).**S. ENGELMANNI** Rohrb. in Ind Sem Hort Berol (1867) app 2:5. B 1:65 as incompta G. = Bridgesii fide IK.Variety **BERRYI** Rohrb. in Linnaea 36: 264. B 1:66 as verrecunda.**SILENA GALLICA** Linn.

L, sp pl 1:417. Greene, Cal ac b 2:391 Cruz. Br 1:208 Rosa. Da 3. Er 1:57. B 1:63. Parish Z 1:9. A 1:21d. Par 250. P 1:86 Mig. Ab 144 as anglica.

S. GRAYI Wat 14:291. B 2:434.**S. HOOKERI** Nutt, T & G Fl 1:193. B 1:64. Par 362. Hook f, bot mag t 6051.**S. INCOMPTA** G 7:330. B 1:65.**SILENA LACINIATA** Cav.

Ic on 6:44 t 564. Lindley, bot reg 17: t 1444. B 1:64. Da 3. Ab 144. Ha 78. Indian pink. Par 360. Greene, Cal ac b 2:392 Cruz? Br 1:207 Rosa (cites S. simulans Greene as a synonym); Cruz; "a few i to

4° hi". A 1:22d. M 4:79.

Variety **CALIFORNICA** G, Wat 10:341. B 1:64 as sp.**S. LEMMONI** Wat 10:342. B 1:64.**S. LONGISTYLIS** A 1:22.**S. LYALLII** Wat 10:342. B 1:63.**SILENA MULTINERVIA** S. Watson. A 1:74 fdr, 265, as conoidea f Baja! Z 1: 133. Ab 144.

S. conoidea Davidson, Erythea 1:58, not L.

See Silena conoidea L.

S. MENZIESII Hook, Fl 1:90 t 30. B 1:63.**S. MONANTHA** Wat 10:340. B 1:63. = Douglasil fide IK.**S. MONTANA** Wat 10:343. B 1:65.**S. MULTICAULIS** Nutt, T & G Fl 1: 192. B 1:66 as Douglasii.**S. OCCIDENTALIS** Wat 10:343. B 1:64.**S. OREGANA** Wat 10:343. B 1:65.**SILENA PALMERI** S. Watson.

Wat 11:124. B 1:65. McClatchie, Er 2:79 Mt Lowe. SD Co! Sber mts (Parish 930). A 1:22d.

SILENA PARISHII S. Watson.

Wat 17:366. Ha 78. Robinson, Syn Fl 1: pt 1, 218. A 1:23d.

S. PECUNATA Wat 10:344. B 1:65.**SILENA PLATYOTA** S. Watson.

Wat 17:366. Da 3. A 1:22d.

S. QUINQUEVULNERA L, sp pl 1:416.

Greene, Cal ac b 2:391 Cruz? Br. Z 1: 113 as probably conoidea L (as regards Greene's plants).

S. SARGENTII Wat 14:290. B 2:434.**S. SCOLEBII** Hook, Fl 1:88. B 1:66.**SILENA SIMULANS** Greene.

P 1:63, Cruz; 86 Mig. A 1:21 fdr. Z 1:133 as laciniata.

S. SPALDINGII Wat 10:344. B 1:66.**SILENA VERECUNDA** S. Watson. Wat 10:344. B 1:652. 2:433. Ab 145. A 1:265d.

Hall, U 78.

Abrams, Fl LA 145.—Gabriel: Sber mts.

SILPHIUM L, Coroll Gen 16 (1737).**S. COLLINUM** P 4:44. Tenn. Ga.**S. COMPOSITUM** P 4:44.**S. HELIANTHOIDES** P 4:43. Tenn.**S. INCISUM** P 4:45. Ga.**S. SIMPSONII** P 4:44. Fla.**S. TRIFOLIATUM** P 4:43.Variety **LATIFOLIUM** G. P 4:44.**S. LAEVIGATUM** Elliott, sketch 2:465. P 4:44. = trifoliatum fide IK.Genus **SILYBUM** Gaertn.**SILYBUM** Vaill ex Adans, Fam 2:116

(1763).

S. MARIANUM Goertn. Fruct et Sem Pl

2:378. Greene, Cal ac b 2:404. Cruz,

"forming thickets impenetrable at the growing season of the year." Da 10. Z

1:58. B 1:421.

Genus **SIMMONDSIA** Nuttall.**SIMMONDSIA CALIFORNICA** Nutt.

Lond J bot 3:400. P 1:208 Cedros. B 2:67. A 1:88d. CD! Baja!

S. FABULOSA K 2:21; Hesperian N 1860 with f. Cur 1:146 et B 2:67 as Californica.**SIMSIA** Pers, Syn 2:478 (1807). = Encelia fide IK.**S. CANESCENS** G, Pl Fendl 85. B 1:351

as *E. eriocephala* G.
S. FRUTESCENS G, Mex bound 89. B 1: 352 as *E. f.*
SINAPIS L, syst ed 1 (1735). = *Brassica* fide IK.
S. ARVENSIS L, sp pl 668. B 1:40 as *E. Sinapistrum*. A 1:119s.
S. NIGRA L, sp pl 668. A 1:118s. = *B. sinapoides* fide IK.
SISYMBRIUM L, syst ed 1 (1735). A 1:123d.
S. ACUTANGULUM B & W, B 1:41. Da 2. A 1:115 as *Thelypodium lasiophyllum* variety *inallenum*; 124 as same.
S. BRACHYCARPUM Fournier = form of *canescens* probably as regards plant from SD (fide B 1:40). Of Bot Beechey (not Richardson) = *incisum* var. *Hartwegianum* fide B 1:41.
S. BRANDEGEANUM Rose, CNH 1:10. P 3:11 as *Sibara* B. Baja.
S. CALIFORNICUM Wat, bot King 23. G, Am J sci ser 3, 3:150 as *incisum*. B 1:41 as same.
S. CANESCENS Nutt, Gen 2:68. B 1:40. Da 2. Br, Z 1:113 Cat. A 1:124 as *pinnatum* (fide Greene, Cal ac b 2:390).
 "The Santa Rosa Indians mix the seed of this plant with their corn meal to give it a more agreeable flavor."—Ha 82. Tansy Mustard.
S. DEPLEXUM Harv; T, Pacific Ry R 4:66. B 1:41 as *reflexum*.
S. DIFFUSUM G, Pl Wright 1:8. Tex, Cov 63.
S. HARTWEGIANUM Fourn, Slsymb 66. B 1:41 as *incisum* variety H. A 1:124s. P 3:95 as *Sophia* H.
S. INCISUM E, ex G, Am ac mem, ns, 4:8. Da 2. B 1:41. P 3:95 as *Sophia* I A 1:124d.
 Variety *HARTWEGIANUM* Wat, B 1:41. A 1:124d. = H.
 Variety *FILIPES* G, Pl Fendl 8. B 1:41. —"a form with divaricate pedicels 6-8" lg, exceeding the pods." Ore, Ar. A 1:124d.
 Variety *SONNEI* Rob, Syn Fl 1:140. P 3:95 as *Sophia* Sonnel.
S. JUNCEUM Bieb, T & G Fl 1:91. B 1: 41. Parry, Pl Wyo 4. Sib, Ore, Mont, Nev.
S. LINIFOLIUM Nutt, T & G Fl 1:91. B 1:41 as *junceum*. P 3:127 as *Schoenocrambe linifolia*.
S. LONGEPEDICELLATUM Fourn, Slsymb 69 (excl syn = *incisum* variety *filipes* fide B 1:41). A 1:124s.
S. OFFICINALE Scop, Carn ed 2, n 824. Greene, Cal ac b 2:390 Cruz, "In cult lands only". Da 2. B 1:41. A 1:124d. Ab 169 as *Erysimum* of.
S. PINNATUM Greene, Cal ac b 2:390, Cruz. P 1:200 Cedros. A 1:124. Based on *Erysimum* p of Walter, Fl Carol 174 (1788); et *Sisymbrium canescens* Nutt, Gen 2:68 (1818).
S. PYGMAEUM Nutt, T & G Fl 1:91. B 1:41 as *junceum*. P 3:128 as *Schoenocrambe pygmaea*.
S. REFLEXUM Nutt, Phil ac J, ns, 1: 183. B 1:41. Br 1:207 Rosa. (K 2:101 f 29 = *Arabis Holbaelli* fide Cur 1:130 et A 1:112.) A 1:115, 124 et Ab 166 as *Thelypodium lasiophyllum*.

Genus **SISYRINCHIUM** Linnaeus.

Per glab herbs, with sh rtstocks, simple or branched 2-edged or 2-winged sts, linear grass-like lvs and rather sm, mostly bl, terminal fls, umbellate from a pair of erect g bracts; perianth-tube sh or 0, the seg oblg or obovate, equal, mostly aristulate; sta monadelphous, their anth alt with branches of sty; stig filiform. Blue-eyed grass.
S. ANCEPS Lam, Enc 1:403 (1783). P 2:70 near Tehachapi, Cal, etc. B 2:141.
S. ARIZONICUM Rothrock, Ar. B 2:141.
SISYRINCHIUM BELLUM S. Watson. Wat 12:277. Par 290 t. B 2:140. P 4:36. Ab 93. Da 17. Br 1:217 Rosa. Greene, Cal ac b 2:413 Cruz. Ha 69. Baja to Ore. M 3:69.
 Sts 2-4 dm hl, glab or with scabrous margins, with 1-3 floriferous nodes at summit; peduncles com 2 at each node; spathes of 2, nearly equal bracts, scabrous on keel, 4-7-fid; perianth of a delicate shade of mauve, with canary y at base, 2 cm broad or more; sta united to near the summit; anth very sm; cap round-obovoid, 6 mm hl; sds 1.5 mm thick, obscurely pitted.
 Fls blue, p-stripled. Baja Cal. to Oregon.
S. BERMUDIANA P 4:33.
SISYRINCHIUM CALIFORNICUM Ait. Hort Kew ed 2, 4:135. B 2 1:41, 484. Da 17. Par 290. Parish. Z 5:112, "not SD but Monterey Co."
 Scape winged; fls y. Wet spots, coast. Synonymy: *S. lineatum* T, Pac Ry R 4:13, SD (Parry).
S. CONVOLUTUM Klatt, Linnaea 34: 735. B 2:141 as *Californicum*.
S. DEMISSUM P 2:69. 4:34.
 Type locality: Bill Williams mts, Ar.
S. DOUGLASSII Dietrich, sp pl 2:504. B 2:141 as *grandiflorum*.
S. FLAVIDUM K 2:50 f 3. B 2:141 et Cur 1:148 as *Californicum*.
S. GRANDIFLOREM Dougl, Lindl bot reg 16: t 1364. Hook, bot mag t 3509. Don in Sweet, Brit Fl Gard, sr 2, t 388. B 2:141, 484.
S. HALOPHYLLUM P 4:34, Nev.
S. LANGLOISII P 4:32, La.
S. LINEATUM T, Pac Ry R 4:143. B 2:141 as *Californicum*.
S. LITTORALE P 4:33, Alk.
S. MARITIMUM M 1:48.
S. MONTANUM P 4:33, Colo.
S. MUCRONATUM Michx. B 2:141, Nev.
S. XEROPHYLLUM P 4:32, Fla.
SITANION Raf. A 2:443d. (4 sp d.)
S. ELYMOIDES Raf. T Pac Ry R 4:157. B 2:327 as *Elymus sitanion*.
SITANION RIGIDUM J G Smith. Ab. SCA b 1:87, summit of Mt San Antonio, LA Co.
 Genus **SIUM** Linnaeus.
 A 1:269d.
S. ANGUSTIFOLIUM L, sp pl ed 2, 1672. B 1:260 as *Berula* a; A 1:286 as B: erecta.
SIUM CUCUTAEPOLIUM Bmel. Abrams, Fl LA 286. Oak Knoll (McClatchie). Schrank, Baier Fl 1:558. B 1:261. A 1: 270d.
SIUM ERECTUM Huds. Fl Angl ed 1, 103. Eu. Da 7. A 1:270, 286, as *Berula* e.

SIUM HETEROPHYLLUM Greene.
A 1:270d.
Abrams, Pl LA 286, near Pasadena (Davidson).
McClatchie, Erythrae 2:123, Pasadena.
S. LINEARE Michx, Fl 1:167. B 1:261 as *cicutae-folium*. = *Apium* 1 fide IK.
SMELEWSKIA C. A. Meyer, in Ledeb Fl Alt 3:165 (1831).
S. CALIFORNICA G 6:520. B 1:41 as *Sisymbrium incisum*.
S. CALYCINA C. A. Mey. Perry, Pl Wyo 14, 25. B 1:42. Colo. Ore.
S. FREMONTII Wat 11:123. Ore. B 1:42.
SMILACINA Desf, in Ann mus Par 9: 51 t 9 (1807).
S. AMPLEXICAULIS Nutt, Phil ac J 7: 58. B 2:161. Par 24. Ha 69. False Solomon's Seal.
S. RACEMOSA Desf, lc 9:51.
Variety **AMPLEXICAULIS** Wat, Bot King 345. B 2:161 as sp.
S. SESSILIFOLIA Wat. B 2:161. Par 23. Greene, T cl b 15:87 as *Unifolium sessilifolium*. SD mts! Canada.
S. STELLATA Wat, bot king 345. B 2: 161 as mainly *sessilifolia*. P 1:281 as *Unifolium liliaceum*.
S. UNIFLORA Menz, Hook Fl 2:175 t 190. B 2:180 as *Clintonia* u.
SMILAX CALIFORNICA A. Gray. B 2:186.
S. ROTUNDIFOLIA Bth 341. B 2:186 as Calif.
Variety **CALIFORNICA** a DC, Mon Phan 1:75. B 2:186 as sp.
SOLANOA P 2:65-67 based on *Schizonotus* G.
S. PURPURASCENS P 2:67 based on *Gomphocarpus* p G (*Schizonotus* p G). Er 1:10.
Genus **SOLANUM** Tournefort.
A 1:208d.
S. ARIZONICUM Parish, Cal. ac pr, sr 3, bot 2:165 fd. Ar.
S. CALIFORNICUM Dunal in DC. B 1: 539 as *umbelliferum*.
SOLANUM DOUGLASII Dunal. DC 13:48. Par 82. P 1:92 Mig. Greene, Cal ac b 2:408 Cruz. Ab 351. Da 12. B 1:538 as *nigrum* variety D. Cov 4:167 Panamint mts.
Com somewhat woody, 1-2 m hi; sts angular, angles somewhat denticulate-scabrous, otherwise more or less puberulent; lvs variously angular-dentate, or some nearly entire; umbels nearly opp the lvs, several-fld; fls w or pale p, 8-14 mm broad, pubescent without, deeply 5-parted, lobes lanceolate; anthy y, 4-5 mm lg; fl about 1 mm lg, stout, hairy, nearly equaling the slender sty; fr black.
Type locality: "in Nova California."
Variety **VILLOSUM** Da 12.
SOLANUM ELAEGNIFOLIUM Cav. B 1:539. Mex. Tex. Ar. A 1:208.
Parish Erythrae 3:61.—"Well established by roadsides at South Riverside, Cal. (W. J. Lester).
S. GENISTOIDES Dunal in DC 13 (1): 85. B 1:539 as *umbelliferum*.
S. HETERODOXUM Dunal, Hist Solan 235 t 25. B 1:538 Mex.
S. HINDSIANUM Bth, bot sulph 39. B 1:539 as *elaegnifolium*. Baja (Or 1839), a good sp.

S. LINDEMERIANUM Scheele in Linnaea 21:766. B 1:539 as *triquetrum*.
S. LYCOPERSICUM L, sp pl 185. B 1: 538 as *Lycopersicum esculentum*.
SOLANUM NIGRUM Linn. L, sp pl 1:186 (1753). Cov 167. Par 82. B 1:539. Cosmopolitan. Pac Rur Press 38:511. Garden & Forest 3:159. M 3:61 Riverside.
Ann or sometimes becoming woody at base and more enduring, widely branching, g. almost glab; lvs more or less ovate and sinuate-toothed, sometimes merely repand or nearly entire, acute or acuminate; fls in sm and pedunculate lateral umbellate clusters; fr sm, bk when ripe, or rarely reddish. Black nightshade. SBar (Or 213); SD mts!
Variety **DOUGLASII** G, B 1:538 based on sp of Dunal. Br 1:215 Rosa. Guad. Cruz, Baja! SD!
S. OLYVAEFORME, Smith, bot gaz 7:— Z 1:63. Guat.
SOLANUM PALMERI Vasey & Rose. Quintin.
SOLANUM ROSTRATUM Dunal. Hist Solan 234. Mex. B 1:538. A 1:208d. Ab 352. Da 12. Z 1:124.
S. TENUILOBATUM Parish.
"Suffrutescent, sts slender, angled, glabrescent below, hirsutulous above with sh, 1- to several-celled, non-glanduliferous hairs; lvs linear to narly obliq, 2-3 cm lg, the midrib prominent, all but the uppermost with a pair of hastate linear lobes at base; umbels 1-4-fld; cor 12-15 mm wide; fr not seen."—Parish, Cal ac pr, sr 3, bot 2:165. Baja.
S. TRIQUETRUM Cav, lc 3:30 t 259. B 1:539.
S. TUBEROSUM L. M 4:80.
S. UMBELLIFERUM Esch. Mem ac Peters, 1821-22:283. B 1:539. Par 274. Da 12. M 3:36.
Shrubby; hairs branched; leaf-base mostly narrow. Los Angeles.
Variety **CALIFORNICUM** Parish, Cal ac pr, sr 3, bot 2:172 based on S: C (Dunal in DC 13:86) et S: umb (Greene, Man 267 non Esch). SF; SBar; Nev.
Variety **TRACHYCLADON** T, Pac Ry R 7:12. B 1:538 as *nigrum* variety Douglasii.
S. VILLOSUM Lam. A 1:209d. Ab 351.
S. WALLACEI Parish. A 1:209d. Ab 351.
S. WALLACEI Parish, Cal ac pr, sr 3, bot 2:166 based on S: xanti Wallacei G (S: xanti Wat 11:117 not G).
Abrams, Fl LA 351. Cat.
Variety **VIRIDIS** Parish, Cal ac pr, sr 3, bot 2:166.
"Stout, erect, glabrate, or above hispidulous; hairs mostly reduced to a single cell; lvs ovate, cordate, or rounded at base; ex cup-shaped, with sh lobes."—Parish, lc.
Habitat: Central Cal, near the coast.
S. XANTI G 11:90. B 1:539. 2:471. Da 12. Ab 351. Par 274. A 1:209d. M 4:59.
Hall U 114.
Parish, Cal ac pr sr 3, bot 2:167. Gray, Am ac pr 11:90 (1876).
Type locality: not given.
Throughout Cal., south.
Variety **GLABRESCENS** Parish, Cal ac pr, sr 3, bot 2:169 fd. Ore; Baja; Ar. Abrams, Fl LA 351.—"Occasional in

the valleys and foothills, mostly in dry and rather exposed places."

Parish, Cal ac pr sr 3, bot 2:167.

Hall U 114.

Variety **GLABRESCENS** Parish. A 1: 209d. Ab 351.

Variety **INTERMEDIUM** Parish, Cal ac pr, sr 3, bot 2:168 fd.

Variety **INTERMEDIUM** Parish. A 1: 209d. Ab 351.

Abrams, Fl LA 351.—"Common in all our low hills and in the mts."

Variety **WALLACEI** G 11:90. Greene, Cal ac b 2:408 Cruz. Br 1:215 Rosa.

Parish as sp. Guad. Cat. B 1:539.

Variety **VILLOSUM** Da (LA).

SOLEA Spreng, in Schrad J bot 4:192 (1800). = *Ionidium* fide IK.

S. CONCOLOR Gingius P 1:42, cites *concolor* B & H as a synonym.

Genus SOLIDAGO Linnaeus.

Strict simple-st'ed per herbs, with alt more or less serrate lvs, and many sm hds in terminal clusters which are com in scorpioid racemes and forming a panicle: inv nar, its bracts in 2 or more sr, neither herbaceous-tipped nor glutinous: fls all permanently y, outer and ligulate sh'er, inn nar-funnelform: sty-appendages lanceolate: ak terete or prismatic, 5-10-nerved, glab or pubescent: pap a series of unequal scabrous permanently w bristles.

= *Chrysoma* fide Greene, Er 3:6.

S. AUREOLA P 4:236.

S. BELLIDIFOLIA P 4:100.

SOLIDAGO CALIFORNICA Nutt.

Nutt. A 1:196d. Ha 131.

Hall, U 131.

S. CILIOSA P 3:22.

SOLIDAGO CONFINIS Gray.

A 1:196d.

Monterey to Mexico; CD! Cruz; Rosa.

SD Co (Cleveland); SBar (Parish).

S. CORYMBOSA Nutt. B 1:318 as *Virgaurea*

var. *multiradiata* T & G.

S. DECUMBENS P 3:161.

S. DIFFUSA G. B 1:314 as *Bigelovia* d.

S. ELONGATA Nutt. B 1:319.

Variety **MICROCEPHALA** K 5:55. Cur 1:139 as "the ordinary form with hds of full size."

S. FASCICULATA P 3:101. Oklahoma.

S. GUIRADONIS G 6:543. B 1:311.

S. LAETA P 5:138.

S. MISSOURIENSIS Nutt. Ckl W 6:10.

Colo.

SOLIDAGO OCCIDENTALIS Nutt.

T & G Fl 2:226 (1842). B 1:318.

Glag thruout, 3-4" hi, paniculately branched, slender: lvs linear, entire, obscurely 3-nerved, 2-4" lg, 1-3" wide: hds in num sm clusters ($\frac{1}{2}$, lg): inv-scales acute: rays 16-18, not exceeding the 8-14 disk-fls. British Columbia. Baja!

Type locality: "banks of the Oregon and Wahlamet and Lewis River, in the Rocky mts."

Cov 124.—"North Fork of Kern River." Da 8. Par 195.

Euthamia occidentalis Nutt, Am Phil soc tr. n sr. 7:326 (1841).

S. PAREYI Greene, Er 2:57 based on *Aplonappus* Parryi G.

S. PETIOLARIS Less, H & A. (= *spiciformis* et *Californica* fide B 1:318, 319).

S. PRUINOSA P 4:70.

S. PUBERULA C & S. B 1:319 as *Californica*.

S. RACEMOSA P 3:160.

SOLIDAGO SEMPERVIRENS Linn.

L, sp pl 878. B 1:319. Da 8.

Completely glab: sts strict, 2-3" hi: lvs fleshy, lanceolate, entire, lower tapering into a lg nar base, upper reduced to subulate bracts of the virgate rather dense panicle: inv-scales lanceolate, obtuse: rays 8-10: ak minutely pubescent.

SF. SD Co.

Throughout Am; SBar (Parish).

SOLIDAGO SPECIOSA Nutt.

Parish, Ery 6:92, SBar mts.

S. SPICIFORMIS T & G Fl 2:202. B 1: 318.

S. SUBVISCOSA P 3:348.

S. TRINERVATA P 3:100.

S. VASEYI M 1:7 based on *arguta* var. *Carolina* G, syn Fl 1 (2): 155.

S. VENULOSA P 5:138.

S. VIRGA-AUREA Duct. = *Virgaurea* fide IK.

Variety **MULTIRADIATA** T & G. B 1: 318.

Genus SOLIVA Ruiz & Pavon.

SOLIVA R & P, Prod 113 t 24 (1794).

S. DAUCIFOLIA Nutt, T & G Fl 2:425. B 1:406. = sessilis.

Ann, diffuse or creeping, about a span hi, soft-hairy: lvs once or twice pinately dissected into rather few linear acute divisions: hds sm (2-3" broad), sessile in the forks: inv scales ovate, acuminate: ak minutely hairy, obovate,

with the broad or nar and thin wings entire, each terminating upwards in an incurved tooth or point. SBar to Mendocino Co.

SOLIVA SESSILIS R. & P.

Prod 113 t 24. B 1:406 Chili. Z 1:207. See

daucifolia for d of Cal form.

Genus SONCHUS Linnaeus.

L, syst ed 1 (1735). A 1:256d.

SONCHUS ASPER Vill.

Fuchs, Hist 674 (1542). Br 1:214 Rosa. Greene, Cal ac b 2:406 Cruz. Ab 450. A 1:256d.

Parish, Zoe 1:58.

Brandegge, Zoe 1:114 Cat.

SONCHUS OLERACEUS Linn.

L, sp pl 794. Br 1:214 Rosa, Greene, Cal ac b 2:406 Cruz. Ab 449. A 1:256d.

Parish, Zoe 1:58.

Hall, U 131.

Davidson, *Erythra* 1:60, LA Co.

McClatchie, *Erythra* 2:125, Cat.

SONCHUS TENERRIMUS Linn.

L, sp pl 794. Br, Z 1:114 Cat. Parish. Z 1:57.

SOMNEA P 1:22.

S. FOLIACEA P 1:222 Nev.

S. GLOMERATA P 1:22 based on *Plagiobothrys* g G 20:286.

S. HARKNESSII P 1:23.

Type locality: "near Mono Lake, in the Sierra Nevada, June, 1886. Dr H. W. Harkness."

S. HISPIDA P 1:22 based on *Plagiobothrys* h G 20:286.

S. JONESII P 1:23 based on *Plagiobothrys* j G, syn Fl suppl 430.

S. KINGII P 1:23, based on *Eritrichium* K Wat, bot king 243 t 23.

SOPHIA Adams. A 1:116 d.
S. HARTWEGIANA P 3:95.
S. INCISA P 3:95. Ab 177. A 1:116d.
S. OBTUSA Gifts 1:96. NM.
S. PINNATA Howell. Ab 178. A 1:116d, 124.
S. SERRATA Gifts 1:96. NM.
S. SONNEI P 3:95.

Genus **SOPHORA** Linnaeus.

SOPHORA ARIZONICA S. Watson.
 Wat 11:135 (1876). B 1:114.
S. SPECIOSA T, Pac Ry R 4:82 not Bth. B 1:115 as *Arizonica*.
SOBEUS L, syst ed 1 (1735).
S. CALIFORNICA Greene, Fl Fr 54. P 4:131.
S. DUMOSA P 4:129. Ar.
S. OCCIDENTALIS Greene, Fl Fr 54. P 4:131, based on *Pyrus occidentalis* Wat 23:263.
S. SAMBUCIFOLIA Roem, syn Monog 3:139. B 189 as *Pirus* S.
S. SCOPULINA P 4:130. NM.
S. SITCHENSIS Roem, lc. B 1:189 as *Pirus sambucifolia*.
S. SUBVESTITA P 4:130. Minn.
 Genus **SPARGANIUM** Linnaeus.

Marsh or aquatic plants with simple or somewhat branched sts: fls in globose hds along the upper portions of the st and branches, the upper hds stam; the lower pist, in the axils of lf-like bracts: perianth of minute irreg scales: sta with long slender distinct fl: ova sessile, mostly 1-celled: fr nut-like.
SPARGANIUM EURYCARPUM E.
 Da 17? Hanson (Or 1307?) fr not seen Ab 9. B 2:188.

Sts rather stout, 1-2.5 m hi, branching; lvs, linear flat, slightly keeled beneath, the lowest 1-1.5 m lg, the upper sh'er; stam hds num; pist hds 2-4, sessile or more com peduncled, compact, 20-40 mm in diam when mature; stig 1-2; nutlets sessile, 6-10 mm long; perianth, seg as many as angles of fr or with 2-3 outer ones, spatulate or eroded, equalling the fr.

S. SIMPLEX Huds, Fl Angl ed 2, 401. Parry, Wyo 18. B 2:188. Eu. Sib. Variety *Augustifolium* E. Parish, Er 6: 85, "Bluff lake, 7400° alt, Sber mts."
SPARTINA GLABRA Muhl.
SPARTINA FOLIOSA Trin.

Genus **SPECULARIA** Heister.

Ann with lfy slender sts: fls in the axils of the lvs, bl or p'ish, 1 or 2 bracteolate: our sp with 2 kinds of fls: the earlier fertilized in the bud, with undeveloped cor and 3-4 cx-lobes; the latter with ordinary fls and 5-lobed cx: cor rotate or nearly so, 5-lobed or -parted: stigs and cells of the ova 3, sometimes 2-4: cap prismatic or cylindrical, dehiscent by sm valvular openings on the sides at the middle or near the summit. A 1:381.

Legouzia Durand.

Subgenus **DYSMICODON**. Flowers dimorphous. Capsule rather short, straight, not disposed to split.

SPECULARIA BIFLORA A. Gray.
 A 1:381d. Br 1:203 Cruz; Z 1:114 Cat. P 1:446. Da 10. Z 1:208. Baja! Ab 386 as *Legouzia biflora* Britton.

Stem slender, simple or branched from

the base; leaves sessile, ovate or oblong, crenately toothed, the upper reduced to lanceolate bracts; fls 1, rarely 2, in each axil, nearly sessile; corolla purple. Cat.
SPECULARIA PERFOLIATA A./D. C.
 T. Fl NY 1:428 t 65. Greene, Cal ac b 2:406 Cruz. B 1:447. Ore-Mex. Baja! A 1:381d.

Stouter, with clasping cordate leaves.

SPEIRODELA Schelden.

Anth-cells bilocellate by a vertical partition and dehiscent longitudinally: ova 2-ovuled; frond 7-11-nerved or more; rrtlets several, with axile vascular tissue; otherwise nearly as *Lenna*.

S. POLYRHIZA Schleid. B 2:190.

Fronds round-obovate, p beneath, 2-4" in diam, distinctly about 7-nerved; rts clustered, com 3-5: bract saclike; ovules amphitropous. Cosmopolitan; Ore, Nev. Genus **SPERGULA** L.

Ann branched herbs, with subulate stipulate lvs, much fascicled in axils: fls w, in terminal cymes: sep and pet 5: sta 5 or 10: sty 3, alt with sep: cap 5-valved, valves opp sep: sds compressed, acutely margined or winged.

S. AEVENSIS L, sp pl 440. B 1:71. Ab 148. Da, er 1:102 LA Co.

Slender, glab or sparingly pubescent, branching from base, erect or ascending 15-45 cm hi; lvs narrowly linear or subulate, 2.5-5 cm lg, clustered at nodes, appearing verticillate; stipules minute, connate; fls 4-6 mm broad, num, in loose terminal cymes; pedicels slender divaricate; sep ovate, 3-4 mm lg, slightly longer than pet; sta 10 or 5; cap ovoid, longer than the cx. Eu. Corn-spurry.

S. SAGINOIDES L. B 1:70 as *Sagina* Linnaei.

SPERGULARIA Pursh. A 1:157 as *Tissa*.

S. RUBRA T, Pac Ry R 4:70. B 1:71 as *Lepigonum macrothecum*.

SPHACELE Bth. A 1:146d.

S. CALYCIINA Bth. Par 46 t. Br 1:215 *Rosa* (cites *fragans* as a synonym). B 1:598, 2:477. A 1:146d.

Variety **WALLACEI** G. Ab 346. Da 14. A 1:147.

S. FRAGRANS P 1:38. A 1:364d. McClatchie, Er 2:124 Cat. Br 1:215 as *calycina*. Greene Cal ac b 2:409.

Type locality: "south side of Cruz."

Genus **SPHAERALCEA** S. N. Hilaire.

Fl Bras Mer 1:209 (1825).

Differs from *Malvastrum* in the 2-ovuled cells of ova, the lower ovule ascending, the upper pendulous and oft abortive in fr.

S. ACERIFOLIA Nutt, Parry, Wyo 20.

S. ALBIFLOEA Rose. CNH 1:81, *Rosa*-lla.

SPHAERALCEA AMBIGUA A. Gray.

Tomentulose; thick crenulate-toothed lvs, fls rose to w, pet 1/2-1 1/2 lg; cx 4-6" lg. So Cal. Ar. Nev. Quintin! Ha 95.

S. ANGUSTIFOLIA Spach. B 1:86.

Slender, erect 2-4° hi, hoary-pubescent: lvs oblig to nar-lanceolate, 2' lg, com subcordate or rounded at base, oft somewhat lobed below, crenate or rather coarsely toothed, on sh petioles: fls sm, in a naked or oft lfy nar raceme; cx 2-3" lg, with acute or acuminate lobes: fr

subglobose with a central depression, pubescent; carpels 1½-2" lg, oblg, blunt or sharply beaked at apex, reticulate on sides below. Ft Mohave to Rio Grande, Mex.

S. CALIFORNICA Rose, CNH 1:66.

"Two to 4 and sometimes even 10-12" hi, densely stellate-pubescent, becoming somewhat glabrate below; lvs triangular-oblg, 1½-2½" lg, cordate or truncate at base, more or less 3-lobed, crenately-toothed, densely stellate-pubescent; inf open paniculate; fls orange-y; cx 2-3½" lg, its lobes ovate-acuminate; pet 5" lg, obovate; cap sm, depressed; carpels 12-16, strongly reticulated below, the sterile part a mere incurved acutish tip; ovale and sd 1. S. Coulteri Br 2:135.—CNH 1:66. Baja, La Paz.

S. COULTERI G. Rose CNH 1:87, Son (Br 2:135 = Californica fide Rose 1:66).

SPHAERALCEA EMORYI Torr. Pl Fendl 23. B 1:86 (Coulter, CNH 1:32 as in part ambigua).

SPHAERALCEA FENDLERI A. Gray.

Variety CALIFORNICA Parish.

"About 1 m hi; sts glabrate below; lvs oblg, 2-3 cm lg, more or less distinctly subhastately lobed, unevenly and obtusely toothed; fls salmon-r; carpels 5 mm lg, indistinctly apiculate, the lower half strongly reticulate; sd nearly circular, 2 mm in diam, hirsute."—Parish, Z 5:71. Colton, SBer Co.

SPHAERALCEA FREMONTII Torr.

See Malvastrum Fremonti.

Sphaeralcea lindheimeri Parish 139 (not G).

San Bernardino (Parish).

SPHAERALCEA FULVA

"Erect and stout, 2-4" hi, sparingly branching, suffrutescent, clothed densely thruout with a y'ish stellate pubescence; lvs sm, of thick and firm texture, of triangular-lanceolate outline, coarsely toothed; cx 4" lg, cleft a little below the middle into triangular acute seg; cor ¾" lg, light scar; fr ? In clay soil, back from the sea; infrequent. Cedros."—P 1:201. CNH 1:14.

S. INCANA G. P. FENDL 23. B 1:86 as Emoryi. G, bot Ives Colo exp 8 = Abutilon Newberryi fide B 1:87.

SPHAERALCEA LINDHEIMERI G.

SBer mts (Parish 139). Parish's plant seems to have been referred later to Malvastrum Fremonti. B 1:86.

S. HAINESII Br 2:137, Jesus Maria, Baja.

SPHAERALCEA ORCUTTII Rose.

"Per (?), 60-90 cm hi, with dense, stellate pubescence thruout; lvs thickish, ovate, entire or somewhat 3 lobed, with slightly cordate or truncate base, obtuse; fls sm, in close, glomerate clusters, on short or long racemes; cx 4mm lg, with ovate lobes; pet 8 mm lg brick-r; sty clavate, thickened; carpels 12, reniform, strongly reticulated except the minute terminal portion, 2 mm in diam, 1-sded. Collected near Carriso [not Cansol] creek, CD, 1 N 1890, by Or (No. 2210). This species, although referred to Sphaeralcea, can hardly be kept out of Malveopsis. The carpel is more like that of the latter genus than of any other known species, and yet very sim-

ilar to those of S. Coulteri and S. Californica."—Rose, CNH 1:289.

SPHAERALCEA SULPHUREA S. Wat. Watt 11:125, Guad. B 1:86.

SPHAERALCEA VARIABILIS Ckld, Am Nat (Ap 1900) 291. SCAB 1:106, the com pl of Salt river valley, Ar", suspects S: Frencleri Californica Parish, SCAB 1:74 is identical.

S. VIOLACEA Rose, CNH 1:81. Rosalia. S. WRIGHTII G, Pl Wright 2:21. B 1:86 as Emoryi.

Genus SPRENOSCIADIUM Gray.

SPRENOSCIADIUM A 1:270d.

S. CAPITELLATUM G 6:536. A 1:270d. B 1:265 as selinum c. Ab 288.

Selinum capitellatum B & H, Gen 1:915.

SPHAEANGIUM Schimp.

S. MUTICUM Schimp. Eu. Africa. B 2:358.

SPHAEROMERIA

S. CANA M 1:7.

S. CAPITATA M 1:7.

S. POTENTILLOIDES M 1:7.

S. SIMPLEX M 1:7.

S. SPHAEOSTIGMA F & M. A 1:330d.

S. ALYSSOIDES Walp Rep 2:78. Ab 272. T 1:330d.

S. BISTORTA Walp Rep 2:77, M 3:106. Ab 270. A 1:330d.

Variety REEDII M 3:60 SBer mts.

S. CAMPESTRE Ab 271. A 1:331d.

Variety PARISHII Ab 272. A 1:331d.

S. CONTORTUM Walp Rep 2:78. Ab 271. A 1:331d.

Variety GREENEI Ab 271. A 1:331d.

SPHAEOSTIGMA BRYTERIA Davidson.

"Ann, slender, upright, branching freely 6-12" hi, whole plant minutely puberulent and glandular thruout, at com p'ish especially in the taller specimens, epidermis not flaking; lower lvs ovate-lanceolate 1-1½" lg, ¼" wide, tapering to petiole, slightly repand-denticulate, midrib prominent beneath; floral lvs similar, above entire and much sm'er; petioles of radical lvs 1" lg, those of the lower cauline ½": fls num, axy, minute, pet 1" lg, light r, becoming darker in age; sep reflexed in fl, cx finely puberulent and glandular, tube obconic very sh; cap 2!lg, ½" broad, obtusely angled, slightly curved with almost truncate tip, sessile, not adnate to lf. In habit this pl somewhat resembles S: strigulosa T & G, but in foliage and fl it is quite different. Collected by the author in Ap 1900 on the rocky slope of the SF river near Clifton, Ar, at an alt of 3500-3800."—Da, SCAB 1: 118 t 9.

S. WALLII M 3:107, Banning, Cal.

S. HIRTPELLUM Small. M 3:108, 116. Ab 271. A 1:331d.

Variety MONTANUM M 3:108 based on bistorta var: Reedii.

S. MICRANTHEUM Walp Rep 2:77. Ab 271. A 1:331d. M 3:107.

S. MINOR M 1:18.

S. NELSONI M 1:1.

S. FALLIDUM Abrams. M 3:108.

S. MITILA A 1:331.

S. SPIRALE F & M. Ab 270. A 1:331d.

S. VEITCHIANUM Small. M 3:106. Ab 270. A 1:332d.

S. VIRIDESCENS Walp Rep 2:77. Ab 270. A 1:332d.

SFAGNUM Dillenius.

Characters as of the order; about 50 sp.

S. ACUTIFOLIUM Ehrh. B 2:422. Eu. Atlantic States, Cal, Ore.

S. AURICULATUM Lesq, Cal ac mem 1:4 (not Schlimp) = *Mendocinum* fide B 2:422.

S. CAPILLIFOLIUM Hedw; Engl bot t 1406. = *acutifolium* fide B 2:422.

S. COMPACTUM Brid. B 2:422, Yosemite; Eu.

S. CONTORTUM Schults. B 2:423 as *subsecundum*.

S. CYMBIFOLIUM Ehrh. B 2:421 Eu; Atlantic states; Cal.

S. FIMBRIATUM Wilson. Bryol Brit t 60. B 2:422, Mt Brewer, 11,000' alt; Eu; north Atlantic states.

S. LATIFOLIUM Hedw, Engl bot t 1405. B 2:421 as *cymbifolium*.

S. MENDOCINUM Sulliv & Lesq. B 2:422, Cal.

S. MOLLUSCUM Bruch. B 2:422, Ore, NJ, Eu.

S. SQUARROSUM.

Variety **SQUAREULOSUM** Schimp, syn ed 2, 836. B 2:423 as sp.

S. SQUARROSUM Lesq. B 2:423, Cal; Eu.

S. SUBSECUNDUM Nees & Hornsch, Bryol Germ 1:17 t 3. B 2:422, Cal; Atlantic states; Eu.

Variety **LONGIFOLIUM** Lesq, Cal ac mem 1:4. B 2:423; lvs narly lanceolate, elongated; swamps near Mendocino city, Cal.

SPHERIA Neck. Elem 3:13 (1790). = *Astragalus* fide IK.

S. BELLII Britton, Can Rec Sci 1894, 148. P 3:212 as *Aragallus* B.

S. CAMPESTRIS OK 1:206. P 3:211 as *Aragallus* c.

S. FOETIDA OK 1:206. P 3:211 as *Aragallus* f.

S. GRANDIFLORA OK 1:206. P 3:210 as *Aragallus* g.

S. MONTANA OK 1:207. P 3:210 as *Aragallus* montanus.

S. SONGARICA OK 1:207. P 3:211 as *Aragallus* s.

S. SPLENDENS OK 1:207. P 3:211 as *Aragallus* a.

S. URALENSIS OK 1:207. P 3:210 as *Aragallus* u.

SPILANTHES Jacq, Enum Pl Carib 8 (1760).

S. PSEUDO-ACMELLA H & A. bot Beech 150. B 1:397 as *Perityle acmella*.

SPINACIA L, syst ed 1 (1735).

S. OLBRACHIA L, sp pl 1027. B 2:44.

Genus **SPIRAEA** Linnaeus.

S. ARIAEOFOLIA Smith, in Rees Cyc; Lindl, bot reg t 1365. B 1:170 as *discolor* variety *ariaefolia*.

S. ARUNCUS L, sp pl 490. B 1:170, 2:443. Alk. Asia. Eu. Trinity and Shasta Co, Cal.

S. BETULAEFOLIA Pallas, Fl Ross t 16. B 1:169, Asia; Japan; Alk; Aleghany mts; Sierra Nevada 5900 to 9000'. M 4: 81.

S. CANSETOSA Nutt, T & G Fl 1:412. Wat bot king 81. B 1:170. NM, Ut. Nev. Ore. Parry, Pl Wyo 11.

S. CALIFORNICA T, Emory R 140. B 1:169 as *Vauquelinia Torreyi* Wat 11: 147. Ar.

S. CAPITATA Pursh, Fl 1:342 (1814). Nutt, Gen 1:307 (1818). P 2:28 as *Neillia* c.

S. CHAMAEDRIFOLIA Pursh (not L) = *betulaefolia* fide B 1:169.

S. CINERASCENS Piper, Er 7:171 (1899). M 1:53 as *Lutkea* c. Wash.

S. CORYMBOSA Raf, Prec Decouv 36. B 1:169 as *betulaefolia*.

SPIRAEA DISCOLOR Pursh, Fl 1:342 (1814). Cruz. Ore. Da 5. B 1: 170, 2:443.

Fls mostly dull w or light buff; carpels hairy.

Type locality: "on the banks of the Kooskoosky," a river in Idaho, now known as the Clearwater. *Holodiscus discolor* Maxim, Adn Spir 257 [150] (1879).

Variety **ARIAEFOLIA** Wat. B 1:170. Oft tall (5-15' hi); lvs 2-3' lg, somewhat canescent beneath or scarcely so; panicle large and open. Based on sp of Smith in Rees Cyc.

Variety **DUMOSA** Wat. B 1:170. SD and S Ber Co (Parish 150); Ore; Colo; NM.

Spiraea dumosa Hooker, Lond J bot 6: 217 (1847)—Nuttall, MS.

S. DOUGLASSII Hook Fl 1:172, bot mag t 5151. B 1:169. Par 87.

Variety **MENZIESII** Presl, Epimeliae bot 195. B 1:169.

Variety **NOBLEANA** Wat. B 1:169.

S. DUMOSA Nutt, T in Stansbury R 387 t 4. Wat, bot king 80. B 1:170 as *discolor* variety *dumosa*.

S. LUCIDA Dougl ex Hook Fl 1:172. Par 87. = *betulifolia* fide IK.

S. MENZIESII Hook Fl 1:173. B 1:169 as *Douglasii* var.

S. MONOBYNA T, NY Lyc ann 2:194 (1827). P 2:29 as *Neillia* m.

S. NOBLEANA Hook, bot mag t 5169. B 1:169 as *Douglasii* var.

S. OPULIFOLIA L, sp pl 489 (1753). Mill, Dict ed 8. B 1:171 as *Neillia* o. P 1:42 as *Physocarpus opulifolius* Maximowicz; 2:37 as *Neillia* o.

Variety **MOLLIS** T & G Fl 1:414. P 2:28 as *Neillia capitata*.

Variety **PAUCIFLORA** T & G Fl 1:414. P 2:29 as *Neillia monogyna*.

Variety **TOMENTELLA** Seringe. P 2:28 as *Neillia opulifolia*.

S. PAUCIFLORA Nutt, in T & G Fl 1: 414 (1840). P 2:29 as *Neillia monogyna*.

S. PECTINATA T & G, Fl 1:417. B 1: 171. 2:443. P 2:19, Mt. Rainier.

S. RIBIFOLIA Nutt, T & G Fl 1:414 (1840). P 2:28 as *Neillia capitata*.

Genus **SPIRANTHES** Rich.

Sts scape-like, bearing many w fls in an oblique spiral row; sep and pet all nar, erect, or more or less connivent; lip oblg, channelled, parallel with the column, and with callos processes at base; column curved, stig ovate, becoming bidentate at apex; anth dorsal, pollinia 2, each 2-lobed, powdery.

S. BECKII Lindl Orch Pl 472 (1840). House, M 1:128 as *Ibidium* B (excl syn).

S. BREVIFOLIA Chapm Fl SUS 462

(1860). House, M 1:128 as *Ibidium longilabris*.

S. CERNUA Rich, mem mus Par 4:59. B 2:135, eastern states.

Variety **PARVIFLORA** Chapm. M 1:128 as *Ibidium ovalis*.

S. DECIPIENS Hook Fl 2:203. = *Goodyera Menziesii* fide IK.

S. GEMMIFERA Lindl, syn Brit Fl 257 (1829)). House, M 1:129 as *Ibidium*

Romanz. B 2:135 as *Romanzoffiana*.

S. GRAYI Ames Rhodora 6:44. House, M 1:128 as *Ibidium* Beckl.

S. LACINIATA Ames, Orch 120 (1905). House, M 1:128 as *Ibidium laciniatum*.

S. LONGILABRIS Lindl Orch Pl 467 (1840). House, M 1:128 as *Ibidium* l.

S. ODORATA Lindl Orch Pl 467 (1840). House, M 1:128 as *Ibidium* o.

S. OVALIS Lindl Orch Pl 466. House, M 1:128 as *Ibidium* o.

S. PARVIFLORA Ames Orch 137 (1905). House, M 1:128 as *Ibidium ovalis*.

S. PARRIFOLIA Lindl, Orch 467. B 2:35.

S. PRAECOX Wat, G man ed 6, 503.

S. TORTILIS Chapm, Fl SUS 462. M 1:129 as *Ibidium praecox*.

S. UNALASCENSIS Spreng, Syst 3:708. B 2:133 as *Habenaria* u.

S. ROMANZOFFIANA Cham, Linnaea 3:32 (1828). House, M 1:129 as *Ibidium* R. Parry, Fl Wyo 18. Par 94t. Ab 95 as *Gyrostachys* R.

Genus **SPIRODELA** Schleiden.

Stipe attached (peltately) to frond back of and under basal margin; reproductive pouches 2, triangular, opening as clefts in either margin of basal portion of frond; rts more than 1, fascicled; spadix of 1 pist and 2 stam fls from the reproductive pouches; spathe sac-like; fl curving upward from margin of frond; anth 2-celled, longitudinally dehiscent; fr rounded lenticular, with wing margins.

S. POLYTRICHA (L.) Schl. Ab 77.

Fronds solitary or united in colonies of 2-5 roundish obovate, flat on both sides, sessile or nearly so; 5-15-nerved, 3-6 mm lg, 2.5-4.5 mm wide; rts 4-16; rootcap large, sharp pointed; spathe a complete sac, opening at upper end; pist flask-shaped; fr somewhat winged; sd slightly compressed, smooth. Near SBer (Parish). This, as well as all the other members of the family occurring with us, is rarely fertile.

SPIROSTACHYS Wat 9:125 (1874).

SPIROSTACHYS OCCIDENTALIS S. W. Wat 9:125. Da 15. B 2:58, 482. LA Co (Parish 767). Magdalena Isl (Br.)

S. BITTERIANA B 2:58. So Am & W. I.

SPLACHNUM L.

S. LUTEUM L. Amoen 2:277 t 3. B 2:387.

S. MELANOCaulon Schwaegr, suppl t 109. B 2:387 as *luteum*.

Genus **SPRAGUEA** Torrey.

Smith Cont 6:4 t 1. A 1:266d.

S. MONTANA M 1:132. based on *umbellata* var.

S. NUDA Howell, Er 1:39 (1893). M 1:132 as *montana*.

S. PANICULATA K 2:187. Cur 1:132. B 1:78.

SPRAGUEA UMBELLATA Torr. Torrey, Pl Fremont 4 t 1.

Smith Cont 6:4 NM. B 1:77. 2:436. Par 73t. A 1:266d.

Calyptridium umbellatum Greene, Torr cl b 12:144.

Variety **MONTANA** Jones, T cl b 9:31 (1882). M 1:132 as sp.

Genus **STACHYS** Linnaeus.

Ann or per, com pubescent or hispid herbs, with mostly p'ish fls loosely clustered in terminal dense or interrupted spikes; cx mostly campanulate, 5-toothed, the teeth nearly =, erect or spreading, pointed; cor-tube not dilated at the throat, nar; limb strongly 2-lipped, upper lip erect or slightly turned back, overarched or concave, entire or emarginate, lower lip spreading, 2-lobed, middle lobe broader than the oft deflexed lateral ones, sometimes 2-lobed; sta 4, didynamous, ascending under upper lip, anterior pair longer, sometimes deflexed or twisted after anthesis; anth contiguous in pairs; ova deeply 4-lobed; sty 2-cleft, the lobes subulate; nutlets ovoid or oblg.

STACHYS ACUMINATA Greene.

Greene, Cal ac b 2:410 (28 My 1887):

— "Sts 2-3 ft hl, from rtstocks, retrorsely scabrous or hispid on the very acute angles; lvs ovate-acuminate, or triangular-lanceolate, mostly cordate, coarsely crenate, 2-3" lg, on petioles of 1" or more, deep g and glabrate above, velvety-canescens beneath; spike naked, a ft or 2 lg in age, the 4-6-fld verticils 1' apart; cx-teeth triangular, spine-tipped, less than half as lg as the campanulate tube; cor light p, more than 1/2 lg, tube well exerted; lower lip about 4" lg. Among loose rocks of the northward slope of Cruz; fl in Jl."

Cruz; ls bullata fide Br.

STACHYS ADJUGOIDES Bth.

Prod 3:474. B 1:605. Da 14. Ab 234.

Softly white-hairy; leaves w-tomentose, oblong obtuse; lil-scented; cor w or w'ish.

STACHYS ALBENS A. Gray.

White-woolly, leafy, often tall; leaves w-tomentose, rather acute; cor w or w'ish.

G 7:387. Ha 113. Ab 342. B 1:605.

STACHYS BULLATA Benth.

Bth Lab 547. B 1:606. Par 236. Ha 114. Br 1:216 Rosa.

Mostly hispid, light rose fls in interrupted spikes.

S. BRACTEATA P 3:342. Cal, Nev.

STACHYS CALIFORNICA Bth.

Bth DC 12:469. P 1:73. B 1:606 as *bullata*. Da 14. Ab 342.

Sts rather slender, simple from base or branched, 4-8 dm hl, sparsely retrorsely hispid, especially on angles, and more or less glandular with sessile glands; lvs ovate-oblong, subcordate at base, lowest rather long-petioled, sparsely villous-hispid, crenate; fls about 6 in the whorls, these rather remote; cx campanulate-turbinate, teeth triangular, cuspidate, spreading in age; cor p, its tube about twice the length of cx, with a horizontal hairy ring at its base within.

S. GILLISSONII Bth. B 1:606.

S. OXYLATA Dougl. B 1:606. Ore.

S. OCCIDENTA Jacq. B 1:606. Mex. Ar.

S. INGRATA P 3:341. Sierra Nevada,

- Cal.
S. LANUGINOSA P 3:342. Mts Fresno Co, Cal.
S. LITTORALIS P 3:341. Modoc Co, Cal.
S. MALACOPHYLLA P 3:343 (velutina Er 2:121).
S. MUTUALIS
 Variety **LEPTOSTACHYA** Bth 331. B 1: 608 as bullata.
S. PALUSTRIS L. B 1:606. Ore.
S. PICHANTHA Bth 331. B 1:605.
S. RAMOSA M 1:116.
S. RIVULARIS M 1:33.
S. SCOPULORUM P 3:342. Colo.
S. STRIATA P 3:341. Plumas Co, Cal.
S. VELUTINA Greene, Er 2:121, P 3: 343 as malacophylla.
STANFORDIA Wat B 2:479 (1880).
S. CALIFORNICA Wat, B 2:479.
STANLEYA Nutt, Gen 2:21 (1818). A 1: 116d.
S. FRUTICOSA Nutt, Phil ac J ns, 1: 180. B 1:38 as pinnatifida.
S. HETEROPHYLLA Nutt, T & G Fl 1: 97. B 1:38 as pinnatifida.
S. INTEGRIFOLIA James, Long's exp 2:17. B 1:38 as pinnatifida.
S. PINNATA Britton, NY ac tr 8:62. A 1:116d. Ab 165.
S. PINNATIFIDA Nutt, Gen 2:71. A 1: 116 as pinnata. Da 2. B 1:38. Parry, Fl Wyo 21.
S. VIRIDIFLORA Nutt, T & G Fl 1:98. Parry, Fl Wyo 10. B 1:38, Nev.
STAPHYLEA L, sp pl, ed 1, 270 (1753).
S. BOLANDERI G 10:69. B 1:108, 2:439.
S. GENICULATA K 2:22 (1859). Cur 1: 133. P 1:163 as Viscainoa g.

Genus **STATICE** Linnaeus.

Lvs broad, fleshy, in a radical tuft: fls secured, in sh spikes or clusters terminating the many branchlets of a branching scape: ex hairy on angles below: sty wholly distinct. Marsh Rosemary.

- S. ALBERIA** L, sp pl 274. B 1:465 as *Armeria vulgaris* Willd.
S. CALIFORNICA Boiss in DC 12:643. B 1:466 as limonium var.
STATICE LIMONIUM Linn.
 Leaves obovate-oblong; spikelets 2-3-fld. Salt marshes, abundant; Marsh Rosemary.
 L, sp pl, ed 1, 274. B 1:466. Eu.
 Variety **CALIFORNICA** G. B 1:466. Da 11.

Rt $\frac{1}{2}$ -1' thick, reddish, woody: lvs obovate to oblg-spatulate, obtuse or sometimes retuse, tapering below into a rather lg petiole, 4-9' lg: scapes 1-2" hi, loosely paniculate; fls lavender. SF: LA Co; Baja! Common in marshes along the coast.

Genus **STELLARIA** Linnaeus.

- L, sp pl, ed 1,421. A 1:265d.
 S. Aelsine Linnaeus.
S. BOREALIS Bigelow, Fl Bost, ed 2, 182. B 1:68.
 Variety **CRISPA** Fenzl. B 2:435 as sp.
S. CRISPA C & S. Linnaea 1:51. B 2:435. Alk. Plumas Co, Cal. Ha 79.
S. JAMESII T, T & G Fl 1:183. Wat, bot king 38. B 1:68. Colo; NM; Cal.
S. KINGII Wat, bot king 39 t 6, Nev. B 1:68.
S. LITTORALIS T, Pac Ry R 4:69. B

- 1:68.
S. LONGIFES Goldie. T, bot Wilkes exp 245. B 1:68. Yosemite to Arctic sea; Asia; Me; Labrador.
STELLARIA MEDIA Linn.
 B 1:67. Smith, Engl bot t 537. Greene, Cal ac b 2:392 Cruz. Br 1:208 Rosa. Parish, Z 1:125. Da 3, Er 1:57 LA Co. Cat. Aelsine media L (fide Ab 145). A 1:24d.
STELLARIA NITENS Nutt.
 T & G Fl 1:185. B 1:67, 2:435 Plumas Co. Da 3. Greene, Cal ac b 2:392 Cruz. Ab 145 as Aelsine n. A 1:23d.
S. UMBELLATA Turcz, Ledeb Fl Ross 1:394. Wat, bot king 38. B 1:67. Asia. Colo. Yosemite.

Genus **STEMODIA** Linnaeus.

- STEMODIA DURANTIFOLIA** Swartz.
 Obs bot 240. B 1:570. Ar.
 Southern Cal; Arizona; tropical Am.
 Erect, a span to 1" hi: lvs lanceolate, sharply serrate, mostly nar'd below and then with a dilated partly clasping base: fls sessile: cor p'ish, $\frac{1}{4}$ lg.
S. POLYSTACHYA Br 2:191, San Gregorio. Comodu, Baja.
S. VERTICILLARIS Link, Reichenb, Ic Escot 2: t 149. B 1:570 as *durantifolia*.
STENACTIS Cass, Dict sc nat 37:462 (1825). = *Erigeron* fide IK.
S. GLAUCO Nees, Gen et Sp Ast 275. B 1:331 as *E: glaucum*.
S. SPECIOSA Lindl, bot reg t 1577. Hook, bot mag t 3607. B 1:330 as *Er: speciosum*.
STEMANTHIUM Kunth Enum Pl 4: 189 (1843).
S. OCCIDENTALE G 8:405. B 2:145, Ore, Wash.
STENOCELOA Nutt, Gamb 189.
S. CALIFORNICA Nutt, Gamb 189. B 2:315. Cat. Guad.
STENOTUS Nutt, Am phil sc tr ns, 7: 334 (1841). = *aplopappus* fide IK.
S. ACAULIS Nutt, T & G Fl 2:238. B 1: 311 as A.a.
S. FLORIFER T & G Fl 2:238. B 2:455 as *Townsendia* f.
S. LAEBRATUS M 1:7.
S. LINEARIFOLIUS T & G Fl 2:238. B 1:311 as A.l.
S. MACLEANII M 1:7.
S. INTERIOR Greene, Er 2:72 based on A.l. Cov. Biol sc pr 7:65 (1892). Dry hills, eastern Cal; Ar. A 1:195 as A.l.
S. MULTICAULIS Nutt, T & G Fl. = A: m fide G, in Parry, P. Wyo 23.

Genus **STEPHANOMERIA** Nuttall.

- Am Philo sc tr.
S. CICHORACEA G 5:552. Greene, Cal ac b 2:405 Cruz. Da 10. B 1:429.
 S. ELATA Nutt, Gamb 173. Greene, Cal ac b 2:405 Cruz? 'oft 6" hi.' See *virgata*.
S. EXIGUA Nutt; Eaton, bot king 198 t 20 f 6, 7. B 1:428. Near Ft Mohave; Nev; NM; Tex.
S. HETEROPHYLLA Nutt. B 1:428 as minor.
S. INTERMEDIA K 5:39. Cur 1:141 as *Microseris nutans* G. B 1:424 as same.
S. LACTUCINA G 6:552. B 1:429.
S. LYGODESMOIDES Jones; Henderson, T cl b 27:349 (1900). M 1:7 as *Ptil-*

oria l.
S. MINOR Nutt, Am phil sc tr, ns, 7: 427. B 1:428.
S. MYRIOCLADA Eaton, bot king 198 t 20. B 1:429. Ut.
S. PANICULATA Nutt, lc, 7:428. Parry, Fl Wyo 13. Da 10. B 1:428. = virgata.
S. PENTACHAETA Eaton, bot king 199 t 20. B 1:428.
S. BURGINATA Nutt. B 1:428 as minor.
S. SCHOTTII G, B 1:427.
S. THURBERI G, Pl Thurb. B 1:429, Ar; NM.
S. TOMENTOSA Greene, Cal ac b 2:152. 405 Cruz. See virgata.
S. VIEGATA Bth, bot Sulph 32. W 5:12. Ha 131. P 1:91 Mig. Greene, Cal ac b 2: 405 Cruz? Br 1: 213 Rosa (cites tomentosa "and probably *S. elata* Nutt" as synonyms). B 1:428 as paniculata.
STEREODON (Moss.).
S. ROBUSTUM Mitten, J Linn sc 8:41. B 2:417 as Hypnum robustum Hook.
STEVIA Cav Ic 4:32 t 354-6 (1797).
S. DECUMBENS P 3:32.
S. DELTOIDEA P 3:31.
S. ELATIOB HBK, Nov G et sp 4:144. P 3:32.
S. PLUMMERAE M 4:78 Ar.
 Genus **STILLINGIA** Garden.
STILLINGIA L, Mont 1:19 (1767). A 1: 282d.
STILLINGIA ANNUA Mull. DC, Prodr 15:1160. Watson Am ac pr 14:297. A 1:282d. B 2:72.
STILLINGIA LINEARIFOLIA S. Wat. Abrams, Fl LA 234. SBer; SD. A 1:282d. B 2:71. Da 16.
S. PAUCIDENTATA Wat 14:298. Da 16. B 2:71.
S. SPINULOSA T, Emory R 152. B 2:72 as annua.
S. TORREYANA Wat 14:298. B 2:72. Tex.
S. TREBULLIANA B 2:72 error for Sebastiania t.
STOKESIA L'Herit Sert Angl 27 (1788).
S. CYANEA L'Her, lc, 28. Greene, Er 1: 3 as laevis.
S. LAEVIS Greene, Er 1:3 based on Carthamus laevis Hill, Hort Kew 57 t 5 (1769).
STREPTANTHEUS Nutt, Phil ac J 5:134 t 7 (1825). A 1:161d.
S. ALBIDUS P 1:62.
 Type locality: Hillsides a few miles below San Jose, Cal., collected 30 Ap 1887 by Volney Rattan.
S. ARGUTUS Nutt, T & G Fl 1:77. B 1:33 as *Arabis arcuata*. A 1:3 s. 111 s. P 4:192 as *Arabis maxima*. SBer Co. Baja.
S. ARGUTUS P 3:227.
S. ASPER P 3:225.
S. BAREIGERA P 1:217, Lake Co, Cal.
S. BREWERI G, Cal ac pr 3:101. G 6: 184. B 1:34.
STREPTANTHEUS CAMPESTRIS Watson. Ha 83. A 1:260 fdr. SBer mts. SD Co.
S. CORDATUS Nutt, T & G Fl 1:77. B 1:34. P 3:227. Wat, bot king 19, Br, Colo 233.
S. CRASSICAULIS T, Stans exp Ut 383 t 9. B 1:36 as *Caulanthus* c.

S. CRASSIFOLIUS P 3:227.
S. FLAVESCENS Hook lc t 44. H & A, bot Beech 322. B 1:35. (G 6:186 in part = *Caulanthus procerus* fide B 1:36). (T, Pac Ry R 4:65 = *Thelypodium* f, fide B 1:38).
S. FOLIOSUS P 3:226.
S. GLANDULOSUS Hook, Ic Pl t 40. B 1:34.
S. HETEROPHYLLUS Nutt, T & G Fl 1:77, 666. B 1:34. Da 2. Ab 167. A 1: 161d. (G 6:186 = *Caulanthus Coulteri* fide B 1:36.)
S. HISPIDUS G, Cal ac pr 3:101. B 1: 35.
S. INFLATUS Da, Er 2:178 LA Co.
S. LINEARIS P 3:226.
S. LONGIFOLIUS Bth 10. B 1:38 as *Thelypodium* l.
STREPTANTHEUS LONGIROSTRIS . Wat 25:127. Da, Er 2:178 LA Co. A 1: 260d. Wash, Nev, Ut, Son, Baja, CD. (*Arabis* l of Wat, bot king 5:17 t 2. Leaves not clasping nor auriculate; glabrous, glaucous, annual. Wash. to Baja Cal. Sonora. Utah.
S. MICRANTHEUS G, Pl Fendl 7. B 1:38 as *Thelypodium longifolium*.
S. POLYGALOIDES G 6:519. B 1:34.
S. PROCEBUS Brewer, in G 6:519. B 1: 36 in part as *Caulanthus procerus*.
S. REPANDUS Nutt, T & G Fl 1:77. B 1: 35 = *Arabis* sp?
S. SAGITTATUS Nutt, Phil ac J 7:12. B 1:37 as *Thelypodium Nuttallii*.
S. TORTUOSUS K 2:152. Cur 1:130. Jepson, Er 1:15. B 1:34. 2:431.
STREPTOPUS Michx, Fl 1:200 t 18 (1803).
S. AMPLEXIFOLIUS DC, Fl Fr 3: 174. B 2:177. = distortus fide JK.
S. BREVIPE Baker, J Linn sc 14: 592. B 2:178. Wash.
S. DISTORTUS Michx, Hook Fl 2:173 t 188. B 2:178 as *amplexifolius*.
S. ROSEUS Michx, Fl 2:201 t 15. B 2: 178. Sitka to Ore; northern Atlantic states.
STROMBOCARPA G, Post J nat hist 5: 243 (1845). = *Prosopis*.
STROMBOCARPUS B & H, Gen 1:591 error for *Stromboscarpa*.
S. PUBESCENS G, in T Pac Ry R 5:360 t 4. P 1:163 as *Prosopis* p.
STROPHOLIBION T, Pac Ry R 4:149. (1856).
S. CALIFORNICUM T, Pac Ry R 4:49. B 2:152. Cur 1:148 as *Brodiaea valvulifolia*.
STYLOCLINE Nutt, Am phil sc tr, ns, 7:338 (1841). A 1:187d.
S. ACUTILE K 7:112. Cur 1:139 as *Evax acutis Greene*. = *Evax caulescens* variety minima G. B 2:456 as *Evax caulescens*.
STYLOCLINE FILAGINEA A. Gray. Mohave (Parry); Oregon (Cusick). G 8:652. B 1:317, 2:456.
S. GNAPHALIOIDES Nutt, lc 7:328. A 1:187d. Da 9. B 1:337. 2:453. Ab 408. Br 1:203 Cruz; 212 Rosa.
STYLOCLINE MICROPOIDES A. Gray. Arid plains, So Cal; Nevada; N. M. Pl Wright 2:84. F 1:337. Ar.
STYLOPAPPUS Nutt, Am phil sc tr ns, 7:431 (1841). = *Troximon* fide LC.
S. ELATUS Nutt, lc, 133. B 1:438 as T:

Nuttallii.

S. GRANDIFLORUS Nutt, Ic 422. B 1: 438 as T: g.**S. LACINIATUS** Nutt, Ic. E 1:435 as T: grandiflorum variety laciniatum G.**STYFHONIA** Nutt, T & G Fl 1:220 (1838) = *Rhus*.**S. INTEGRIFOLIA** Nutt, T & G Fl 1: 220; Sylv 3:4 t 82. T, Pac Ry R 7:9 t 2. B 1:110 as *Rhus* L.**S. SERRATA** Nutt, T & G Fl 1:220. B 1:110 as *Rhus integrifolia*.**STYLOPHYLLUM** B & R. A 1:91 fdr.**S. ALEXIDUM** Rose. A 1:191.
San Clemente Island (T. S. Brandegee).**S. ATTENUATUM** B & R. A 1:92.
Cotyledon attenuata S. Watson, Am ac pr 22:472 (1897).

Near San Quintin, Baja (Or).

S. DENSIFLORUM Rose. A 1:93 fdr. Ab 186.

Cotyledon nudicaule Abrams, So Cal ac b 2:42 (1909), non Lam (1786).

S. EDULE B & R. A 1:92d. Par 154.**S. HASSEI** Rose, A 1:92 fdr. Ab 185.**S. INSULARE** Rose. A 1:91 fdr. Ab 185.**S. ORCUTTII** Rose. A 1:93 fdr.**S. PARISHII** Britton. A 1:92 fdr.**S. SEMITERES** Rose. A 1:92 fdr.**S. TRASKAE** Rose. A 1:91.
Santa Barbara Island (Blanche Trask).**STYLOPHYLLUM VIRENS**.Rose, NY bot gard b 3:34.
San Clemente Island (Blanche Trask).

A 1:91.

STYLOPHYLLUM VISCIDUM.A 1:91.
Britton & Rose, NY bot gard b 3:33, based on

Cotyledon viscida S. Watson, Am ac pr 17:373 (1892). Near Ocean side and San Juan, Cal. (Nevin, Orcutt). Readily distinguished by its viscid foliage.

Genus **STYRAX** Tournefort.

L. syst ed 1 (1735). A 2:409d.

STYRAX CALIFORNICA Torr.

Upper Sacramento to SD Co.

Smithsonian Conto 6:4, Pac Ry R 418. B 1:470. A 2:409d.

S. GUATEMALENSE Smith, Bot Gaz 7: — Z 1:63. Guat.Genus **SUAEDA** Forskal.**S. CALIFORNICA** Wat Rev. Chenop 89. B 2:59. Ab 131 as *Dondia Californica* Heller.**S. DEPRESSA** Wat, bot king 294; Rev Chenop 89. B 2:58. Ab 131 sub *Dondia* d, Britton.**S. DIFFUSA** Wat, Rev. Chenop 88. B 2: 58 as *diffusa*.**S. MOQUINI** P 1:264 based on *Chenopodium* Moquini T. P 1:289 San Bartolome Isl. Baja; indetermination with T's plant doubtful. Ab 131 as *Dondia* M of Nelson.Synonymy: *Suaeda Torreyana* Wat.**S. OCCIDENTALIS** Wat, Rev Chenop 90. B 2:58 Nev. Magdalena Isl, Baja ? (Br).**S. SUPPESCENTES** Wat, Rev Chenop 88. B 2:59. Da 15. Ab 131 as *Dondia Multiflora* Heller.**SUAEDA TORREYANA** S. Watson.
Wat 9:88. Da 15. B 2:59. P 1:93 Mig. Greene, Cal ac b 2:411 Cruz. Br 1:216Rosa. P 1:264 as *Suaeda Moquini*. Ab 131 as *Dondia Moquini* Nelson. M 4:42 SBr.**SUBULARIA** Ray ex L, syst, ed 1 (1735)**S. AQUATICA** L, sp pl 642. Eu. B 1:43. Parry, Pl Wyo 18. SD mts!**SWAETIA** (Moss).**S. CAPILLARIA** Hedw. Musc Frond 2: 72 t 26. B 2:375 as *Distichium* c.**S. INCLINATA** Hedw. Musc Frond 2:74, t 27. B 2:375 as *Distichium* l.**SWEETIA** L, sp pl, ed 1, 228 (1753).**SWEETIA COVILLEI** Greene.

"Stout-stemmed, rather few-fl, 6-16' hi; basal lvs in the largest plants 6' lg, thin and flaccid, not indistinctly 3-nerved, the obl-g-lanceolate acutish blade tapering to a lg and broadly winged petiole; fls on stout pedicels, 1 in axil of each bract; sep lanceolate, acute or acuminate, of scarcely more than half the length of cor, this 5-parted, lobes oval or obl-g-obtuse, much exceeding the sh stout-subulate fil, their glands with a laciniate margin, some or all the laciniae slenderly setaceous-pointed; cor blue-p but not dark; sds broadly winged." Gifts 1:77. Crabtree Meadows, 11,000'. Tulare Co, Cal.

S. OCCIDENTALIS P 4:184.**S. OVALIFOLIA** P 4:185.**S. PASTIGIATA** Pursh.

Gifts 1:72, Mont.

SWEETIA PARALLELA Greene. Mont.

"Sts simple, stout for the genus, 12 or 14' hi, with 2 pairs of cauline lvs, those from the rt or rstock of half the length of st, elliptic obl-g as to blade, this tapering to a lg petiolar base, all traversed from base of broad petiole to near the end of the blade by about 5 conspicuous wish parallel veins; infl somewhat congested, its more terminal portion almost thyrsoid: subulate-lanceolate sep nearly = the lurid-p'ish not dark-colored cor: fil much flattened and obl-g-liguliform, obtuse at apex behind the anther: fr?" — Gifts 1:92.

S. FERENNIS L sp pl 226. B 1:478. P 4: 184.**S. SCOPULINA** P 4:184.

Gifts 1:72, Rocky Mts.

Genus **SYMPHORICARPUS** DILL.

Low branching shrubs, erect or diffuse; leaves mostly small, entire and short-petioled; the small white or pinkish flowers usually in crowded axillary or terminal spikes or clusters.

S. CILIATUS Nutt, T & G Fl 2:4. B 1: 279. "a less downy form" of mollis.**S. FRAGRANS** M 3:143 Nev.**S. LONGIFLORUS** G, Am J sci 34:249. B 1:279, Nev; Ut.**SYMPHORICARPUS MOLLIS** Nutt.

T & G Fl 2:4. B 1:279. Da 7. Greene, Cal ac b 2:399 Cruz. Br 1:211 Rosa. A 1:53d. Ab 361. Cuyamaca mts (Or 684).

S. MONTANUS G, Am J sci 34:249. B 1: 279 as *oreophilus*.**S. OCCIDENTALIS** R Br. Hook Fl 1: 285. B 1:279. Z 1:128.**S. OREOPHILUS** G, J L sc 14:12. B 1: 279, Nev; Colo; Cal.**S. PARISHII** Rydb, T cl 26:545 (1899). Ha 122.

SYMPHORICARPUS RACEMOSUS Mx. Fl 1:107. A 1:54d. B 1:279. Da 7. Par 231.
 Variety **PAUCIFLORUS** Robbins, G man. B 1:279, not Cal.
S. ROTUNDIFOLIUS G, Pl Wright 2: 66 et J Linn sc 14:9. B 1:279, Nev; Ore; Ut; NM.
SYNOSMA Raf, Loud Gard mag 8:247 (1832).
S. RENIFORMIS Raz, Loud Gard mag 8:247 (1832). P 3:182 as Mesadenia r.
SYNTHYRIS Bth, DC 10:454 (1846).
S. BULLII M 1:4, based on Gymnandra B of Eaton.
S. CORDATA M 1:4.
S. GYMNOCARPA M 1:5.
S. HOUGHTONIANA Bth in DC 10:454. M 1:4 as Bullii.
S. MAJOR M 1:5 based on Wulfenia reniformis variety major.
S. RENIFORMIS Bth, DC 10:454. B 1: 571, 2:474.
 Variety **CORDATA** G, B 1:571. 2:475 as rotundifolia var.
S. ROTUNDIFOLIA G, Syn Fl 2:285. B 2:474.
 Variety **CORDATA** G, B 2:475.
S. RUBRA Bth, DC 10:455. B 1:571.
S. WYOMINGENSIS M 1:5, based on Wulfenia W.
SYNTHYRIS A 2:415d.
S. SANGUINALIS A 2:415d.
 Genus **SYNTRICHOPAPPUS** A. Gray. Pac Rv R 4:106 (1856).
SYNTRICHOPAPPUS FREMONTI A. G. G. lc. B 1:395.
 CD; Mohave; Nevada; Utah; Arizona.
SYNTRICHOPAPPUS LEMMONI Gr. G 19:20. M 3:9 as Microbahia L. Mohave (J. G. Lemmon).
SYLNGA L, syst ed 1 (1735).
S. PEKINENSIS Rupr. Z 1:62. = amurensis fide IK.
SYRMATIUM Vog, in Linnaea 10:590 (1835-63. = Hosackia fide IK.
S. ARGOPHYLLUM Greene, Cal ac b 2:147. A 1:300 as Lotus argophyllus.
S. DENDROIDEUM Greene, Cal ac b 2: 146 Cruz; 394. A 1:377 fdr. = Hosackea glabra T fide. Z 1:135.
S. GLABRUM Vogel in Linnaea 10:591. B 1:137 as Hosackia g. A 1:300 as Lotus glaber.
S. MICRANTHUM Greene. A 1:301 as Lotus m.
S. NEVADENSIS Greene. A 1:301 as Lotus N.
S. NIVEUM Greene. A 1:300 as Lotus argophyllus. Z 1:135 as Hosackia argophylla, Cruz.
S. NUDATUM P 1:173, 202 Cedros.
S. PATENS Greene, Cal ac b 2:147, 394 Cruz. P 1:87, Mig; Princes Island. Z 1: 135 as Hosackia glabra.
S. ORNITHOPUS Greene. Z 1:135 as argophylla. Cat and San Clemente Islands.
S. TOMENTOSUM Vogel in Linnaea 10: 591. B 1:139 as Hosackia t.
TALINUM Adans. Fam 2:245 (1763).
T. MENZIESII Hook, Fl 1:223 t 70. B 1:74 as Calandrinia M.
T. SPINOSUM T, US exp 2:250. B 1: 74, Wash.
T. PYGMAEUM G, Am J sci, sr 2. 33:

407. B 1:75 as Calandrinia p.
TANACETUM Tourn ex L, syst, ed 1 (1735).
T. CAMPHORATUM Less, Linnaea 6: 521. B 1:402 as Huronense.
T. CANUM DC Eaton, bot King 180 t 19. B 1:617, Cal; Nev. M 1:7 as Sphaeromeria cana.
T. CAPITATUM Nutt, T & G Fl 2:415. Parry, Pl Wyo 10. DC Eaton, bot king 180 t:19 f 1-7 in Sphaeromeria capitata fide M 1:7.
T. DOUGLASSII DC 4:128. B 1:40 2 as Huronense.
T. ELEGANS Decalsne. Fl serres t 1191. B 1:402 as Huronense.
T. HURONENSE Nutt, Gen 2:141. B 1: 402.
T. MATRICARIOIDES Less. B 1:401 as Matricaria discoidea.
T. PAUCIFLORUM DC 6:131. B 1:401 as Matricaria discoidea.
T. POTENTILLOIDES G 9:204. B 1:402. M 1:7 as Sphaeromeria p.
T. SIMPLEX Aven Nelson; T c b 26: 484 (1899). M 1:7 as Sphaeromeria Simplex.
T. SUAVIOLENS Hook, Fl 1:327 t 110. B 1:401 as Matricaria discoidea.
T. VULGARE L, sp pl 844. B 1:402, "Tansy". Eu.
T. NUTTALLII T & G, Fl 2:415. Parry, Pl Wyo 4.
TARAXACUM L, syst ed 1 (1735).
T. AMBOPHILUM P 4:233.
T. ANGUSTIFOLIUM P 4:232.
T. CERBALOPHORUM DC 7:146. P 4:231. = officinale fide IK.
T. CHAMISSONIS P 4:228.
T. DENIS-LEONIS Desf. Da 10, Er 1:60 LA Co. B 1:489.
T. DUMETORUM P 4:230.
T. ERYTHROSPERMUM Andr. ex Bess En Pl Volh 75, 106. P 4:227, 233. = officinale fide IK.
T. LACERUM P 4:230.
T. LATILOBUM P 4:231.
T. MUTILOM P 4:232.
T. OFFICINALE Weber, in Wigg Prim Pl Holsat 56. P 4:227.
T. OVIFORME P 4:229.
TARAXIA
T. TARAXACIFOLIA M 1:1.
 Genus **TAXUS** Tournfort. L, syst ed 1 (1735).
T. BURCHERII Carr in Rev Hort sr 4, 3:228 (1854). B 2:110 as brevifolia.
TAXUS BREVIFOLIA Nutt. Sylv 3:86 t 108. B 2:110. P 3:69.
 Pacific Yew. Small trees growing along streams of British Columbia, south to the Santa Cruz mts, Cal. Lvs small, in 2 ranks. Wood tough and elastic.
T. CANADENSIS Willd, sp pl 4:856. B 2:110. (Bigelow in Pac Ry R 4:25. = brevifolia fide IK.)
T. LINDLEYANA Murr in Edinb new Phil J 1:294. B 2:110 as brevifolia.
TAXODIUM Rich in Ann mus Par 16: 208 (1810).
T. DISTICHUM Rich. lc. Z 1:91.
T. GIGANTEUM K & Behr, K 1:54. Cur 1:148 as Sequoia g. B 2:117 as same.
T. SEMPERVIRENS Lambert. Gen Pin ed 2:107, t 48; ed 3, 120 t 64. B 2:116 as Sequoia s.

T. WASHINGTONIANUM Winslow, Cal Farmer, S 1854; Kew J bot 7:29. B 2: 117 as *Sequoia gigantea*.
TAYLORIA Hook. Moss.
T. SERRATA Bruch & Schimp, Bryol Eu t 284, 285. B 2:387.
T. SFLACHENOIDES Hook Musc Exot t 173. B 2:386. Nev.
TEGOMA Juss, Gen 139 (1789).
T. STANS Juss lc. Baja (Br).
 Genus **TELLIMA** R. Brown.

Frankl Narr 1st J App 765, in obs (1823)
TELLIMA AFFINIS Bolander.
 G, B 1:198. Da 6. Ha 84. Br, Z 1:113 Cat. Star of Bethlehem.

Plumas Co; S Ber foothills (Parish 274).
T. BOLANDERI G. B 1:198. Cal.
TELLIMA CYMBALARIA Walp.
 Nom ed 2, 2:665; Walp Rep 2: 372. Br 1:203 Cruz. B 1:198.

S Ber to Baja! Crus (Br).
TELLIMA GRANDIFLORA R. Br. -
 R Br, lc. B 1:197. Par 348.
 Santa Cruz Co to Alaska.

T. HETEROPHYLLA H & A, bot Beech 346. B 1:198.
T. PARVIFOLIA Hook Fl 1:239 t 78. B 1:198.

TELLIMA TENELLA Walpers.
 Steud nom ed 2, 2:665; Walp Rep 2:371. B 1:198.

So Calif (Parish 1821).
TELLIMA TRIPARTITA Greene.
 A 1:39 fdr.

TELOKYS Moq in Ann sc nat sr 2, 1: 289 t 10 (1834). = *Chenopodium fide* IK.
T. AETIATA Moq. fl Chen aristatum fide IK.

T. CORNUTA T, Pac Ry R 4:129. B 2: 46, 482. = *Chen cornutum* fide IK.
T. MANDONI Wat 9:91. B 2:482 as *Chenopodium foetidum* Schrad.

TETRARANTHEM K 2:144. = *Frasera fide* IK.
T. RADIATUM K 2:144. B 1:484 as *Frasera speciosa* Cur 1:142 as same.

TERRIS
T. PATULA Grah. A 1:112 as *Arabis Holboellii*.

TERRARIA R & P, Pav Prod 112 t 24 (1794).
T. BOREALIS T & G, Emory R 143. Da 8. B 1:334. A 1:186 as *Pluchea borealis* (sericea).

Genus **TETRACOCCLUS** Engelm.
 Parry, W 1:13. Wat 20:372. A 1:376 fdr.
TETRACOCCLUS DIOICUS Parry.
 W 1:13. A 1:376 fdr.

T. ENGELMANNI Wat 20:373. = *dioicus*.

Genus **TETRADYMIA** De Candolle.
 DC 6:440 (1830).

Low rigid canescently tomentose shrubs with alt narrow entire lvs: fls y in cymose-clustered discoid hds: inv long and narrow, of 4-6 bracts: cor with long tube, the narrow spreading lobes longer than the campanulate inv: ak terete, short, 5-nerved, from long-villous to glabrous: pappus of fine and soft long capillary w or w'ish bristles.
TETRADYMIA CANESCENS DC.
 Prodr 6:440. B 1:407.

British Columbia to So Cal.; Texas.
 Variety **INERMIS** B 1:408.

TETRADYMIA COMOSA A. Gray.
 G 12:60. B 2:458. Ab 438. A 1:196d.
 Gray. Am ac pr 12:60 (1876).

Type locality: "W. Nev." "S. E. borders of Cal." "Potrero," SD Co. Covilla, CNH 4:141.
 Abrams, Fl LA 438.

Nevada; SBer; SD Co; Baja!
TETRADYMIA GLABRATA A. Gray.
 Pac Ry R 2:122 t 5 (1854). B 1:408. Da 10.

Oregon; Utah; California.
T. INERMIS Nutt. Am phil sc tr ns, 7: 415 (1841). B 1:408 as *canescens* var.
T. NUTTALLII T & G, Fl 2:447. B 1: 408. Ut; Idaho.

T. RAMOSISSIMA T. Emory R 145 (1848). B 1:409 as *Psathyrotes* r.

TETRADYMIA SPINOSA H. & A.
 Bot Beech 360. Cov 141, Ut, Nev, Da 10. B 1:407.

Type locality: "Snake country," Idaho. Idaho; Oregon; Mohave!

T. SQUAMATA G 9:207. B 1:408. = *Lepidospartum* s.

Variety **BREWERY** G, B 1:408.
 Variety **PALMERI** B 1:408. CD in Ar.

TETRAGONANTHEM
T. BRENTOLIANUS M 1:2, based on *Halenia* B.

T. HETERANTHEM M 1:2, based on *Halenia* h.

T. ROTHECKII M 4:81 Ar.
TETRAEURIS P 3:265.

T. ACAULIS P 3:265 based on *Galaria* a of Pursh.

T. ANGUSTATA P 3:267, Chihuahua.
T. ARIZONICA P 3:266, Ar.

T. BREVIFOLIA P 3:266, Pike's Peak.
T. DEPRESSA P 3:266 based on *Actinella depressa* T & G. Colo. Ut.

T. FASTIGIATA P 3:268, Kansas.
T. GLABRA P 3:268 based on *Actinella* g. Rocky mts.

T. HERBACEA P 3:268, Ill; O.
T. IVESIANA P 3:269, on Rio Zuni.

T. LANATA P 3:265 based on *Actinella* l of Nutt.

T. LEPTOCLADA P 3:269 based on *Actinella* l of G. Colo, NM, Ar.

T. LINEARIFOLIA P 3:269 based on *Hymenoxys* l of Hook.

T. LINEARIS P 3:267 based on *Actinella* scaposa variety l of Nutt. Tex; NM.

T. OBLONGIFOLIA P 3:269, Nuevo Leon, Mex.

T. SOAPOSA P 3:266 based on *Cephalophora* s. (*Actinella scaposa* Nutt). Tex. NM.

T. TORREYANA P 3:265 based on *Actinella* T.

T. TRINERVATA P 3:267, NM.

TETRANTHERA Jacq, Hort Schoenb 1: 59 t 113 (1797). = *Litsea* fide IK.

T. CALIFORNICA H & A, bot Beech 159. B 2:61 as *Umbellularia* C.

TETRAPEIS Hedw.
T. PELLUCIDA Hedw. B 2:376.

TEUCRIUM L, syst ed 1 (1735).
T. CANADENSE L, sp pl 564. B 2:478.

Buenos Ayres. Tex. Cal. WL. Mex. Yuma, Ar (Parish 756).

TEUCRIUM CUBENSE Linn.
 Jacq, En Pl Carib 25. B 2:478.

T. LACINIATUM T, Ann Lyc NY 2:231 (1828). B 2:478.

T. GLANDULOSUM K 2:23. Mex. Baja

(Br). P 1:206 Cedros. Cur 1:145.
T. OCCIDENTALE G, Syn Fl 2 (1):349. B 2:477.
THALESIA Raf, Am mag 1818, 267, = Aphyllon fide IK.
T. PASCICULATA Britton. Ab 374. M 3:77, 4:80.
T. UNIFLORA Raf, lc. = Aphyllon u fide IK.
THALICTRUM Tourn ex L, Gen, ed 1, 164 (1737). A 1:148d.
T. FENDLERI B 1:4 in part = platycarpum fide P 1:166, of Anders, Cat pl Nev 117 = same fide IK.
T. FENDLERI E ex G, Am ac mem ns, 4:5 (1849). B 1:4. 2:425. A 1:148 as polycarpon (as regards So Cal plant). Variety **FLATYCARPUM** Trelease, Bost sc nat hist pr 23:304. P 1:166 as sp.
T. FISSUM P 4:233.
T. HESPERIUM P 2:24 based on platycarpum (of P 1:166 not of Hook f & Th.)
T. OCCIDENTALE G 8:372. A 1:148d. B 1:4. 2:425. = dioicum fide IK.
T. FLATYCARPUM P 1:166; 2:24 as hesperium.
T. POLYCARPUM Wat 14:288. B 2:424. Da 1. Ab 156. A 1:148d.
T. SPATIFOLIUM Turcz ex F & M, Ind sem Hort Petrop 1:40. B 2:425. A 1:148d.
T. POLYGANUM M 4:72 Pa.
THAMNIUM Schimp. = Hypnum fide B 2:416.
T. ALLEGHANIENSE Bruch & Schimp. B 2:416 as H: a.

Genus THAMNOSMA Torrey.

T & Fremont, in Frem 2d R 313 (1845).
THAMNOSMA MONTANUM Torr.
 T & F, lc. B 1:97. CD! Ft Mohave. Ut. Baja!
T. TEXANA T, bot Mex bound 42. Br, Colo 234. B 1:97.
THELAA Alef in Linnaea 28:33 (1856). = Pyrola fide IK.
T. BRACTEATA Alef lc 28:57. B 1:460 as Pyrola rotundifolia variety bracteata G.
T. SPATULATA Alefeld, lc. B 1:461 as Pyrola picta.
THELESFERMA Less, in Linnaea 6:511 (1831).
T. FORMOSUM P 5:56.
THELYPODIUM Endl. A 1:114d.
T. AFFINE P 4:314.
T. ANISOPETALUM P 3:247.
T. COOPERI Wat 12:246. A 1:114. B 2:431.
T. CRENATUM P 4:20.
T. ATTBIGUUM Wat 14:290. B 2:431.
T. BRACHYCARPUM T, US exp 2:231. B 1:37. 2:431.
T. FLAVESCENS Wat, bot king 25. B 1:38.
T. INALIENUM Ab 166.
T. INTEGRIFOLIUM Endl. A 1:114d. Da 2. B 1:37. P 4:20. 314.
T. LACINIATUM Endl Gen Pl 876. Walp Rep 1:172. B 1:37. Br, Z 1:113 Cat. Ore. M 3:4 not Cat.
T. LASIOPHYLLUM Greene, T cl b 13:142; Cal ac b 2:390 Cruz; P 1:85 Mig. Ab 166. A 1:114d. 124. Da 2. M 3:4 Cat. Variety **INALIENUM** Rob. A 1:115d.
T. LONGIFOLIUM Wat, bot king 25. B 1:38.

T. MICRANTHUM P 3:248.
T. NUTTALLII Wat, bot king 26. B 1:37.
T. NEGLECTUM Jones, Am nat 17:875 (1832). Cal. A 1:115 as lasiophyllum.
T. RHOMBOIDEUM P 4:314.
T. RIGIDUM P 1:62.
T. SAGITTATUM Endl, Walp Rep 1:172. B 1:37.
T. SIMPLEX P 4:200.
THELYPODIUM STENOPETALUM Wat Wat 22:468. A 1:5 fdr.
T. PROCERUM Da, Er 2:178, LA Co.
T. WRIGHTII G, Pl Wright 1:7. A 1:115.
THEMIS Sallsb Gen Pl Fragm 85 (1866). = Brodiaea fide IK.
T. IXIODES Sallsb lc. B 2:155 as B. i.
THERESIA C. Koch in Linnaea 22:232 (1849). = Fritillaria.
T. PUDICA Klatt. B 2:170 as W: p.
 Genus **THERMOPSIS R. Brown.**
THERMOPSIS CALIFORNICA S. Wat. Wat 11:126. B 1:113. Par 154. A 1:35. Variety **VELUTINA** Greene. A 1:35 as velutina.
T. FABACEA DC 2:99.
 Variety **MONTANA** G; Wat bot king 53. B 1:114 as sp.
T. MACROPHYLLA H & A, bot Beech 329. B 1:113, 114 as montana (as to var. B in T & G Fl). T & G Fl 1:388. (T, Pac Ry R 4:81 = California fide. B 1:114).
T. RHOMBIFOLIA Richards. B 1:114. Ckl W 5:10.
T. PINETORUM P 4:133.
THERMOPSIS VELUTINA Greene.
 T. californica var. velutina Greene, Erythea 1:81.
 A 1:35 fdr.
THEROFON Raf. A 1:326d.
T. ELATUM Greene. Ab 189. A 1:326d.
T. INTERMEDIUM M 1:53.
T. ROTUNDIFOLIUM Wheelock. Ab 189. A 1:326d.
TELASFI Tourn, L, Gen ed 1, 193 (1737).
T. ALPESTRE L, sp pl, ed 2, 903. B 1:45. 2:432. Eu.
T. COCCLEARIIFORME B 1:45 as
T. FENDLERI G, Pl Wright 2:14. B 1:45 as
T. MONTANUM L, sp pl 647. Eu. (Hook Fl 1:58 et T & G Fl 1:114. = alpestre fide B 1:45.)
THUIDIUM Schimper.
T. BLANDOWII Bruch & Schimp. B 2:411 as Hypnum B.
T. LEUCONEURUM Lesq. B 2:411 as Hypnum l.
 Genus **THUYA Tournefort.**
 L, syst ed 1 (1735).
T. CRAIGIANA A Murr. Oreg Exp 2 t 5. B 2:116 as Libocedrus decurrens.
THUYA GIGANTEA Nutt.
 Phil ac J 7:52 (1834). B 2:115.
T. EXSELSE Bong. M 4:7 fdr.
T. MENZIESII Dougl ex Endl Syn Conif 52. B 2:115 as gigantea.
T. OCCIDENTALIS L, sp pl 1002. B 2:115.
T. FLICATA Lamb, Pln ed 800, 127 n 61 (part = gigantea fide IK.)
THYMUS Tourn ex L, syst ed 1 (1735).
T. CHAMISSONIS Bth in Linnaea 6:80 (1831). = Micromeria Douglasii fide. B 1:595.

T. DOUGLASSII Bth lc. = *Micromeria*
D fide. B 1:595.
THYSANOCARPUS Hook, Fl 1:69 t 18
f A. A 1:115d.
T. AMPLECTENS P 3:87.
T. APFINES P 4:311.
THYSANOCARPUS CONCHULIFERUS.
Greene, T cl b 13:218; Cal ac b 2:390
Cruz: P 1:31. Z 1:132. A 1:20 fdr, 261
fdr.

K. Brandegee, Zoe 1:132.
Variety **PLANIUSCULUS** Rob. A 1:261
fdr.
T. CRENATUS Nutt, T & G Fl 1:118. B
1:49 as *laciniatus* variety c.
T. CURVIFES Hook Fl 1:69 t 18 f A.
Ab 177. A 1:115d. B 1:48.
Variety **ELEGANS** Rob. A 1:115. M 4:
65.
Variety **PULCHELLUS** Greene. Da 2,
Er 2:179, LA Co. A 1:115.
T. ELEGANS F & M Ind sem Hort
Petrop 2:51. B 1:48 as *curvipes*.
T. EMARGINATUS P 3:86.
T. ERECTUS Wat 11:124. B 1:49 Guad.
T. FILIPES P 4:200.
T. HIRTELLUS P 3:86.
T. LACINIATUS Nutt, T & G Fl 1:118.
B 1:49. Da 2. Ab 177. Br 1:225 (cites
ramosus as a synonym). A 1:115d.
Variety **CRENATUS** Brewer, B 1:49. A
1:115.

T. OBLONGIFOLIUS Nutt, T & G Fl
1:119. Greene, Cal ac b 1:73 as *athysanus*
pusillus (T. *pusillus* fide B 1:49).
A 1:117s.
T. PULCHELLUS F & M, lc. B 1:48 as
curvipes.
THYSANOCARPUS PUSILLUS Hooker.
lc Pl t 42. Da 2. B 1:49. 2:432. A 1:117.
H & A, bot Beech 324. Wat, bot king 31.
T & G Fl 1:119.

See *Athysanus pusillus* Greene.
T. RADIANUS Bth 297. B 1:49.
THYSANOCARPUS RAMOSUS.
Greene, Cal ac b 2:390 (28 My 1887):
—"Wholly glab and slightly glau, a ft
hl, the st parted near the base into
many erect, leafy and at length race-
mose branches; lvs 2-4' lg. linear, those
of the branches entire, or with a few
scattered sm but salient teeth, and an
auriculate-clasping base, the lower and
radical with 2-3 pairs of linear divaricate
lobes; raceme naked, the pedicels
slender and recurved; sep minute, cym-
biform, erect-spreading in fl, w. with a
broad g mid-vein; pet twice the length
of the sep, spatulate-oblg, retuse; sta 6,
all of the same length, 3 on each side
of the broad flat pist; samara regularly
and rather strongly concavo-convex, the
crenate margin with or without some
oblg perforations; sty short, persistent.
Species just intermediate between its
very singular island congener and the
mainland T. *crenatus*; having the foliage
and branching habit of the former,
nearly." Cruz.

See *Thysanocarpus laciniatus* Nuttall.
THYSANTHEMA Neck.
T. HYBRIDUM Gifts 1:158 based on
Tussilago hybrida L.
TIABELLA L. Diss Chen 29 (1751).
T. MENZIESII Pursh, Fl 1:313. B 1:197
as *Tolmiea* M.
T. STEFOPETALA Presl. B 1:199 as

trifoliata L.
T. TRIFOLIATA L. B 1:199. Asia; Alk;
Ore.
T. UNIFOLIATA Hook, Fl 1:238 t 81.
B 1:199.
TIBOUCHINIA Aubl Pl Gui 1:445 t 177
(1775).
T. BRITTONIANA Cogniaux, T cl b 11:
—, Z 1:63, SA.
TILLAEA Michx ex L, syst ed 1 (1735).
A 1:327d.
TILLAEA ANGUSTIFOLIA Nuttall.
T & G Fl 1:558. B 1:209. Br, Z 1:113
Cat. A 1:48.
See *Tillaeastrum aquaticum*.
T. AQUATICA L. A 1:48 as *Tillaeas-*
trum a.
T. GOLANDERI Greene. A 1:49 as *Til-*
laeastrum aquaticum.
T. ERECTA H & A. M 3:99 cites *minima*
Miers as a synonym.
T. LEPTOPETALA Bth 310. B 1:208 et
A 1:327 as *minima* variety *subsimplex*.
T. MINIMA Miers, Chil 2:530. Ab 188.
B 1:208. Da 6. Greene, Cal ac b 1:210
Cruz. Br 1:210 Rosa. A 1:327d. M 3:99
as *erecta*.
Variety **SUBSIMPLEX** Wat 1:208. A 1:
327d.
T. PEDUNCULARIS Sm in Rees Cycl
35: n 4. Brazil. B 2:446 SBer. Gay, Fl
Chil 2:531. DC Prodr 3:382.
T. SIMPLEX Nutt, Phil ac J 1:114. A
1:49 as *Tillaeastrum aquaticum*.
Genus **TILLAEASTRUM** Britton.
TILLAEASTRUM AQUATICUM.
Britton, NY bot gard b 3:1, based on
Tillaea aquatica L, Sp Pl 128 (1753)
A 1:48d.
TIMMIA J. F. Gmel, Syst 524, 538
(1791). = *Cyrtanthus*.
TIMMIA Hedw. Moss.
T. MEGALOPOLITANA Hedw. B 2:399.
TISSA Adans. Fam 2:507. A 1:157d. =
Spergularia fide IK.
T. GRACILIS Britton. Ab 149. A 1:163.
T. LEUCANTHA P 1:301.
T. LUTEOLA P 5:114.
T. MACROTHECA Britton. Ab 149. Da
3. M 3:74. A 1:157d, 163.
T. MARINA Britton. Ab 148. A 1:158d,
163.
T. MEDIUM Da 3.
TISSA TALLINUM Greene.
"Per and apparently suffrutescens;
the erect branches almost without in-
ternodes and densely clothed with linear
or linear-filiform lvs 1-2½' lg, these
from glab to sparsely glandular-his-
pidulous under a lens; the triangular-
lanceolate long-attenuate stipules ½-¾'
lg; infl a rather dense sh peduncled
cyme; cap nearly cylindrical, 3 or 4" lg,
little exceeding the narly linear-oblg
hispidulous sep; sds minute, broad-
pyriform smooth, wingless."—Greene,
Er 1:106. Guad.
T. TENUIS Greene. Ab 149. A 1:158d.
T. VALIDA Greene. A 1:158 fdr.
T. VITILLOSA Britton.
TIQUILLA Pers Syn 1:157 (1805). =
Coldenia fide IK.
T. BREVIFFOLIA Nutt, ex T, bot Mex
bound 136. B 1:520 as *Coldenia* Nuttallii.
Variety **PLICATA** T, lc. B 1:520 as *Col-*
denia Palmeri.
THESIPTERIS

T. FORSTERI Endlicher. Australia. B 2:349.
TITHYMALUS Tourn ex Hall, Enum Stirp Helv 1:189 (1742). = Euphorbia fide IK.
T. PHILLOBUS Ckl., M 4:56 based on E: montana E (not Raf).
T. CRENULATUS M 1:55.
T. DICTYOSPERMUS M 1:56.
T. FRANCISCANUS M 1:56.
TOLPHELDIA Huds, Fl Angl ed 2, 157 (1778).
T. GLUTINOSA Pers syn 1:399. B 2: 184. 484. P 3:81.
T. OCCIDENTALIS Wat 14:283. B 2:184.
TOLMIEA T & G Fl 1:582 (1840).
T. MENZIESII T & G, Fl 1:582. B 1:197.
TONELLA Nutt, ex G 7:378 (1868).
T. COLLENSIODES Nutt, G 7:378; 11: 92; B 1:565. P 1:55 as Collinsia tenella. M 1:5 as Tonella tenella.
T. FLORIBUNDA G, B 1:556. P 1:55 as Collinsia f.
T. TENELLA M 1:5, based on Collinsia tenella Bth, DC Prodr 10:593 (1846).
 * Genus **TORREYA** Arnott.
 Ann nat hist sr 1, 1:130 (1838).
TORREYA CALIFORNICA Torr.
 NY J Pharm 3:49 (1852). B 2:110.
 See Tumion Californicum.
T. MYRISTICA Hook, bot mag t 4780. B 2:110 as Californica.
TORTULA = Barbula.
T. CRASSINERVA De not, Musc Ital 1: 23 t 6. B 2:369 as B: chloronotis.
T. CUNEIFOLIA Smith, Engel, bot t 1510. B 2:369 as B: c.
T. INERMIS Mont; De not, musc Ital. 1:44 t 20. B 2:372 as B: l.
T. LAEVIFILA Schwaeger, suppl t 120. B 2:373 as B: l.
T. LATIFOLIA Wilson, Bryol Brit t 43. B 2:373 as B: l.
T. MARGINATA Wilson, Bryol Brit 131 t 43. B 2:370 as B: m.
T. MEMBRANIFOLIA Hook, Musc Exot 1: t 26. B 2:369 as B: m.
T. MUELLERI Wilson, lc, t 44. B 2: 373 as B: m.
T. PRINCEPS De not Musc Ital 1:33 t 13. B 2:373 as B: Muelleri.
T. EIGIDA Wilson, Bryol Brit t 32. B 2:368 as B: r.
T. EURALIS Hedw. B 2:373 as B: r.
T. SUBULATA Hedw, sp Musc t 37; Eng bot t 1101. B 2:372 as B: s.
TOVARIA Neck, Elem 3:190 (1790). = Smilacina fide IK.
T. BACEMOSA Baker, J Linn sc 14:570. B 2:161 as in part S. amplicaulis.
T. SESSILIFOLIA Baker, lc, 566. B 2: 161 as S: s.
T. SRELLATA Necker, Baker lc, 565. B 2:162 as S: s.
TOWNSENDIA Hook, Fl 2:16 t 119 (1833).
T. BAKERI P 4:157.
T. FLOERFER G 16:84. B 2:455.
T. SCAPIFERA Eaton, bot king 145 t 17. R 2:455.
T. STRIGOSA Nutt, Am phil sc tr, ns, 7:306. B 2:455.
T. LEPOTES Osterh, M 4:69 based on sericea var. l. Colo.
T. WRIGHTII G, bot Mex bound 78. P 3:47. = Aster W (fide IK).

TOXICODENDRON L. = Rhus L.
TOXICODENDRON Tourn. Gifts 1:114.
 Type T: vulgare.
T: ABORIGINUM Gifts 1:125. Choctaw agency.
T: ARIZONICUM Gifts 1:123. Ar.
T: BITERNATUM Gifts 1:124. Tex.
T: BLODDGETII Gifts 1:126 based on Rhus B. (Kearney, T cl b 21:486).
T: COMAROPHYLLUM Gifts 1:120.
 "Sts upright, lfy branches light r-brown, obscurely puberulent, well marked with sm elliptic lenticels: lfts obovate-deltoid, the terminal 1 or 2' lg and petiolulate, the laterals half as large, sessile, all entire except around and across the nearly truncate apex which is almost as broad as lfts' length, here crenate-toothed, the upper face dark g. lower pale, both glab: fr in loose pendulous clusters both notably compressed and elongated, being round-oval, but obtuse, the epicarp very thin and fragile, delicately puberulent: putamen strongly striate."—Gifts 1:120. "From Tighe's, near S. D." (near Julian, S. D. Co).
T: COMPACTUM Gifts 1:126. Vt.
T: CORIACEUM Gifts 1:120. Wash.
 "Branches only sparsely lfy, elongated and curved, the shrub, perhaps, reclining or trailing but not rt'g, bark g'ish-gray, minutely hirtellous: lvs elongated and lg-stalked, the whole 6-10' lg; lfts subcoriaceous, entire, deep-g and giab above, beneath with villous midvein but otherwise nearly glab, the terminal ovate, acuminate, 2-4' lg, the pair remote from it, sm'er, very inequilateral: panicles sm, sessile, neither erect nor ascending but spreading divaricately: fr very sm, depressed-globose: epicarp polished, not wrinkled, only faintly striate."—Gifts 1:122. Baja.
T. DIVERSILOBUM Greene. M 3:115.
T: DIVERSILOBUM Gifts 1:119 based on Rhus d (T & G Fl 1:218). Ore; Cal.
T: DRYOPHILUM Gifts 1:121.
 "Dendrophilous, climbing trees to the height of 20': branches puberulent, knotted by salient protuberances under the insertion of lvs: foliage large, 6-8' from base of petiole to apex of terminal lft, lfts 2½-4' lg, oft 3 in width, of oval or ovate outline, coarsely but not deeply crenate-lobed but lobes all abruptly acutish, texture thin even in autumnal maturity, of a deep rich g above paler beneath and with slight pubescence along veins: inf a simple raceme in axil of every lf, never paniced, frs seldom more than 2 or 3 to each raceme, but pedicels slender and drooping: striae of fr indistinct, obscured by a strong very irr wrinkling of whole epicarp."—Gifts 1:121. Little Chico Creek, Butte Co., Cal.
T: EXIMUM Gifts 1:123. Durango, Mex.
T: GLABRUM Mill Dict (1768). Gifts 1:116.
T: GONIOCARPUM Gifts 1:125. Fla.
T: HESPERIUM Gifts 1:118. Ore; Wash; Id.
T: ISOPHYLLUM Gifts 1:121.
 "Stoutish upright striate sts velvety-puberulent not only the first but also the 2d and 3d seasons: lvs palmately 3-foliate, lfts= in size and all 3 sessile,

1-1½ r lg. of somewhat obovate general contour but pinnately sinuate-lobed, the rounded lobes not deep but in about 3 always opp pairs, dark g above, yet dull and with a glau hue, paler beneath, with very few and scattered appressed hair points on both faces, but between the veins, not along them: fr sm, epicarp not polished but dull and murfucate-punctate as well as somewhat pubescent, the roundish but notably compressed putamen ribbed and striated."—Gifts 1:121. River banks near San Jacinto, Cal.

T: LAETEVIENS Gifts 1:123. Ar.
T: LOBADIOIDES Gifts 1:119. Ore.
T: LONGIPES Gifts 1:118. Ut.
T: MACROCARPUM Gifts 1:117. Kans.
T: MONTICOLA Gifts 1:126. Ga.
T: NEGUNDO Gifts 1:117. Kans.
T: ORIENTALE Gifts 1:127. Japan.
T: OKYCAEPUM Gifts 1:21.

"Twigs smooth, free from angles and lenticels, slightly puberulent: lvs thin, very large, the terminal lft 3-4½' lg, oval, coarsely and evenly crenate-lobed, laterals sm'er, inquilateral, entire on nar'er side, on the other lobed like the terminal, deep g and glab above, beneath paler, with a few hirtelous hairs along veins and on margin: inf panicle but branches of it only 2 or 3 and very sh: fr on slender pedicels and pendulous, notably compressed and of singularly oblique-rhomboid outline, tapering turbinate from above middle to base, upper part more abruptly acute, epicarp not striate but irr sharply and deeply wrinkled, minutely hirtelous-puberulent."—Gifts 1:121. Vicinity of Santa Cruz, Cal.

T: PHASEOLOIDES Gifts 1:123. Son.
T: PUBESCENS Mill Dict (1768). Gifts 1:116. Rhus Toxicodendron L. sppl 266 (not Small, Fl 727 fide Greene.)
T: PUMILUM Gifts 1:124. Ar.
T: PUNCTATUM Gifts 1:126. N. M.
T: QUERCIFOLIUM Gifts 1:127 based on Rhus q (Steud, Nom ed 1, 639). Dela. Fla.
T: RHOMBOIDEUM Gifts 1:125 based on Rhus r (Small, Fl 727).
T: RYDBERGII Gifts 1:117 based on Rhus R (small, in Rydl Fl Mont 268, in part). Mont; Wyo; Colo; N. M.
T: DIVARICATUM Gifts 1:122.
T: VACCARUM Gifts 1:122.

"Sts slender, upright, branchlets not striate, obviously knotted by sm infrapetiolar protuberances, densely puberulent: lvs of sm'est, lfts from ¾ to 1' lg, rather deeply and angularly 5-lobed, dark g and glab above, paler and pubescent beneath especially along the veins: inf a simple ascending and rather lg raceme in axil of each lf: stam fls very sm, with sh subquadrate anth on still sh'er fl: fr?"—Gifts 1:122. Cow Creek Mts, Shasta Co., Cal.

T: VERUCOSUM Gifts 1:124 based on Rhus v (Scheele, Linnaea 21:592). Tex.
T: VULGARE Mill Dict (1768). Gifts 1:115. Rhus radicans, in part.
TRACAULON Raf, Fl Tell 3:13 (1836). = Polygonum fide IK.
T: ABIFOLIUM Raf, Fl Tell 3:13 = P: arifolium fide 1k.

T: MULTANGULARE Gifts 1:22 based on P: m (H and A comp to bot mag 2:62).

T: SIBIRICUM Gifts 1:22 based on P: sagittatum sibiricum Meisn, Asla.
T: SIEBOLDII Gifts 1:22 based on P: sagittatum Thunb, Asla.
T: THUNBERGII Gifts 1:22 based on P: arifolium Thunb, Asla.
T: HASTATO-TELOBUM Gifts 1:22 based on P: h (Meisn.)
T: STRIGOSUM Gifts 1:22 based on P: s (R Br).

T: MEISNERIANUM Gifts 1:22 based on P: M (Ch and Schl, Linnaea 3:40).
T: RUBRICALE Gifts 1:22 based on P: r (Ch, Linnaea 8:130).
T: STELLIGERUM Gifts 1:22 based on P: s (Ch, Linnaea 8:131).
T: MURICATUM Gifts 1:22 based on P: m (Meisn, Monogr 74).
T: PSEPHOLIUM Gifts 1:22 based on P: p (L. sp re ed 2, 521).

T: EDUJULARE Gifts 1:22 based on P: p (Wall, Cat n 1718).
T: PRAETERMISSUM Gifts 1:22 based on P: p (Hook f, Brit Ind 5:47).
T: MILIDULUM Gifts 1:22 based on P: p (Blume, Bijdr 535).
T: TETRAGONUM Gifts 1:22 based on P: t (Blume, Bijdr 535).
T: MACCLANUM Gifts 1:22 based on P: M (Regel, Fl Ussur 127).

TRAGANTHES Wallroth (1822). Gifts 1:12 (type: Eupatorium capillifolium).
T: COMPOSITIFOLIA Gifts 1:13 based on Eupatorium c (Walt, Carol 199).
T: EUGENEI Gifts 1:13 based on Eupatorium E (Small Fl Sus 1165).
T: LEPTOPHYLLA Gifts 1:13 based on Eupatorium l (DC 5:176).
T: FECTINATA Gifts 1:13 based on Eupatorium p (Small Fl 1165).
T: FINNATIFIDA Gifts 1:13 based on Eupatorium p (Ell, sk 2:295).
T: TENUIFOLIA Gifts 1:12 based on Eupatorium Capillifolium).
TRAGOPOGON L, syst ed 1 (1735).
T. FORESIOLUS L, sp pl 789. Ab 448.

TRADESCANTIA
T. UNIBESITATIS M 3:54, Colo.
T. REFLEKA M 3:54.
T. SCOPULORUM M 3:54.
TRAUTVETTERIA F & M.
T. GRANDIS Nutt, T & G Fl 1:37. B 2: 425. = palmata fide IK. M 3:78, Idaho, Cal.

T. PALMATA F & M, Ind Sem 1:22. B 2:425.
 Variety **OCCIDENTALIS** G 8:372. B 2: 425 as grandis.

TRELEASA
T. PUMILA P 4:225.

Genus **TRIBULUS** Linnaeus.
 L, syst ed 1 (1735).
T. CALIFORNICUS Wat 11:125. B 1:91.
T. FISHERI K 7:162. Cur 1:133 as grandiflorus.
TRIBULUS GRANDIFLORUS B. & H. B 1:91, 2:438.
TRIBULUS MAXIMUS Linn. L, sp pl 386. B 1:91.

Genus **TRICARDIA** Torrey.
 Wat, bot king 258 t 24 (1871).
TRICARDIA WATSONI Torr. B 1:515.

- TRICERASTES** Presl, Rel Haenk 2:88 t 64 (1836). = *Datisca*.
- T. GLOMERATA** Presl, lc. B 1:242 as *D. g.*
- TRICHODIUM** Michx Fl 1:41 t 8 (1803). = *Agrostis* fide IK.
- T. LAXIFLORUM** Bigel ex Mich Fl 1:42 t 8. B 2:274 as *A. scabra*.
- TRICHOLOBONIS** G, Am ac mem, ns, 4:65 (1849).
- T. RIPARIA** Greene, Er 1:42, based on *Bloetitia r* (P 2:216).
- TRICHOPHYLLUM** Nutt, Gen 2:166 (1818). = *Bahia* fide IK.
- T. INTEGRIFOLIUM** Hook Fl 1:316. B 1:381 as *B. i.*
- T. LANATUM** Nutt. B 1:381 as *B. i.*
- T. MULTIFLORUM** Nutt, Phill ac J 7:37. B 1:381 as *B. integrifolia*.
- TRICHOPTILIUM** G, Mex Bound 97 (1858).
- TRICHOPTILIUM INCISUM** A. Gray. G, Mex bound 97. B 1:395. T, Pac Ry R 5: t 5.
- Mohave; CD; Arizona; Baja (Br).
- Genus TRICHOSTEMA** Linnaeus. Gronov ex L, Hort Cliff 493 (1737). A 1:235d.
- T. ARIZONICUM** G 8:371. Ar. B 1:606.
- TRICHOSTEMA LANATUM** Benth. Lab G et sp 659. B 1:607. 2:477. Ab 340 Da 14. A 1:236d. Par 322 t.
- Davy Erythra 6:37. Monterey Co. Variety **LANCEOLATUM** Ab 339.
- TRICHOSTEMA LANCEOLATUM** Bth. Bentham, Lab 659 (1835). Coville, CNH 4:176.
- Jepson, Erythra 1:14.
- B 1:607. Da 14. Par 321. A 1:236d. Ab 339. M 3:77.
- T. LAXUM** G 7:387. B 1:607. Jepson, Er 1:13.
- T. MICRANTHUM** G, syn fl 2:348. B 2:477. Ha 114. A 1:362d. Sber Co.
- T. OBLONGUM** Bth, Lab G et sp 659. B 1:606.
- T. OVATUM** Cur 1:154. A 1:362 fdr.
- TRICHOSTEMA PARISHII** Vasey. Vasey, bot gaz 6:173. "Romero". Baja! So Cal.
- TRICHOSTOMUM** Smith.
- T. ANOMALUM** Schimp. B 2:367. SF.
- T. COLORADENSE** Austin, bot gaz 2:90. Yosemite. B 2:367.
- T. CORNICULATUM** Schwaegr, suppl 2:75 t 118. B 2:367 as *anomalum*.
- T. CRASSINERVE** Hampe, Linnaea 30:456. B 2:367 as *flexipes*.
- T. CRISPULUM** Bruch, Regensb Fl 12:t 4. B 2:367.
- T. FLEXICAULE** Bruch & Schimp, Bryol Eu t 18a. B 2:366 as *Leptatrichum f.*
- T. FLEXIPES** Bruch & Schimp, Bryol Eu t 171. B 2:367. SF. Eu.
- T. HETEROSTICHUM** Hedw. Musc Frond 2: t 25. B 2:381 as *Rhacomitrium h.*
- T. LANUGINOSUM** Hedw, lc 3: t 2. B 2:381 as *Rhacomitrium l.*
- T. RIGIDULUM** Smith. B 2:371 as *Barbula rigida*.
- T. TOPEACEUM** Bridel. Eu. Cal. B 2:367.
- TRICUSPIS** Beauv. Agrost 77 t 15 f 10 (1812).
- T. FULCURELLA** T, Pac Ry R 14:156.
- B 2:301. = *Triodia p* fide IK.
- TRIENTALIS** Rupp ex L, syst ed 1 (1735).
- T. AMERICANA** Pursh, Fl 1:252. B 1:468.
- T. ARCTICA** Fisch ex Hook Fl 2:121. B 1:469 as *Europaea* var: a.
- T. EUROPAEA** L, sp pl 344. Eu. Par 208.
- Variety **LATIFOLIA** T. B 1:469.
- T. LATIFOLIA** Hook Fl 2:121. B 1:469 as *Europaea* var: i.
- Genus TRIFOLIUM** Linnaeus.
- TRIFOLIUM AMPLECTENS** T. & G. Brandegee, Zoe 1:113. Cat. Cruz; Guad; Sonoma Co to Chilli.
- TRIFOLIUM BIFIDUM** A. Gray. Abrams, Fl LA 212. Morgans station (Davidson). Brewer & Watson, Bot Cal 1:129. Oregon. Davidson, Pl LA Co 4.
- TRIFOLIUM CATALINAE** S. Watson.
- TRIFOLIUM CILIATUM** Nutt.
- TRIFOLIUM CILIOLATUM** Bth. Abrams, Fl LA 212. Common on grassy hillsides and in the valley. Columbia river; Cruz (Greene); Sber hills (Parish 822); SD! Baja! Bentham, Pl Hartw 304 (1848). Davidson, Pl LA Co 4.
- TRIFOLIUM CILIATUM** Nuttall, Pl Gamb 152 (1848), not Clark.
- Brewer & Watson, bot Cal 1:129. LA to the Columbia.
- See *T. ciliolatum*.
- TRIFOLIUM DECODON** Greene.
- TRIFOLIUM DEPAUPERATUM** Desvaux. Abrams, Fl LA 215. Davidson, Pl LA Co 4.
- TRIFOLIUM EXILE** Greene.
- TRIFOLIUM FLAVULUM** Greene.
- TRIFOLIUM FRANCISCANUM** Greene. "Slender but wiry, the decumbent branches 5-10' lg: lfts linear-cuneiform, the very lowest entire, truncate and cuspidate, the others serrulate and acute; filiform peduncles far exceeding the lvs: inv-seg oblg, obtuse; hds sm, hemispherical or subglobose: cx-teeth sh and subulate: cor r-p, in age inflated to the broadly ovate. Type com at S F."—Greene, Man 100.
- Variety **TRUNCATUM** Greene, Man 100.
- "Larger and more flaccid, lfts ampler, nearly all linear and oblg-linear, truncate and scarcely toothed; hds larger: cor ochroleucous, the keel tipped with dark p, the whole in age inflated almost to the turbinate or obpyramidal. Abundant in Napa and Solano counties, etc."—Man, 100.
- TRIFOLIUM FUCATUM** Lindl.
- TRIFOLIUM GAMBELII** Nuttall. Mt. Diablo, and So. Cal. (Greene pitt 2:224).
- TRIFOLIUM GRACILENTUM** T. & G. *Trifolium denudatum* Nutt; J ac Phila. II. 1:152. t 24 (1848).
- Variety **INCOMSPICUUM** Fernald.
- TRIFOLIUM INVOLUCRATUM** Willd. Variety **HETERODON** S. Watson. Sber (Parish 1151).
- TRIFOLIUM MACRAEI** H. & A.

- Brandege, Zoe 1:113 Cat.
H & A, bot Misc 3:179 (1833).—Bot Beechey 330.
Type localities: "Baths of Collina, Macrae. Sandy hills, near Valparaiso, Mathews (n 174). Valparaiso, Cuming (n 749)."
Variety **ALBOPURPUREUM** Greene.
Abrams, Fl LA 213.
Davidson, Pl LA Co 4.
Trifolium albopurpureum T & G, Fl 1:313 (1838).
TRIFOLIUM MICROCEPHALUM Pursh
Puget Sound; Cat; Cruz; Guad; Baja; SD! SBER; San Clemente Island.
Pursh, Fl 2:478 (1814).
Type locality: "on the banks of Clark's river."
Per, ascending, pubescent; lvs obovate, dentate; hds sm, few-fld; fls sessile, exceedingly sm, pale p.
Coville, CNH 4:83, 274.
Abrams, Fl LA 214.
Hall, U 91.
TRIFOLIUM MICRODON H. & A.
Hooker & Arnot, Bot Beech 330 t 79.
Type locality:—"Valparaiso, Cuming (n 747)."
Torrey & Gray, Fl 1:691.
Variety **PILOSUM** Eastwood.
TRIFOLIUM MINUTIFLORUM Greene.
—Greene, Pittonia 3:215 (1897).
TRIFOLIUM MONANTHUM A. Gray.
Trifolium pauciflorum (?) var parvum Kellogg. Cal ac pr 5:54 (1873).
Trifolium multicaule Jones, Torr, cl b 9:31 (1882).
T. NEUROPHYLLUM Gifts 1:154 N. M.
TRIFOLIUM OBTUSIFLOREM Hooker.
Type locality: "near Monterey, Cal."
Trifolium roscidum Greene, Fl Fran 31 (1891).
Davidson, Pl LA Co 4.
TRIFOLIUM PALMERI S. Wats.
Brandege, Zoe 1:113, Cat.
San Clemente Island.
TRIFOLIUM PAUCIFLOREM Nuttall.
Wash; Mont; Ut; SBER hills (Parish 749); SD!
T & G, Fl 1:319.
Trifolium variegatum Nuttall.
Trifolium oliganthum Steudel.
TRIFOLIUM PRATENSE L.
Abrams, Fl LA 213.
L. Sp Pl 768 (1753).
Type locality:—"Europae graminosis."
TRIFOLIUM PROCUMBENS L.
Parish, Erythea 3:60.—"well established along the banks of a stream in Potatocanyon, alt 3000', in the SBER mts."
TRIFOLIUM REPENS Linn.
L. Sp Pl 767 (1753).
Type locality:—"Europae pascuis."
Abrams, Fl LA 212.
Davidson, Erythea 1:59, Pl LA Co 4.
TRIFOLIUM RUSBYI Greene.
Pittonia 1:5 (1887).
Hall, U 92.
Variety **ATROBENS** Greene.
Greene, Erythea, 4:66 (1896).
TRIFOLIUM SPINULOSUM Douglas.
Gabriel; SBER mts.
Abrams, Fl LA 213.
Douglas, Hook, Fl Bor, Am 1:133 (1834).
Type locality:—"Very common near springs, in the vallies between Spokane

- and Kettle Falls, Wash."
TRIFOLIUM STENOPHYLLUM Nutt.
Abrams, Fl LA 215.
Davidson, Pl LA Co 4.
TRIFOLIUM TRIDENTATUM Lindl.
Abrams, Fl LA 214.
Lindl, bot Reg t 1070 (1827).
Variety **MELANANTHUM** S. Watson.
"Arizona; So to middle Cal."
Variety **OBTUSIFLOREM** S. Watson.
SBER hills (Parish 751); SD! to middle Cal.
TRIFOLIUM VARIEGATUM Nutt.
See T. pauciflorum Nuttall.
TRIFOLIUM WOENSKJOLDII Lehm.
T. involucratum Wild of Bot Cal in part.
Abrams, Fl LA 213.
Hall, U 92.
Genus TRIGLOCHIN Linnaeus.
TRIGLOCHIN MARITIMUM Linn.
Genus TRILLIUM Linnaeus.
TRILLIUM CALIFORNICUM Kellogg.
TRILLIUM OVATUM Pursh.
TRILLIUM PETIOLATUM Pursh.
TRILLIUM SESSILE Linn.
TRIODIA PULCHELLA Torrey.
Tricusps pulchella Torrey.
TRISETUM CALIFORNICUM Vasey.
TRISETUM ELONGATUM Kth.
Texas: Baja (Or 143, 143).
TRISETUM SPICATUM Rich.
Genus **TRITELEIA** Douglas.
Scapes slender from a fibrous coated corn, with few thin linear lvs and bearing an umbel of y, w, blue or p fls: perianth tube rather sh or funnelliform, not inflated, angular or caccate; the seg erect or spreading; sta 6 unappendaged, all antheriferous; anth versatile or basifixed; ova on a slender stipe.
T. GRANDIFLOEA Lindl, bot reg sub t 1293. B 2:154 as Brodiaea Douglasii.
T. HENDERSONI P 1:164 based on Brodiaea H.
Type locality: Glendale, Ore.
T. LAKA Bth, Hort sc tr 1:413 t 15. A 1:183d. Lindl, bot reg t 1685. B 2:155 as Brodiaea l. M 3:80.
T. PALMERI P 1:292 based on Brodiaea P.
T. PEDUNCULARIS Lindl, bot reg sub t 1685. B 2:155 as Brodiaea p.
Genus TRITICUM Linnaeus.
TRITICUM L. syst ed 1 (1735).
T. AEGIOPOIDES Turcz. B 2:324 S. Parry, Pl Wyo 16.
T. CANINUM L, sp pl 86. B 2:324.
T. REPENS L, sp pl 86. Br, Colo 227. 246. Pa 19. B 2:323.
T. STRIGOSUM Spreng, syst 1:326. B 2:324.
T. VIOLACEUM Horn, Fl Dan t 2044. B 2:324.
TRIXIS P Br. Hist Jamaica 312 (1756).
TRIXIS ANGUSTIFOLIA D. C.
DC 7:69. P 1:205 Cedros; 265, San Benito Isl.
Texas to Cal.; throughout Baja.
Variety **LATIUSCULA** A. Gray.
CD; SD foothills; Texas.
T. CALIFORNICA K 2:182. Cur 1:141 as angustifolia.
T. SUPFRUTICOSA Wat, B 2:459.

- TROPAEOLUM** L. Gen. ed 1, 114 (1787).
T. MAJUS L. sp pl 345. B 1:93. Howe, Br 1:19.
TROPIDOCARPUM Hook. A 1:114d.
T. CAPPAEIDNUM P 1:217, Contra Costa Co. Cal.
TROPIDOCARPUM DUBIUM Davidson. Ab 174. A 1:5 fdr.
T. GRACILE Hook. Ic Pl t 43. Ab 173. B 1:44. 2:432. Da 2. A 1:114d.
T. SCABRIUNCULUM Hook. Ic, t 52. B 1:44 as gracile.

Genus **TROXIMON** Nuttall.

- Fraser Cat 1813, n n 83, 84. Pursh, Fl 2: 505, 742 (1814).
T. APARGIODES G. B 1:438.
T. ARIZONICUM P 2:78, mts of Ar and NM.
T. AURANTIACUM Hook. Fl 1:300 t 104. B 1:437. Cockerell W 6:11. P 2:76 Colo.
T. BLATUM P 1:71, "Plains of the lower Sacramento, Cal."
T. ORELENSIS G 9:216. = heterophyllum. B 1:439.
T. GLAUCUM Nutt. Fraser Cat 1813. P 2:77 Colo. B 1:437.
TROXIMON GRANDIFLORUM A. Gray. G 9:216. Par 169. P 1:91 Mig. Br 1:214 Rosa. B 1:438.
 Washington; CD; Rosa.
TROXIMON HETEROPHYLLUM Grne. Greene, T cl b 10:88; Cal ac b 2:406 Cruz. Ha 131.
 British Columbia; Utah; Cruz; Guad.
 Synonymy: *Macrorhynchus heterophyllum* Nutt.—*Agoseris heterophylla* P 2:178.
T. MARSHALLI P 1:174. Humboldt Co.
T. NUTTALLII G 9:216. B 1:438.
T. PARVIFLORUM Nutt. Am phil sc tr 7:434. P 2:78 Wyo. B 1:437a.
T. PLEBEIUM P 2:79.
T. PUMILUM Nutt. B 1:437 as aurantiacum, "a small form."
T. PUMILUM P 2:76 based on *Macrorhynchus purpureus* G (T. aurantiacum purpureum G). Colo; NM.
TROXIMON RETRORSUM A. Gray. G 9:216. Ha 131. B 1:438. (*Agoseris retrorsa* P 2:178.)
 Mendocino Co to S Ber mts.
T. TARAXACIFOLIUM Nutt. B 1:437 as glaucum var: t.

Genus **TSUGA** Carriere.

- T. CANADENSIS** Carr. Conif ed 1, 188. B 2:121.
T. DOUGLASSII Carr. Conif, ed 1, 192. B 2:120 as *Pseudotsuga* D.
TSUGA MERTENSIANA Carr. Carr. Conif ed 2:250. B 2:120. P 3:68.
T. FORTYANA E. Gard Chron 1879 (2): 756. B 2:121, 483. P 3:68.
TUCKERMANNIA Nutt. Am phil sc tr, ns 7:363 (1841). = *Leptosyne* fide IK.
T. MARTINA Nutt Ic. B 1:356 as L: m.
TUMION Raf. = *Torreya* Arn.
TUMION CALIFORNICUM Greene. *Torreya* California *Torreya*. California Nutmeg.
 False nutmeg. Singular trees of four species, found in Japan, China, Florida, and California respectively. Foliage of a heavy, disagreeable odor; fr resembling the nutmeg of commerce in both exterior and interior appearance, but having none of its qualities. Sd large, solitary.

- TUOMENYA**
T. FLUVIATILIS Harv. Z 1:91.
TURBITIS Tourn ex L, syst ed 1 (1735). = *Arabis* fide IK.
T. GLABRA L. sp pl 666. A 1:112 s.
T. LAKIOPHYLLA H & A, bot Beech 321. A 1:114a. B 1:41a.
T. MACROCARPA Nutt, T & G Fl 1:78. A 1:112s.
TUSILAGO L, syst ed 1 (1735).
T. PALMATA Ait. B 1:407s.
 Genus **TYPHA** Tournefort.

TYPHA ANGSTIFOLIA Linn.

Ab 8. Da 17. B 2:189.

TYPHA BRACHYATA

Greene, Cal ac b 2:413 (28 My 1887): —"Rather slender, 15-18 ft hi, the staminate and pistillate spike each 12-16 l long, separated by an interval of 1 l or more, aggregate length of spike in the largest specimens fully 3 ft, the staminate at flowering time subtended and partly embraced by a linear deciduous bract of its own length, and bearing 3-7 smaller somewhat scarious caducous ones above midway or near the apex: pollen simple. In a marshy place near the sea on the south side of Santa Cruz Island, above the mouth of Laguna canyon. A gigantic sp, were not out of fl * 13 Ag * the mature spike would be 1 l at least in thickness." Z 1:146a.

TYPHA LATIFOLIA Linn.

Da 17. Ab 8. B 2:188.

TYRIA Klotzsch. = *Bernardia*.

T. MYRICAEFOLIA Scheele. B 2:70a.

TUMIONELLA Gifts 1:173, with *Aplopappus monactis* as type.

T. MONACTIS Gifts 1:173.

UDORA Nutt Gen 2:242 (1818). = *Elodea*.

U. CANADENSIS Nutt, Gen 2:242. B 2: 129s.

ULOTA Mohr.

U. CRISFULA Bruch. B 2:382.

U. PHYLLANTHA Bridel. B 2:382.

Genus **UMBELLALARIA** Nuttall.

A 1:222d.

Trees with thick evergreen petioled lvs and perfect fls, borne in terminal or **UMBELLULARIA CALIFORNICA** Nutt. Da 15. B 2:61. Ab 158. Par 378. A 1:223d. M 3:34.

Cal Laurel. S Ber Co to Oregon.

UNAMIA Gifts 1:6 (type: *Aster ptarmicoides*).

U. PTARMICOIDES Gifts 1:6 based on *Aster* p.

U. FASTIGIATA Gifts 1:6 fd. Ind.

U. GEORGIANA Gifts 1:6 based on *Aster Ptarmicoides* var: *Georgianus*.

U. SUBOBERA Gifts 1:7 fd. So Dak.

UNCASIA Gifts 1:13 (type: *Eupatorium perfoliatum* L.). Based on *Eupatorium* sp.

U. ALBA (L. Mont 111) Gifts 1:13.

U. ALTISSIMA (L. sp pl 837) Gifts

U. ANOMALA (Nash, T cl b 23:106) Gifts 1:13.

U. CURBATA (E in T and G Fl 2:88) Gifts 1:13.

U. CUNEIFOLIA (Willd sp 3:1753) Gifts

1:13.

U. GLOMBRATA (DC 5:154) Gifts 1:13.

U. HYSOPIFOLIA (L, sp pl 836.) Gifts 1:13.
U. LECHEAEFOLIA (P 3:177) Gifts 1:13.
U. LEUCOLEPIS (T & G Fl 2:84) Gifts 1:13.
U. LINEARIFOLIA (Walt Carol 199) Gifts 1:13.
U. MIKANIODES (Chap Fl 195) Gifts 1:13.
U. MOHRII (Greene, CNH 6: 762) Gifts 1:13.
U. PALLESCENS (DC 5:154) Gifts 1:13.
U. PEFOLIATA (L, sp pl 838.) Gifts 1:13.
U. FETALOIDEA (Brit. T cl b 24:492) Gifts 1:13.
U. PUBESCENS (Muhl in Willd sp 3: 1753) Gifts 1:13.
U. RESINOSA (T in DC 5:176) Gifts 1:13.
U. ROTUNDIFOLIA (L, sp pl 837) Gifts 1:13.
U. SALVIA (Colla) Gifts 1:13.
U. SCABRIDA (Ell, sk 2:288) Gifts 1:13.
U. SEMISERRATA (DC 5:177) Gifts 1:13.
U. SEROTINA Gifts 1:13.
U. SESSILIFOLIA (L, sp pl 837) Gifts 1:13.
U. TORREYANA (Short, suppl 5) Gifts 1:13.
U. TORTIFOLIA (Chap, bot gaz 3:5) Gifts 1:13.
U. TRUNCATA (Muhl in willd sp 3: 1751) Gifts 1:13.
U. VERBENAEFOLIA (Mich. Fl 2:98) Gifts 1:13.
UNCINULA
U. SPIRALIS Howe, Er 1:25.
UNIFOLIUM Brunfels. = Malanthemum.
UNIFOLIUM P 2:31. = Smilacina Desf.
U. AMPLEXICAULE Greene, T cl b 15: 287 = Smilacina racemosa Desf fide IK.
U. DILATATUM Greene, Man 316. = M: convallaria fide IK.
U. LILIACEUM P 1:280 based on Smilacina stellata Wat.
U. RACEMOSUM Britton, NY ac tr 8:74. P 2:34.
U. SESSILIFOLIUM Greene, T cl b 15: 287. P 1:280. 2:31, 32.
U. STELLATUM Greene, T cl b 15:287. P 2:31-33.
URIOLA L, Gen, ed 1, 353 (1737).
U. MULTIPLORA Nutt. B 2:306s.
URIOLA PALMERI Vasey.
 Along the Colorado river in Sonora, where the Indians gather the grain for food (Palmer).
U. SPICATA L, sp pl 71. B 2:306s.
U. STRICTA T, NY Lyc ann 1:155. B 2:306s.
URALEPIS Nutt, Gen 1:62 (1818). = Triodia fide IK.
U. COMPOSITA Buckl, Phil ac pr 1862: 94. B 2:292s.
U. PULCHELLA Kunth, Rev Gram 1: 108. B 2:301s.
 Genus **URBINIA** Rose.
URBINIA CORDEROYI Rose.
 Rose NY bot gard b 3:12, based on Echeveria Corderoyi E Morren, Belg Hort 24:159 (1874). Northern Mexico. Cotyledon corderoyi Baker, Gard Chron 1:599 (1874).
 Purchased in San Luis Potosi, where it

was found on sale as a medicinal plant.—Orcutt.

Genus **UROAPPUS** Nuttall.

U. CLEVELANDI A 1:365.
U. GRANDIFLORUS Nutt. B 1:427s. A 1:252s.
UROAPPUS LEUCOCARPUS Greene. A 1:251d.
UROAPPUS LINDLEYI Nuttall. Ab 445. A 1:251d.
 Nutt Am phil soc tr 7:425 (1840). SF; SD (Or 1063); Baja; Rosa; Cruz.
 Calais Lindley DC prodr 7:85 (1838); T-G Fl 2:471 (1843), excl; C. linearifolia.
UROAPPUS LINEARIFOLIUS Nutt. Nutt Am phil soc tr 7:425 (1841). Ab 445. B 1:427s. A 1:251d.
 Type locality: "In California et circa Fort Vancouver."
 Coville, CNH 4:142. Panamint mts. Throughout Cal.; Baja; Nevada; Arizona; N. M.; Wash; Cruz; Rosa; Guad.
 U. grandiflorus Nutt l. c
 Calais linearifolia DC prodr 7:85 (1838).
URTICACEAE A 1:223d.
 Genus **URTICA** Tournefort.
URTICA Tourn. A 1:223d.
 Simple or branching herbs, with stinging hairs, and opp 3-7-nerved petioled serrate or dentate stipulate lvs; fls clustered in ax geminate racemes or hds; staminate fls 4-merous; pistillate cx with unequal sep, inner larger, at length enclosing the flattened ak; stlg sessile, tufted. Nettle.
URTICA BREWERI S. Watson.
 Watson, Am ac pr 10:343 (1875). Coville, CNH 4:195. Mt Whitney meadows.
 Ab 108. Da 16. B 2:64. A 1:224d.
 Parish, Zoe 5:112, as not LA.
 Type locality: "LA".
U. CALIFORNICA P 1:281, San Mateo Co, Cal.
U. DIOICA L, sp pl 984. B 2:64s.
URTICA HOLOSERICEA Nutt. Gamb 183. Da 16. B 2:64. A 1:223d. Greene, Cal ac b 2:412 Cruz.
 Abrams, Fl LA 107, Common in gardens and waste places.
U. LYALLII Wat 10:348. B 2:64. P 1:281 in part as ? Californica.
U. TRACHYCARPA Wedd, Arch mus Par 9:367. B 2:64s.
URTICA URENS Linn. L, sp pl 984. Greene, Cal ac b 2:412 Cruz. B 2:65. Ab 107. Da 16. Z 1:125. A 1:223d.
USTERIA Willd, in Roem & Usterl, Mag 1790: 151.
U. ANTIHEMINIFLORA Poir. B 1:551 as Antorrhinum maurandoides.
UTRICULARIA L syst ed 1 (1735).
U. INTERMEDIA Hayne, Schrad J 1800 (1): 18. Eu. B 2:476.
U. MINOR L, sp pl 18. Eu. B 1:586. (Pursh Fl 1:15 = gibba fide IK).
U. VULGARIS L, sp pl 18. Eu. Parry, Pl Wyo 18. B 1:586. K Br, Z 1:83, Marin Co, Cal.
UVULARIA L, Gen ed 1, 93 (1737).
U. SMITHII Hook Fl 2:174 t 189. B 2: 178s. = Disporum Menziesii fide IK.

VACCINIUM L, syst ed 1 (1735).
V. ALBUM Pursh. P 3:324 as ? Polycodium elevatum.
V. ARBOREUM Marshal, Arb 157 (1785). P 3:325 as *Barodendron a. NC*; III.
V. ARBUSCULA P 3:73, Alk; 81.
V. CAESIUM P 3:249, 325 as Polycodium c. Fla.
V. CAESPITOSUM Michx Fl 1:234. B 1:450. 2:460.
V. BLEVATUM Banks & Soland, DC Prodr 7:567 (1838). P 3:324 as Polycodium elevatum.
V. LANCEOLATUM DC, ex Dun, in Prodr 7:570. B 1:451 as ovatum.
V. MACROCARPON Ait, Hort Kew, ed 1, 2:13. B 1:450.
V. MYRTILLOIDES Michx, Fl 1:234. Parry, Pl Wyo 13. = *pennsylvanicum* fide IK.
V. MYRTILLUS L, sp pl 349. B 1:451.
V. OBLONGUM P 3:250, 325 as Polycodium o. Tenn.
V. OCCIDENTALE G, B 1:450.
V. OVALIFOLIUM Sm, in Rees Cyc 36: n 2. B 1:451. P 3:73.
V. OCATUM Purch, Fl 1:290. B 1:451. Greene, Cal ac b 2:406 Cruz. Par 206 t.
V. OXYCOCCUS L, sp pl 351. B 1:450. P 3:81 Alk.
V. PARVIFOLIUM Sm, in Rees Cyc 36: in 3. B 1:450. P 3:73, Alk.
V. REVOLUTUM P 3:250, 325 as Polycodium r. Fla.
V. STAMINEUM L, sp pl 390 (1753). P 3:324 as Polycodium S.
V. VITIS-IDAEA P 3:81 Alk.
V. ULIGINOSUM L, sp pl 350. B 1:451. B 1:451.
VAGNERA Adans. = *Smilacina*.
V. AMPLEXICAULIS Greene, Man 316.
V. AMPLEXICAULIS Greene, M 3:81.
V. SESSILIFOLIA Greene, Man 316.
V. SESSILIFOLIA Greene, M 3:80.
VALERIANA Tourn ex L, syst ed 1 (1735).
V. CALIFORNICA M 1:60.
V. CAPTATA Fall in herb willd. M 4: 83.
V. EDULIS Nutt, T & Fl 2:48. B 1:287. M 4:78 Ar.
V. SYLVATICA Banks. B 1:287. Par 111.
V. SITCHENSIS Bong. P 3:84. M 4:82 fdr.
V. SAMBUICIFOLIA Mik. M 4:83.
VALERIANELLA Tourn ex Hall, Enum Stirp Helv 666 (1742).
V. MACROCEBA G 19:83. Da 8. A 1: 179 as *Alligera m*: 340 as *Plectritis Macroceba* (Ab 382 as P: minor).
VANCLOVEA P 4:51.
V. STYLOSA P 4:51.
VANCOUVERIA C Morr & Decne in Ann sc nat, sr 2, 2:351 (1834).
V. CHEYSANTHA Greene, Cal ac b 1: 66. P 2:100 as Van: hexandra variety c. Ore.
V. HEXANDRA C Morr & Decne, lc. B 1:15. (Greene, Cal ac b 1:66 = *parviflora*.) Variety *CHEYSANTHA* P 2:100, reduced from sp.
V. PARVIFLORA P 2:100. Par 90 t.
VASEYA Thurb. Phil ac pr 1863: 79. = *Muehlenbergia* fide IK.
V. COMATA Thurber, lc. B 2:278. = M: c.

VEATCHIA G, Cal ac b 1:4 (1884).
V. CEDROSENSIS G, Cal ac b 1:4. P 1: 198, 201. G 20:291. P 1:198, 201.
V. DISCOLOR Br 2:140, based on *Schinus ? discolor* Bth.
 Synonymy: *Rhus Veatchii* K.—*Veatchia cedrosensis* G.—*Bursera pubescens* Wat 24:44.
VEATCHIA K 2:11 (1863). = *Brodiaea*.
V. CRYSTALLINA K 2:11 Cur 1:148 as *Brodiaea lactea*. B 2:156 as same.
 Genus **VELLAEA** DC.
 A 1:271d. = *Arracacia* fide IK.
VELLAEA ARGUTA C & R.
 Ha 99. Ab 283. Da 7. A 1:271d.
 Coulter & Rose, Mon 79.
Arracacia arguta B & H, Gen Pl 1:885.
Deweya arguta T. & G.
VELLAEA PARISHII C-R.
 M 4:66. Da 7. A 1:271d.
 SBER mts (Parish 978 and 1827).
 Drudeophytum Parishii C-R, M 82.—
 Ha U 99.—Abrams, Fl LA 284. *Monica*, Gabriel mts.
VELLAEA VESTITA C. & R.
 A 1:271 fdr.
Arracacia vestita, Watson, Am ac pr 22:415.
 SBER mts (Parish 508); Tulare Co. (Palmer).
Deweya vestita Watson Am ac pr 17:873.
 Genus **VENEGASIA** De Candolle.
V. CAEPESIOIDES DC 5:43. Ab 427. Da 7. B 1:372. Br 1:202 Rosa. Greene, Cal ac b 2:403 Cruz. Par 176. A 1:340d.
 Genus **VERATRUM** Tournefort.
V. ALBUM Wat, bot king 344. B 2:182 as *Californicum*.
VERATRUM CALIFORNICUM Dur.
 Durand, Phil ac J 3:103. M 1:121. Par 110. SD mts (Parish 457). (B 2:182 = *speciosum*.)
V. ESCROHOLTEIANUM M 1:120.
V. FIMBRIATUM G 7:391. B 2:182. M 1:125. Par 111.
V. JONESII M 1:124.
V. SPECIOSUM Rydb. T cl b 27:532, 650 (1901). M 1:124. Ha 69.
V. TEMUIPE TALUM M 1:39.
V. VIRIDE Ait. B 2:182, Ore.
VERBASCUM Tourn ex L, syst ed 1 (1735).
V. BLATTARIA L, sp pl 178. Eu. Par 194.
V. THAPSUS L, sp pl 177. M 3:61. B 2: 472. Par 194.
V. VIRGATUM Stokes in Withering, bot arr Brit Pl ed 2, 1:227. Eu. Jepson, Er 1:13. Parish, Z 1:123. Ab 356. Da 13. B 1:548.
 Genus **VERBENA** Linnaeus.
V. BIPINNATIFIDA Schan in DC 11: 553. B 1:609.
V. BISERRATA HBK Nov G et sp 2: 275. P 1:608 as *polystachya* = *Carolina* fide IK.
VERBENA BRACTEOSA Mich.
 Michx Fl 2:13. B 1:609. Da 13. P 4:152. Ab 337. = *bracteata* fide IK.
 Similar to *V. prostrata*, but rigid bracts exceeding the smaller fls. Da 13.
VERBENA CANESCENS H. B. K.
 HBK, Nov G et sp 2:274 t 136. B 1:608.

- Mex. Tex. SD Col! Baja!
 Cantilles (Palmer); Texas; Mexico.
V. CAROLINA L, syst ed 10, 852. B 1: 608.
V. CAROLINIANA Michx, Fl 2:14. B 1: 608 (as polystachya as to Spreng in H & A, bot Beech 156, et DC 11:546).
V. CAROLINIENSIS Dill, Hort Eth 407 t 301. B 1:608 as polystachya.
VERBENA CILIATA Benth. Bth 21. Mex. B 1:609. 2:478. Hanson's (Or 496); to Purissima, Baja (Br); to Texas; Mexico.
S D Or 496; S Bar; Baja (Or 1435).
V. COMPNIS P 4:152.
V. HANSEI P 3:308.
V. HASTATA L, sp pl 20. B 1:609, 2: 478.
V. INCONSPICUA P 5:137.
V. LASIOSTACHYS Link Enum 2:122. B 1:609 as prostrata (as to H & A, bot. Beech 156).
V. LEUCANTHEMIFOLIA P 5:135.
VERBENA LILACINA Greene. Cal ac b 1:210. P 1:206 Cedros.
VERBENA LITTORALIS H. B. K. HBK, Nov G et sp 2:276 t 137. P 3:309. Baja Cal mts (Or 909).
V. NODIFLORA L, sp pl 20. P 4:46s. = *Lippia* n fide IK.
VERBENA OFFICINALIS Linn. L, sp pl 20. B 1:608, 2:478. Spikes filiform, bracts minute: leaves pinnatifid.
 Europe; naturalized round the world.
V. PANICULATA Lam, Encyc 8:548. B 1:609. = *hastata* fide IK.
V. Plicata P 5:135.
VERBENA POLYSTACHYA H. B. K. HBK Nov G et sp 2:274. B 1:608. Da 13. A 1:237d. = *Carolina* fide IK.
 Abrams, Fl LA 337. Occasional in marshes.
VERBENA PROSTRATA R. Br. Hort Kew 4:41. B 1:609. Da 13. Greene, Cal ac b 2:409 Cruz. Ab 337. P 1:92 Mig. A 1:237d. Jepson, Er 1:12.
V. PUBENS P 5:136.
V. PULCHELLA P 5:136.
V. REMOTA Bth 21. B 1:608 as *canescens*.
V. ROBUSTA P 3:309.
V. RUDIS P 4:152.
V. SORORIA D Don Prod Fl Nep 104. B 1:608 as *officinalis*.
V. STRICTA Vent, Jard Cels 53 t 53. Leeds, W 5:22.
VERBENA URTICIFOLIA L. L, sp pl 20. A 1:237d. B 1:608. Abrams, Fl LA 337. Occasional in marshes.
V. VERONICAEFOLIA HBK, Nov G et sp 275. B 1:608 as *polystachya* (Carolina fide IK).

Genus VERBESINA Linnaeus.

- L, syst ed 1 (1735).
V. BRISTATA M 1:8.
V. DISSECTA G 20:299 (1885). Parish, So Cal ac b 2:83; M 3:62. Baja! SBER mts.
VERBESINA DISSITA A. Gray. Todos Santos bay, Baja!
V. ENCELLOIDES B & H ex G, B 1:350. Da 9. Z 1:59. Ab 416. A 1:189d.
V. HASTATA K 1:140. P 1:204 Cedros.
V. NUDICAULIS G 19:12. M 1:8s.

- V. VENOSA** Greene, T cl b 9:110. Cur 1:140 as *hastata* K.
VERONICA Schreb, DC 2:541 (1791).
V. AERIALIS DC 7:264 (1838). Greene, Er 1:4 as *crinita*.
V. CERRITA Raf, New Fl n 932 (1836). Greene, Er 1:4.
 Synonymy: *V. Arkansas* DC (fide Greene).
V. GUADALUPENSIS M 1:28.
V. OLIGANTHA P 5:56.

Genus VERONICA Linnaeus.

- VERONICA ALPINA** Linn. L, sp pl 11. B 1:572. Par 307. Variety **WORMSKJOLDII** Hook, bot mag t 2795. Greenland, Am.
VERONICA AMERICANA Schw. Perennial, racemes in the axils of opposite leaves: cor blue. Schwein, DC 10:468. B 1:572. P 5:114.
V. ANAGALLIS L, sp pl 12. B 1:572.
VERONICA ARVENSIS L, sp pl 14. Parish, SCAB 8:7, LA Co; Riverside.
V. BUX BAUMI Tenore, Fl Nap 1:7 t 1. A 1:232 as *Byzantina*.
VERONICA BYZANTINA BSB. Abrams, Fl LA 368. LA (Davidson). *Veronica Buxbaumii* Tenore. A 1:232d. M 3:77.
V. CRENATIFOLIA P 5:114.
V. CUSICKII G, syn fl 2 (1): 288. B 2: 475.
V. OXYLOBULA P 5:113.
VERONICA PEREGRINA Linn. L, sp pl 14. B 1:572. Ab 368. A 1:232d. Hall, U 120. Neckweed. McClatchie, Erythea 2:124. Pasadena. San Julian, Baja (Br). SD! Canada to the Pacific; So Am. Almost cosmopolitan.
V. SCUTULATA L, sp pl 12. B 1:572. 2:475.
V. SERPYLLIFOLIA L, sp pl 12. B 1: 572, 2:475.
V. WORMSKJOLDII Roem & Schult, syst 1:101. B 1:572 as *alpina* var: W.
VESICARIA Tourn ex Adans, Fam 2: 420 (1763).
V. ALPINA Nutt, T & G Fl 1:102. P 4:309s. Parry, Fl Wyo 4.
V. DIDYMOCARPA Hook Fl 1:49. B 1:47 as *Physaria* d.
V. FENDLERI G. Am ac mem, ns, 4:9. Baja mts (identified by G as a var.)! NM.
V. MONTANA G, Phil ac p 1863:58. B 1:43, 2:432.
VIBURNUM L, syst ed 1 (1735).
V. ELLIPTICUM Hook, Fl 1:280. B 1: 278.
V. PAUCIFLORUM Rafin, Alsog Am 58. P 3:71. La Pylaie ex T & G, Fl 2:17.

Genus VICIA Tournefort.

- Veatch or tare; ann or per herbs with weak and angular sts, oft slightly climbing: lvs pinnate, with several to many lfts and semi-sagittate stipules, the rachis ending in a simple or branched tendrill: ped axy: fls solitary or racemose: cx 5-toothed, the 3 lower teeth oft longer: banner oblg, or appearing so by the turning back of the edges; wings united to middle of keel: sta more or less diadelphous: sty filiform with a tuft of hairs below stig all around or some-

times only on back: pod flat, 2-valved, 2-several seeded; sds globose, the funiculus expanded above to cover hilum, thus arillate; cotyledons remaining under ground in germination.

VICIA AMERICANA Muhl.
Greene, Cal ac b 2:395 Cruz. Br 1:208
Rosa. A 1:513d. Da 5. B 1:157. M 4:80 Ar.
Muhl. Willd sp 3:1096.
Abrams, Fl LA 224. Notes only the 2 varieties as occurring in LA Co.
Davidson, Pl LA Co 5.
Variety **LINEARIS** S. Watson.
Ab 325. A 1:313d.
Vicia linearis Greene.
Variety **TRUNCATA** Brewer.
Ha 92. B 1:158. Ab 325. A 1:313d.
Sber Co (Parish): LA (Davidson); SD Co.
Vicia truncata Nuttall.
VICIA CALIFORNICA Greene.
A 1:313d.
Abrams, Fl LA 225.—Summit of Mt belt of the Cuyamaca mts.
Greene, Fl Fran 3 (1891).
Type locality: "Calaveras Co." Cal.
Coville, CNH 4:88. Tehachapi valley (No. 1120).
VICIA EXIGUA Nutt.
T & G Fl 1:272. P 1:87 Mig. Ab 325. Da 5. B 1:158. Greene, Cal ac b 2:395 Cruz. A 1:313d.
Variety **CALIFORNICA** T. A 1:74s.
Variety **HASSEI** Jepson.
A 1:313s.
Jepson, Fl Midd Cal 296, based on Vicia Hassel S. Wats.
Abrams, Fl LA 225.
Nuttall in T & G Fl 1:272.
Cruz; San Miguel Island (Greene); Cat (Gambel); San Clemente Island. SD! Baja! LA (Bolander).
V. PABA L M 3:76. Windsor Bean.
V. GIGANTEA Hook, Fl 1:157. Par 364. B 1:157.
VICIA HASSEI S. Watson.
Wat 25:129. A 1:74 fdr, 314. Ab 325. Da 5. Guad.
V. HOOKERIANA Walp Rep 1:715. B 1:157 as gigantea.
VICIA LINEARIS Greene.
A 1:270s, 314s. Da 5.
Is Vicia Americana linearis.
V. MICRANTHA Nutt, T & G Fl 1:271. B 1:158.
V. NANA K 7:89. B 2:442 as Lathyrus Nevadaensis. Cur 1:136 as same.
V. OREGANA Nutt, T & G Fl 1:270. B 1:158 as Americana.
V. PULCHELLA HBK, Nov G et sp 6: 499. B 1:158. M 4:78 Ar.
VICIA SATIVA L.
L, sp pl 736. Eu. B 1:157. Da 5. Ab 325. A 1:314d.
Abrams, Fl LA 225.
Davidson, Pl LA Co 5; Erythea 1:59. LA. rare.
V. SITCHENSIS Bong, Veg Sitcha 129. B 1:157 as gigantea. M 4:46.
V. SPARSIFOLIA Nutt, T & G Fl 1:270. B 1:158 as Americana.
VICIA THURBERI Watson.
A 1:314d.
V. TRUNCATA Nutt, T & G Fl 1:270. B 1:158s. A 1:313s. = Americana fide IK.
Variety **VILLOSA** K 1:57. Cur 1:136 as Americana variety truncata.

— Genus **VIGUIERA** H. B. K.
Nov Gen et sp 4:224 t 376 (1820).
V. DELTOIDEA G 5:161. B 1:354. Z 1: 272.
VIGUIERA LACINIATA A. Gray.
G, Mex bound 89. B 1:354. A 1:61d.
V. LANATA G 17:218. P 1:204 Cedros, 265 San Benito Island.
V. NIVEA B & H, Gen 2:378, in note under Encella. B 1:354. = tephrodes fide IK.
VIGUIERA PARISHII Greene.
T cl b 9:15. Ar. A 1:61 fdr.
VIGUIERA TEPHRODES A. Gray.
Colorado Desert (Schott).
V. TOMENTOSA G 5:161. B 1:354. Z 1: 272.
VILFA Beauv Agrost 16 t 5 f 8 (1812). = Sporobolus fide IK.
V. AIROIDES Trin, ex Steud Nom ed 2: 2:766. B 2:269 as S: a.
V. ASPERIFOLIA Nees & Meyen, in Trin Agros 1:73. B 2:270 as S: a Parry, Fl Wyo 16.
V. CRYPTANDRA Trin in mem ac Petersb sr 6, sci nat 5 (2): 69 (1840). B 2:268 as S: c.
V. DEPAUPERATA T. Hook Fl 2:257. B 2:267. = S: d fide IK.
V. GRACILLIMA Thurb B 2:268. = S: g fide IK.
V. RAMULOSA HBK Nov Gen et sp 1: 137. B 2:269 as S: f.
V. RIGENS Trin, Sp Gram 3: t 250. = S: r. (Bolander's distribution = Cinna macroura fide B 2:276.)
V. STOLONIFERA Beauv Agrost 16. B 2:272 as Agrostis verticillata (= A: stolonifera fide IK).
V. UTILIS T, Pac Ry R 5:365. B 2:267 as depauperata.
VILLARISIA Vent Choix t 9 (1803) in part.
V. PUMILA Hook Fl 2:70 t 157. B 1:517 as Hesperochiron p. (= H: californicus fide IK). P 5:50 as Capnoorea p.
VINCA MAJOR.
Vasilit, Z 1:86, periwinkle, escape from cult in SF bay region.
VINGETOXICUM Rupp, Fl Jen ed Hall 25 (1745).
V. CYRANCHOIDES M 1:2 based on Gonolobus c (E & G).
V. FLAVIDULUM M 1:2 based on Gonolobus f (Chapm).
V. HASTULATUM M 1:2 based on Gonolobus h (G).
V. PARVIFOLIUM M 1:2 based on Gonolobus p (T).
V. PUBIFLORUM M 1:2 based on Gonolobus p (E).
V. SAGITTIFOLIUM M 1:3 based on Gonolobus S (G).
V. WRIGHTII M 1:3 based on Gonolobus biflorus var: W (G).
VIOLACEAE A 1:262d.
Genus **VIOLA** Linnaeus.
L, syst ed 1 (1735). A 1:262d.
V. ACHLYDOPHYLLA P 5:87, 131.
V. ACHYOPHORA P 5:33.
V. ADUNCA Smith in Rees Cyc 37: (1819). B 1:56. A 1:263 as canina var.
V. AFFINIS LeConte, NY Lyc ann 2: 138. P 3:337. = cucullata fide IK.
V. ALBERTINA P 4:288.

- V. ALSOPHILA** P 4.
V. AMOENA P 47.
V. ANDERSONII P 4:7.
V. ANODONTA P 5:32.
V. ARENARIA P 5:13 as *subvestita*, as to the pl so-called by some authors (not of DC).
V. ARIZONICA P 5:33.
V. AERVENIS Murr Prod Fr 73. P 4:287. = tricolor fide JK.
V. ATRIPLEXIFOLIA P 3:38.
VIOLA AUREA Kellogg.
 K 2:185. Cur 1:131. B 1:56. 2:433. P 3:40. A 1:262, 263.
 See *Viola praemorsa* Douglas.
V. AUSTINAE P 5:30.
V. AVERII K. Pac Rural Press 31 My 1879. Cur 1:131—"evidently *V. Patrini* DC. var. *Chinensis*." Collected on the Chinese wall by B. P. Avery.
V. BECKWITHII T & G Pac Ry R 2: 119 t 1. B 1:58. 2:433. Par 31.
V. BELLIDIFOLIA P 4:9.
V. BERNARDI Pollard, Brit man 635. P 3:260. 5:123.
V. BICOLOR P 4:292.
V. BIFLORA L, sp pl 936. B 1:57.
V. BLANDA Willd. Hort Berol t 24. B 1:55. Ab 254. A 1:127d. P 4:9. 5:128.
V. BRADNERII P 5:39, 128.
V. BROOKSII K. Cal Hort S 1879. Cur 1:131, probably a good sp; certainly not *V. aurea* as suggested in B 2:433. P 3: 36.
V. CANADENSIS L, sp pl 936. Cockerell, W: 5:6. B 1:57. P 5:24. M 4:80.
VIOLA CANINA L.
 B 1:55. P 4:5, 6. Par §10. A 1:262d.
 Variety *ADUNCA* Gray, Am ac pr 8:377 (1873). A 1:262d.
 Variety *SYLVESTRIS* Regel. Cockerell, W 5:6.
V. CARDAMINAEFOLIA P 4:285, 289. 5:131.
V. CAROLINA P 3:259.
VIOLA CHRYSANTHA Hook.
 Ic Pl t 47 (1837). A 1:128 as *Douglasii*. A 1:263d. P 2:14 as *Douglasii*. B 1:58. 2: 433.
 Leaves pinnatifid: fls orange-y, brown on back.
 Variety *NEVADENSIS* K 2:229. Cur 1: 131—"scarcely differing from the ordinary form."
V. CLAUDESTINA P 4: 8.
V. COGNATA P 3:145. 4:7.
V. COMMUNIS Pollard, bot gaz 26:336 not Wittrock. P 4:140 as *papilionacea*.
V. COMPACTA P 4:286.
V. CONJUGENS P 4:3.
V. CONSOLES P 5:100.
V. CRASSULA P 5:95.
V. CRENULATA P 4:295.
VIOLA CUCULATA Ait.
 Ait. Hort Kew ed 1. 3:288. B 1:55. P 3: 143, 336. 5:96, 119. A 1:263d.
 Cockerell w 5:6.
 Sber (Parish 484).
V. CUNEATA Wat 14:290. B 2:433.
V. CYCLODATA P 3:314, 336, 5:116.
V. CYCLOPHYLLA P 4:7, 5:88 as *Eucycla*.
V. DACTYLIFERA P 3:317.
V. DECORA K. Pac Rural Press 31 My 1879. Cur 1:131, "a form with all the pet blue."
V. DELTOIDEA P 3:317.

- V. DENTATA** Pursh. P 3:296, 140.
V. DESERTORUM P 4:291.
V. DICKSONII P 4:65, 5:103.
V. DISCUBENS P 5:26.
V. DELPHINIFOLIA Nutt, T & G Fl 1: 136. Cockerell, W 5:6.
V. DOUGLASSII Steud, nom 2:771 (1841). Ab 255. A 1:127d. P 2:14 cites *chrysantha* Hooker as a synonym.
V. ELEGANTULA P 4:66.
V. EMARGINATA P 3:255, 313. P 4:142.
V. ESCULENTA P 3:314.
V. EUCYCLA P 5:88.
V. FALCATA P 4:3.
V. FILIPES P 4:289.
V. FIMBRIATULA P 4:139.
V. FLETCHERI P 4:296.
V. FULCRATA P 4:285.
V. GALACIIFOLIA P 5:30.
V. GEMINIFLORA P 5:29.
V. GLABELLA Nutt, T & G Fl 1:142. B 1:57. P 3:81.
V. HALLII G 8:377. B 1:57. 2:433.
V. HETEROPHYLLA Muhlenberg. Le Conte Ann Lyc NY 2:139. P 3:314 as *esculenta* Ell.
V. ILLINOENSIS P 4:293.
V. INDIVISA P 5:124.
V. INSIGNIS P 4:95.
V. LABRADORICA Schrank, Reg Denk sch 1 (2): 12. P 4:290. 5:130.
V. LANCEOLATA L, sp pl 934. P 5:128.
V. LAETEAERULEA P 4:297.
V. LANGSDORFFII P 3:81.
V. LANGLOESII P 3:87.
V. LATIUSCULA P 5:93.
V. LECONTEANA Don, Gen syst 1:324. P 5:128.
V. LEPTOSEPALA P 5:98.
V. LINGUAEFOLIA P 3:39.
V. LOBATA Bth 298. B 1:57. P 3:39. Ab 254. A 1:128d.
 Variety *INTEGRIFOLIA* Wat. A 1:128.
 Variety *PETIOLATA* Rose. A 1:128.
V. LONGIPES Nutt, T & G Fl 1:140. B 1:56 as *canina* var: 1.
V. MACOUNII P 3:335.
V. MACROSTIS P 5:97.
V. MELISSAEFOLIA P 5:103.
V. MISSOURIENSIS P 4:141.
V. MISTASSINICA P 4:5.
V. MONTANA K 1:56. Cur 1:132 as *lobata*. B 1:58 as *Beckwithii*.
V. MONTICOLA Jordan Obs 2:37 (1846).
V. MONTICOLA Rydb, Fl Mont 264. P 4: 307 as *oreophila*.
V. MURICULATA P 5:28.
V. NEOMEXICANA P 5:28.
V. NEPETAEFOLIA P 5:92.
V. NEPROPHYLLA P 3:144.
V. NESIOTICA P 5:102.
V. NODOSA P 4:296. 5:104, 117.
V. NUTTALLII Pursh, Fl 1:174. B 1:57. 2:433. P 3:36, 38. Cockerell W 5:6. Parry. Pl Wyo 4.
V. OBLIQUA Hill. P 3:142. 5:96.
V. OCELLATA T & G Fl 1:142. B 1:56. Par 52. M 3:116.
V. ODORATA L. English violet. B 1:55.
V. OPHIOPHILA P 5:88.
V. OREOCALLIS P 4:288.
V. OREOPHILA P 4:307.
V. OVATA Nutt, Gen 148 (1818). P 3:139. 4:139 as *fimbriatula*.
V. OXYCERAS P 3:255.
V. PALMATA L, sp pl 933. P 3:141, 260. 5:133. A 1:128.

Variety **OCUCULLATA** G. Da 3. Ab 254. A 1:128a.
V. PALUSTRIS L, sp pl 934. P 3:81. 4: 296. B 1:55.
V. PEDATA L, sp pl 933.
 Variety **INORNATA** P 3:35, 34, 355:126.
V. PAPHIOLACEA P 4:140.
V. PARNASSIFOLIA P 5:32.
V. PEDATIFIDA Don, Gen syst 1:320. P 3:259. 5:123.
V. PEDUNCULATA T & G Fl 1:141. Par 124 t. Ab 254. A 1:127d. Br 1:207 Rosa. B 1:56. Da 3. M 3:70.
V. PETROPHILA P 4:286.
V. PERAMOENA P 5:94, 119.
V. PHILIPPANA P 2:14, based on *Viola chrysantha* Philippi, Linnaea 33:15 (1864) not Schrader, in Reicheub Ic exot t 114 (1834), nor Hooker, Ic Pl t 47 (1837).
V. PINETORUM P 3:14, 42. A 1:127 fdr, 263 as *purpurea* var: p.
V. POPULIFOLIA P 3:337. 5:116.
V. FORTERIANA P 3:256 s.
VIOLA PRAEMORSA Douglas.
 Douglas in hb, Lindl, Bot Reg xiv, t 1254 (1829).
Viola aurea Kell. Leaves ovate or narrower, crenate.
 B 1:56 (of Bth 298 as *aurea*), 57 as Nuttallii. A 1:263d, 262. P 3:37, 39.
 Variety **VENOSA** G. A 1:263.
V. PRATINCOLA P 4:64. 5:117.
V. PRIMULAEFOLIA L. P 5:133.
V. PRIONOSEPALA P 5:99, 119.
V. PSYCHODES P 3:318.
V. PUBESCENS Ait Hort Kew 3:290. P 5:131.
 Variety **SCABRIUSCULA** G, man 79. B 1:57 as *giabella*.
V. PURPUREA K 1:56. Cur 1:131 as *aurea* var: *venosa*. Da 3. B 1:56.
 Robinson, Syn Fl 1:200, refers this to *Viola praemorsa*.
 Variety **PINETORUM** Greene, Fl Fr 243 (1891). A 1:127, 263.
Viola pinetorum Greene, Pittonia 2:14 (1839); 3:42 (1896).
 Robinson, Syn Fl 1:200, refers this to *Viola praemorsa* var. *venosa* Gray.
V. RAFINESQUEI P 4:9.
V. RANUNCULIFOLIA P 3:260.
V. RENIFOLIA G. 3:288. P 5:128.
V. RETROSCAERA P 4:290.
V. RETUSA P 4:7.
V. ROTUNDIFOLIA Michx, Fl 2:150. P 3:254. 4:8. 5:132.
V. BUGULOSA P 5:26, 129.
V. RYDBERGII P 5:27.
V. SAGITTATA Ait, Hort Kew ed 1, 3: 287. P 3:317. 5:133.
V. SANDBERGII P 5:119.
V. SARMENTOSA Dougl, Hook Fl 1:80. B 1:57. P 4:8 as *sempervirens*.
V. SCOPULORUM P 5:27.
V. SECEDENS P 5:121.
V. SECURIGERA P 5:29.
V. SELCKII Pursh, Edinb Phil J 6: 324. P 5:122.
V. SEMPERVIRENS P 4:8. Par 143.
V. SEPTEMBLOSA P 4:9.
V. SEPTEMBRONIALIS P 3:334, 4:294.
V. SEQUOIENSIS K 2:185 f 55. Cur 1: 132 et B 1:57 as *lobata*.
V. SHELTONI T, Pac R 4:67 t 2. B 1:58.
V. STELLATA Ait, Hort Kew ed 1, 3:290. P 5:132.

V. SUBCORDATA P 3:316, 4:286.
V. SUBJUNCTA P 5:31.
V. SUBROTUNDA P 5:118.
V. SUBSAGITTATA P 3:315. 5:120.
V. SUBSINUATA P 4:5.
V. SUBVESTITA Greene, Er 5:39. P 5: 130.
V. SUBVINCOSA P 4:293. 5:101.
V. TENELLA Raf, Am mo mag 4:191. P 4:9 as *Rafinesquii*.
V. TRICOLOB L, sp pl 9:35. P 4:9. B 1:56. Eu.
V. UNGUICULATA P 4:291.
V. VAGULA P 4:67.
V. VARIABILIS P 5:90.
V. VENUSTULA P 3:335, 4:295.
V. VICINALIS P 4:9.
V. VILLOSA Walt, Fl Carol 219. P 3: 144. = *ucullata* fide IK.
V. VITTATA P 3:258.
V. WATSONI P 4:5. 5:101.
VIORNA Reichb, Handb 277 (1837). = *Clematis* fide IK.
V. ARIZONICA M 1:40.
V. HIRSUTISSIMA M 1:40.
VISCALINOA Greene.
V. GENICULATA P 1:163 based on *Staphylea geniculata* K. P 1:208, Cedros; Son; Baja; Island in Gulf of Cal (Palmer). Calmali!!
 Br 2:137 (12 N 1889):—"Lvs simple or imparipinnate, with 3-5 lfts; petiols oft more than $\frac{1}{2}$ ' in length; fls ochroleucous. Abundant in some places, and called by the inhabitants, who have a very good idea of its botanical affinities, *guiacén*.—San Raimundo, San Fernando [Baja, Calif.]"
Chiltonia simplicifolia Watson ined.
VIRGARIA Rafinesque.
V. CONCOLOR Raf. Gifts 1:5.
VISCUM Tourn ex L, Gen ed 1, 284 (1737).
V. BOLLEANUM Seem, bot Herald 295 t. 63. B 2:105 as *Phoradendron* B.
V. FLAVESCENS Pursh. B 2:105 as *Phoradendron* f.
V. TOMENTOSUM DC. B 2:105 as *Phoradendron flavescens* var: t. Mex.
V. VAGINATUM HBK. B 2:107 as *Arceuthobium* v.
VITACEAE A 1:291d.
VITEX Tourn ex L, Syst ed 1 (1735).
V. CALIFORNICA Bentham, bot Sulph 10 (1844), error = *Vitis Californica*. A 1: 292 s.
 Genus **VITIS** Tournefort.
 L, syst ed 1. (1735); Gen. ed 1, 56 (1737). A 1:292 d.
V. ARIZONICA E, Am nat 2:321, 9:268. B 1:104.
VITIS CALIFORNICA Bentham.
 Bth, bot Sulph 10 (1844); A 1:292 d. Da 4. B 1:104.
 Type locality: "Rio Sacramento," Cal. Bentham, Fl Hartw 302 (1843).
Vitis Californica Benth, bot Sulph 10 (1844).
VITIS GIBDIANA Munson.
VITIS pro agr sci pr 1837, 59. Ab 245. A 1:292 d.
V. VIVIFERA L, sppl 202. B 1:104.
VITTARIA P 4:106 as *Oetosis* Necker.
V. ELONGATA Swz. Syn 109 (1306). P 4:106 as *OB*:e.
V. ENSIFORMIS Swz lc. P 4:106 as

- OE:e.
V. FILIFORMIS Swz. lc. P 4:106 as OE:f.
V. ISOETIFOLIA Swz. lc. P 4:106 as OE:i.
V. LINEATA Swz. P 4:106 as OE:l.
V. ZOSTERAEOFOLIA Willd sp 5:406 (1810). P 4:106 as OE:z.
VLECKIA Rafin. Med Rep NY 5:35? (1808)=Lophanthus fide lk.
V. OCCIDENTALIS M 1:4.
VULPIA C C Gmel, Fl Bad 1:8 (1805)=Festuca fide lk.
V. MICROSTACHYA Munro in Bth 342. B 2:317 s.
V. MYURUS Gmel, lc. B 2:316 s.

WAHLENBERGIA

- W. CALIFORNICA** K 2:158 f 49. Cur 1:141 et B 1:448 as Campanula lineatifolia G (M 1:46 as C. Californica).
WASHINGTONIA Raf. A 1:269 s.
W. BRACHYPODA Heller. Ab 281. A 1:269 s. M 4:66.
W. NUDA Heller. A 1:269 s.

Genus WASHINGTONIA Wendland.

- W. AMERICANA** Hort ex Gord, Pinet suppl 106.=Sequoia gigantea.
W. CALIFORNICA Kinsl, in Cal Farm (S 1854); ex Hook, Kew J 7:29 (1859). B 2:117 as Sequoia gigantea.
WASHINGTONIA FILIFERA Wendl. Bot Zeit 37:68. B 2:211, 485. A 1:95 d. M 4:41.
 Variety **ROBUSTA** Parish, bot gaz (D 1907). M 4:41.

- W. GIGANTEA** Hort ex Carr Conif ed 2, 217 as Sequoia g.
W. GRACILIS Parish, bot gaz (D 1907). M 4:41.
W. ROBUSTA Wendland, Berl Gart-Zeit 2:198 (1883). M 4:41.

W. SONORAE Wat. M 4:41. Son. Baja.
 "A tree reaching 25° in height and a foot in diam: lvs 3 or 4° in diam, somewhat glau, very filiferous, upon rather slender petioles which are armed with stout curved spines; spadice slender, 5 or 6° lg: fr about 3" lg, the flattened-globose sd 2 to 2½" in the longest diam. apparently distinct from *W. filifera* and *W. robusta* in its more slender petioles, more glau lvs, and sm fr. The sds are used for food by the Indians. It may here be noted that in the 'Genera Plantarum' the genus *Washingtonia* is placed in the group having basilar styles though it is correctly described as having the style terminal. In secluded canons in the mts about Guaymas."—Wat 24:79 (31 Ja. 1889).

- WEBERA** Hedw.=Bryum.
W. ALBICANS Schimp. B 2:392 as B:a.
W. BIGLOBE Hoppe & Hornsch. B 2:391 as B:b.
W. COMMUTATA Schimp, syn, ed 2, 403 B 2:391 as B:c.
W. CRUDA Schimp. B 2:391 as B:c.
W. CUCULLATA Schimp. B 2:391 as B:c.
W. INTERMEDIA Schwaegr, suppl t 75. B 2:393 as B:d.
W. MUTANS Hedw Musc Frond t 4. B 2:391 as B:n.
W. POLYMORPHA Schimp. B 2:390 as B:p.

- W. TOKERI** Schimp. B 2:392 as B:t.
WEISSIA Hedw.
W. CIRREATA Hedw. B 2:362, Wash. Ora. Eu. Cal.
W. CRISIFOLIA Hedw. B 2:363, Arctic, Wash. Ut. Colo.
W. CONTROVERSA Hedw. B 2:362 as viridula.
W. STABREANA Hedw. B 2:362 as Pottia s.
W. VIRIDULA Bridel. B 2:362, SF, Eu, Atlantic coast.
WELLINGTONIA Lindl, Gard Chron 1853:819. 823.=Sequoia.
W. GIGANTEA Lindl, lc. B 2:117.=S:g.
W. CALIFORNICA Sargent, Rep For N AM 184 = S: gigantea.
WHEELERELLA George B Grant, SCA b 5:28 based on Piptocalyx T.
W. CIRCUMSCISSA Grant, lc. LA Co.
W. DICHOTOMA Grant, lc. Nev.
WHIPPLEA MODESTA T, Pac Ry R 4: 90 t 7. Par 36 t. Parish, Er 7:92. Near Redlands, Cal. B 1:203. Monterey to Mendocino Co, 2:446 (Humboldt Co, Cal; Ore).

Sts slender, spreading or trailing: lvs membranaceous, ovate or oval, obtusely few-toothed or sometimes entire, 1' or less lg: peduncle slender, bearing a sm and close few-fld cluster: fls hardly 2" lg: cx-tube almost hemispherical, adnate to base of the 4-celled (sometimes 3-5-celled) ova and glubular cap: sty at length decid: sd oblg.

WHIPPLEA UTARENSIS.

"Shrubby, low (6' hi), much branched; pubescence strigose, mostly appressed: lvs oblg, attenuate to a very short petiole, 3-5" lg, acutish, entire, sparingly hairy, 3-nerved; fls sm, few, on very short pedicels, in a dense compound cyme; calyx cylindrical-turbinate, the subulate lobes shorter than the w oblg clawed pet; sta 10; sty 3 and ovary 3-celled; cap oblg, terete, 1½" lg, adherent for half its length to the calyx-tube. Especially distinguished from *W. modesta* by its elongated cap. Bud-scales very silky. Kanab, southern Ut (Mrs. E. P. Thompson). On dry sandy cliffs: Ag.—Wat, Am nat 7:300 (My 1873). B 1:203. "Possibly Cal."

- WHITLAVIA** Harv, Hook L and J bot 5:311 (1846). = Phacelia fide IK.
W. GRANDIFLORA Harv, lc. 312. = P: Whitlavia. B 1:513.
W. MINOR Harv, lc. = P: Whitlavia. B 1:514.

- WHITNEYA** G 6:549 (1865).
W. DEALBATA G 6:550. B 1:374.
WIGANDIA HBK, nov G et sp 3:126 (1818).

- W. CALIFORNICA** H & A, bot Beech 364. B 1:518 as Eriodietyon tomentosum.
 Genus **WISLIZENIA** Engelm.

- Wisl r 99. A 1:261d.
W. CALIFORNICA Greene. A 1:145 fdr.
W. DIVARICATA Greene. A 1:145 fdr.
W. PALMERI G 8:622. B 1:52.
WISLIZENIA REFRACTA Engelm. Wisl r 99. B 1:52. A 1:261 fdr. (Greene, Fl Fran. A 1:145 as Californica.)

The Cal plants hitherto referred to this are considered by Greene as dis-

tinct species.
WOLFFIELLA.
W. LINGULATA Ab 79.
W. OBLONGA Ab 79.
WITRANIA Pauq, Diss Bellad 1824:14.
W. COBONOPUS T, Mex Bound 155. B 1:540 as *Chamaesarachia* C.
WOODVILLEA DC 5:318 (1836) = *Eri-geron* fide IK.
W. CALENDULACEA DC, lc. B 1:331 as E: glaucus.
WOLFENIA Jacq, Misc 2:62 (1781). = *Synthyris*.
W. BULLII Barnhart, T cl b 26:378 (1899). M 1:4 as S: B.
W. CORDATA Greene, man 280 (1894). M 1:4 as S: c.
 = *Synthyris reniformis cordata* G.
W. GYMNOCARPA Aven Nelson, T cl b 25:282 (1898). M 1:5 as S: g.
W. HOUGHTONIANA Greene, Er 2:83 (1894). M 1:4 as S: Bullii.
W. MAJOR Heller Cat 7 (1898). M 1:5 as S: m.
W. RENIFORMIS Dougl, ex Bth Scroph Ind 46; Hook Fl 2:102 t 71.
 Variety **MAJOR** Hook J bot Kew Gard misc 6:257 (1853). M 1:5 as S: major.
W. WYOMINGENSIS Aven Nelson, T cl b 25:281 (1898). M 1:5 as S: W.

Genus WYETHIA Nuttall.

Phil ac J 7:39 t 5 (1834).
W. AMPLEXICAULIS Nutt, Am phil sc tr, ns. 7:352. B 1:350. 2:458.
W. ANGUSTIFOLIA Nutt, Am phil sc tr 7:352. B 1:350. Par 161.
W. CORIACEA G 11:77. B 1:616. Ha 131. SD mts (Palmer); Baja!
W. GLABRA G 6:543. B 1:349. Par 161.
W. HELIANTHOIDES Nutt, Phil ac J 7:38. B 1:350.
W. HELENIODES Nutt; G, Pl Fendl 352. B 1:350 as *angustifolia*.
W. MOLLIS G 6:544. B 1:349. Par 161.
W. OVATA G 7:357. B 1:349.
W. ROBUSTA Nutt, Am phil sc tr 7: 82. B 1:349. Par 161.

XAMACRISTA P 4:26.

Genus XANTHIUM Tournefort.

L, syst ed 1 (1735). P 4:59.
X. ACEROSUM P 4:63.
X. ACUTUM P 4:62.
X. AFFINE P 4:60.
X. CALIFORNICUM P 4:62.
X. CAMPESTRE P 4:61.
X. CANADENSE Mill, Dict ed 8. Greene, Cal ac b 2:402 Cruz, adventive. Ab 414. Z 1:58. P 4:59, 61, 62.
X. GLANDULIFERUM P 4:61.
X. MACROCARPUM P 4:59.
X. ORIENTALE P 4:58.
X. PALUSTRE P 4:63.
X. SILPHIIFOLIUM P 4:60.
X. SPINOSUM L, sp pl 987. B 1:346. Ab 413. Z 1:58. P 4:58.
XANTHIUM STRUMARIUM Linn.
 L, sp pl 2:987 (1753). McClatchie, Er 2:125 Cat. Br, Colo 231. Cov 4:130 Charleston mts. B 1:346.
 Type locality: "In Europe, Canada, Virginia, Jamaica, Zeylona, Japonia."
X. VARIANS P 4:59.
XANTHOCEPHALUM Willd.

X. CALIFORNICUM Greene, Man 171.
XEROBOTRYS Nutt, Am phil sc tr ns. 8:267 (1843). = *Arctostaphylos* fide IK.
X. ARGUTUS Nutt, lc, 268. B 1:453 as A: tomentosus.
X. CORDIFOLIUS Nutt, lc. B 1:453 as A: tomentosus.
X. TOMENTOSUS Nutt, lc, 267. B 1:453 as A: t.
X. VENULOSUS Nutt, Bth 321. B 1:453 as A: pungens.
XEROPHYLLUM Michx Fl 1:210 (1803).
X. DOUGLASSII Wat 14:284. B 2:186.
X. SETIFOLIUM Michx, Fl 1:211. (B 2: 185 as *tenax* as to Lindl, bot reg t 1613, not Michx.)
X. TENAX Nutt, Gen 1:235. B 2:185. Par 53. = *setifolium* fide IK.
XIMENESIA Cav, Ic 2:60 t 178 (1793). = *Verbescina* fide IK.
X. ENCELLOIDES Cav Ic 2:60 t 178. B 1:350 as *Verbescina* e. T & G Fl 2:359.
XYLOCCUS Nutt, Am phil sc tr, ns. 8:258 (1843). = *Arctostaphylos* fide IK.
X. BICOLOR Nutt, lc, 259. B 1:454 as A: b.
XYLORRHIZA Nutt, Am phil sc tr, ns. 7:297 (1841). = *Aster* fide IK.
X. FRUTESCENS P 3:48.
X. GLABRISCUOLA P 3:47.
XYLORRHIZA ORCUTII Greene
 Greene, Pitt 3:48, based on *Aster orcuttii* A 1:58 fdr.
X. PARRYI P 3:47.
XYLORRHIZA TORTIFOLIA Greene.
 P 3:48. A 1:58d.
 --- **VENUSTA** M 1:8.
X. VILLOSA P 3:47. Parry, Pl Wyo 4.
X. WRIGHTII P 3:47.
Genus XYLOTHERMIA Greene.
 See Pickeringia for description.
X. MONTANA Greene, based on *Pickeringia* m. Par 236 t. Ab 206.

Genus YUCCA Linnaeus.

YUCCA ALOIFOLIA Linn.
Y. ANGUSTIFOLIA Pursh, Fl 1:227. Br, *YUCCA ARBORESCENS* Trelease.
 Ab 92. Joshua tree. Mohave.
Y. ALOIFOLIA L, sp pl 319 (B 2:164 as Whipplei as to T. Pac Ry R 4:147.)
Y. ANGUSTIFOLIA Pursh, Fl 1:227. Br, Colo 244, 246. = *Glaucua* fide IK.
Y. BACCATA T, Mex bound 221. Br, Colo 228, 229, 244. B 2:164. (Cal pl = *Mohavensis*.)
Y. BREVIFOLIA E, ex Wat, bot king 496. B 2:164. Da 17. See *arborescens*.
 = *See Chistoyucca arborescens*.
Y. DRACONIS L, Amoen ac 3:407.
 = *Dracaena draco* fide IK.
 Variety **ARBORESCENS** T, Pac Ry R 4:147. = *brevifolia* fide B 2:164.
Y. FILAMENTOSA L, sp pl 310. B 2:165.
YUCCA GLORIOSA L.
 Stem from a few inches to 6 feet high, 4-6 inches in diameter, usually simple, covered with a shaggy coat of old withered pendant leaves; leaves about 2 feet long, 1½ to 2½ inches wide, stiff, sharply pungent; panicles 2-4 feet long, 1-1½ in diameter. North Carolina to Florida, on sandy sea beaches.
Y. GRAMINIFOLIA Wood, Phil ac pr

1868: 167. B 2:165 as Whipplei.
YUCCA MACROCARPA Engelm.
Y. MOJAVENSIS Sargent. Par 22. A 1:
 184d.
YUCCA VALIDA Brandegee.
 Br. 2:20. Baja!
YUCCA WHIPPLEI Torr.
 Mex bound 222. Par 76. B 2:164. Da 17.
 See Hesperoyucca Whipplei.
 Variety **GRAMINIFOLIA** Ab 92.

ZANNICHELLIA Michx ex L, syst ed 1
 (1735).
Z. MAJOR Boenn, Nees Gen 3: t 46. B
 2:193 as palustris.
ZANNICHELLIA PALUSTRIS Linn.
 Sp pl 969. B 2:193. Da 17. Ab 12.
ZAPANIA Lam 1:58 t 17 (1791). P 4:45
 as Phylla.
Z. CUNEIFOLIA T, NY Lyc ann 2:234
 (1826). P 4:47 as P: c.
Z. LANCEOLATA Juss, Ann Mus Par 7:
 72 (1806). P 4:47 as P: l.
Z. NODIFLORA Lam Ill 1:59 t 17 f 3
 (1791). P 4:47 as P: n. B 1:610 as Lippia
 n.

ZAUSCHNERIA Presl, Rel Haenk 2:28
 t 52 (1831). A 1:335d.

ZAUSCHNERIA ARIZONICA Davidson.
 "Sts 1-2° hi, decumbent, branching
 from base; whole plant villous, not at all
 tomentose; lvs ovate; 1-1½' lg and ½'
 broad, broadly sessile and usually strongly
 denticulate, feather veined and mark-
 edly villous on mid-rib, veins and edges;
 lower lvs frequently obovate; fls scarlet,
 large, 1½' lg above ova; cx-tube cylin-
 drical for 3" above globose base, minute-
 ly villous, lobes 3' shorter than cor; sty
 exerted 1' or more; sta somewhat less;
 cap pedicellate, 1¼' lg, slightly villous
 at base; sds large, in form resembling
 those of *Z. Californica* var: *microphylla*.
 G. Ar: Chase Creek, Metcalf; Ag 1900. A.
 Davidson, 365. Not uncommon in the
 moist sand of this rocky creek at 5000°
 alt. Those found growing on drier
 ground, tho of stricter habit and some-
 what less villous, are quite as handsome
 in fl."—Da. SCAB 1:4 f 1.

Z. CALIFORNICA Presl, Rel Haenk 2:
 28 t 52. Greene, Cal ac b 2:397 Cruz. Br
 1:210 Rosa. B 1:218. Da 6. A 1:335d. Par
 372t. P 1:27, 88 Mig.

Variety **LATIFOLIA** Hook, bot mag t
 4493. P 1:26 as sp. Ab 263. A 1:335d.

Variety **MICROPHYLLA** G, B 1:218. Ab
 263. A 1:335 d. P 1:27 as typical of the
 species.

Z. CANA P 1:28. Greene, Cal ac b 2:398.
 Cruz.

Z. MEXICANA Presl, Rel Haenk 2:29.
Z. LATIFOLIA P 1:26 based on Califor-
 nica var: l. A 1:335 sub Californica var.
 A 1:335 et. B 1:218 as Californica.

Z. TOMENTELLA P 1:26.

Z. VILLOSA P 1:27. Greene, Cal ac b 2:
 397 Cruz.

Genus ZIZYPHUS Juss.

Z. PARRYI T, Mex bound 46. B 1:99.
 A 1:98d. Weberbauer in Eng & Prantl,
 Natpf 3 Abt 5, 404 as Condalia P.
ZOSTERA L, Diss Dass 27 (1747).
Z. ANGUSTIFOLIA Reicheub, Ic Fl

Germ 7:3. B 2:192 as marina var: a.
ZOSTERA MARINA Linn.
 L, sp pl 968. Greene, Cal ac b 2:414
 Cruz. Ab 13. Da 17. B 2:192.

Variety **ANGUSTIFOLIA** Hornem,
 based on sp.

ZEBERINA Schnizl, bot zeit 7:870 (1849).
Z. PUMILA P 1:167; 4:225 as Treleasea p.
ZEPHYRANTHES Herbert (1821). P 3:
 187 as Atamosco (Adanson of 1763).
Z. ARENICOLA Br 2:205. P 3:187 as A
 a. Baja.

Z. ATAMASCO Herb, app bot reg 36
 (1821). P 3:187 as A: a.

Z. PULCHELLA J G Smith, Mo bot
 gard r 6:114. P 3:187 as A: p. Tex.

Z. ROSA Lindl, bot reg t 821 (1824). P
 3:188 as A: r. West Indies.

Z. SIMPSONI Chapm, Fl SUS, ed 3, 493
 (1897). P 3:187 as A: S. Fla.

Z. TAUBERTIANA Harms in Garten-
 flora 45:281 t 1427 (1896). r 3:188 as A:
 T. Brazil.

Z. TEXANA Herb, bot mag sub t 3482.
 P 3:187 as A: T. Tex.

Z. TERTIATIAE Wat 14:300. P 3:187 as
 A: T. Fla.

Genus ZYGADENUS Michx.

Stems simple, scale like, from a tunic-
 ated bulb, glabrous and somewhat
 glaucous, with linear mostly basal
 leaves and greenish white flowers, in a
 raceme or panicle. Perianth nearly ro-
 tate, segments ovate to oblong-lanceo-
 late, with a green glandular spot at the
 narrowed base. Stamens free from the
 segments and about equalling them;
 fil subulate: Sty distinct persistent. Sap
 deeply 3-lobed. Seeds brownish, angled.
Zygadene.

ZYGADENUS ANGUSTIFOLIUS S. W.
Z. CHLORANTHUS H & A, bot Beech
 402. B 2:183 as Fremontii.

Z. CHLORANTHUS Richards. B 2:183
 as elegans.

Z. DOUGLASSII T, Pac Ry 7:20. B 2:183
 as Fremontii.

ZYGADENUS ELEGANS Pursh.
 B 2:183. Ore, Nev. Ar.

ZYGADENUS FREMONTII Torr.
 Pac Ry R 7:20. Greene, Cal ac b 2:413

Cruz. Br 1:217 Rosa. Ab 83. Par 6 t.
 B 2:183.

Bulb oblg, 2-5 cm lg, with dark coats;
 sts 4-8 dm hi; basal lvs 2-4 dm lg, 1.5-
 2.5 cm broad at base, somewhat falcate-
 curving; st lvs few, sh'er, sheathing at
 base; fls few to many in a raceme or
 panicle; lower pedicels 2.5-4 cm lg; seg
 8-14 mm lg, the outer not clawed, the
 inner with a broad claw; gland gl'sh-y,
 toothed on its upper margin; sta about
 as lg as segs; cap oblg, about 2 cm lg.
Z. GLABERRIMUS H & A, bot Beech
 160. B 2:183 as Fremontii.

Z. GLAUCUS Nutt. B 2:183 as elegans.

Z. GRACILENTUS P 4:241.

Z. LONGUS P 4:240.

ZYGADENUS NUTTALLII A. Gray.
 Wat, bot king 343. B 2:183 as mainly
 venosus.

ZYGADENUS PANICULATUS S. Wat.
 Wat, bot king 344. B 2:184.

ZYGADENUS VENENOSUS S. Watson
 Wat 14:279. B 2:183. Par 6.

FLOWERLESS PLANTS OF THE UNITED STATES

CRYPTOGAMOUS or flowerless plants, never bearing true flowers with stamens or pistils, are reproduced by minute homogeneous bodies, called spores, in which there is nothing of the nature of an embryo. Botanists divide them into two classes, Acrogens and Thallogens.

ACROGENOUS PLANTS are those growing from the apex of a distinct axis, mostly with distinct leaves.

THALLOGENS are distinguished by having a growth chiefly peripheral and horizontal, without definite axis, mostly without leaves, and composed wholly of cellular tissue: the spores not developing a prothallus. The Thallogens include the three large orders, Lichenes, Fungi, and Algae, characterized from each other as follows:

LICHENES. Not parasitic, on exposed surfaces, prostrate and crustaceous or frondose, or erect, containing chlorophyllose granules. Reproductive organs of two kinds, apothecia and spermogonia.

FUNGI. Parasitic, wholly without chlorophyll, the organs of vegetation (mycelium) mostly subterranean or concealed, the reproductive very various in form and structure.

ALGAE. Aquatic, mostly submerged, not parasitic, always containing chlorophyll and usually highly colored. Reproductive organs very various.

ACROGENS are divided into two subclasses:

PTERIDOPHYTA, or VASCULAR ACROGENS. Plants with both woody and cellular tissue: reproductive organs of one or both sexes produced upon a prothallus developed from the spore.

CELLULAR ACROGENS. Plants with cellular tissue only: reproductive organs borne upon the stem or branches. These are commonly divided into four large orders, characterized as follows:

*Capsules mostly opening by a lid, containing num spores without spiral fibres.
MUSCI. Branches not regularly fascicled along the stem. Tissue of the leaves homogeneous. Spores of one kind.

SPHAGNACEAE. Branches regularly fascicled. Tissue formed of colorless cells and intermediate green linear ducts. Spores of two kinds. Pale flaccid bog plants.

**Capsule not opening by a lid: spores mixed with spiral fibres (elaters).

HEPATICAE. Stems procumbent, leafy with alt or distichous lvs, or thalloid.

***Sporangium consisting of a single spore surrounded by spirally arranged tubes.

CHARACEAE. Submerged aquatics, with whorled branches, consisting of tubular cells placed end to end.

PTERIDOPHYTA Cohn. Vascular Acrogens.

These are placed in two divisions.
I.—TRIAPOROUS VASCULAR ACROGENS. Spores only of one kind, the prothallus bearing organs of both sexes. This group comprises the following orders:

EQUISETACEAE. Cylindric jointed hollow-stemmed plants, with toothed sheaths. Fructification in a terminal spike.

OPHIOGLOSSACEAE. Fronds often fern-like, erect in veneration. Sporangia globose, coriaceous, in special spikes or panicles.

FILICES. Ferns, with fronds circinate in veneration, bearing the fructification on the under surface or beneath the margin.

LYCOPODIACEAE. Club-Moss or Ground-Pine. Moss-like, terrestrial plants with small lanceolate or subulate, sometimes oblong or roundish, simple lvs, arranged in 2 to many ranks on trailing or sometimes erect, usually branching stems.

II.—HETEROSPOROUS VASCULAR ACROGENS. Spores of two kinds, one producing a prothallus with archegonia, the other smaller and containing antherizoids. This group contains the following orders:

SELAGINELLEAE. The two kinds of spores borne separately upon the upper side of the base of linear grass-like radical lvs or in the axils small lvs arranged in 4 ranks upon a stem.

MARSHALLACEAE. Spores of both kinds together in peduncled capsules borne upon a rhizome. Lvs filiform or pedately quadrifoliolate.

SALVINIACEAE. Small floating plants, the spores borne in separate capsules at the base of the frond.

ISONTACEAE. Lvs awl-shaped, tubular, containing the sporangia in their axils.

Order **OPHIOGLOSSACEAE** Lindley.

NOTRYCHIUM Swz. Grape-fern.

Sporangia in pinnate or compound spikes or panicles. Veins free. Spores copious, sulphur-yellow.

Section **EUBOTRYCHIUM** Bud enclosed in the base of the stalk.

*Vernation wholly straight.

B: SIMPLEX E. Hitchcock.

Plant 2-7' hi, fleshy; sterile seg stalked, varying in insertion from near the rtstalk to two-thirds the height of st. ovate, obovate or oblong, entire, incised, or pinnately parted into 1-3 pairs of roundish or semi-lunate lobes; fertile spike long-stalked, simple or 1/2-pinnate; spores largest of genus, closely covered with small points; bud smooth; apex of both sterile and fertile seg erect. New England, NY, northward.

Variety **COMPOSITUM** Lasch.

Sterile seg composed of 2 or 3 pinnately incised divisions. Wyo; Cal.

**Vernation partly inclined in one or both portions. I—Buds smooth; sterile seg sessile or short-stalked; plant small, fr'ng in early summer.

B: LUNATA Swz.

Moonwort. Plant 5-8' hi, fleshy; sterile seg nearly sessile, borne near the middle of stalk, oblong, simply pinnate with 5-15 lunate or fan-shaped lobes which are crenate, incised, or entire, close and overlapping, or distant; fertile seg bi-tri-pinnate, panicle, about the height of the sterile. Apex only of sterile seg bent over and outside of the nearly straight fertile seg in veneration; divis-

ions of sterile frond arranged nearly perpendicularly. Ct; NY; Mich; Colo; BC.
S: BORNALE Milde.

Plant 2½-7' hi, smooth, fleshy; sterile seg placed above the middle, sessile, cordate, ovate or deltoid, pinnately parted, acute; lowest seg spreading from a narrower base, ovate or cordate-ovate, acute, all entire, or here and there flabellately incised with acute lobes, or pinnately parted; secondary seg from a narrowed base, ovate, acute, serrate, the upper spreading, quickly decreasing, finally elliptical, acute; fertile seg bi-tri-pinnate, paniced. Apex of sterile seg bent over inside of the nearly erect fertile one in vernation; division of the sterile seg arranged on an angle. Unalaska.

S: NEGLECTUM Wood.

Plant 2-12' hi, usually fleshy; sterile seg placed above the middle, short stalked or sessile, ovate or oblong, pinnately parted into ovate-oblong, obtuse, rounded, entire, incised, pinnatifid, or pinnately parted seg, the narrow divisions linear; fertile seg 1-3-pinnate, paniced, often very much branched; spores thickly covered with large rounded warts. Apex of both segments turned down in vernation; sterile seg clasping the fertile with its apex overlapping the whole. New England; NY; Ohio; Mt Peddo, Washington (Suksdorf). Synonym: *B. matricariaefolium* A. Br. fide recent authors.

**II.—Buds pilose; sterile seg usually long-stalked; plant larger, fr'ng in autumn.

S: TERNATUM Swz.

Frond fleshy, the common stalk very short; sterile seg broadly pentagonal or triangular, ternate; the 3 primary divisions also stalked, as broad as long, pinnately decomposed; ultimate divisions varying from round-reniform to triangular-lanceolate, entire or variously toothed and incised; fertile seg long-stalked, bi-quadrifid-pinnate. Apex of both seg bent down, with a slight curve inward in vernation. New England; Canada; BC; Fla; Wash; Cal. Synonyms: *B. australe* R. Br.—*B. lunarioides* Swz.—*B. fumaroides* Willd.—*B. decompositum* Mart & Gale.—*Osmunda ternata* Humboldt.—*Botrypus lunarioides* Mich.

Variety **OBELIQUUM** Milde.

Form 6-17' hi, with more compound fructification and with divisions of sterile seg oblong or lanceolate and obtuse or oblique at base.

Variety **DISSECTUM** Milde.

Form with divisions of sterile seg laciniately cut into narrow teeth.

**Vernation wholly inclined, in the fertile seg recurved.

S: LANCEOLATUM Angst.

Plant 3-9' hi, somewhat fleshy; sterile seg closely sessile at top of a long common stalk, in the smallest forms 3-lobed, in larger ones broadly triangular, twice pinnatifid, the divisions lanceolate, entire or toothed, all set at an oblique angle; fertile seg short-stalked, slightly overtopping the sterile, bi-tri-pinnate. Bud smooth; fertile seg recurved its whole length, the shorter sterile seg

reclined upon it. New England; Colo; Alaska.

Section **OSMUNDOPHOBIS**. Bud pilose, enclosed in a smooth upright cavity at one side of the lower part of the stalk.
S: VIRGINIANUM Swz.

Rattlesnake fern. Plant from a few inches to 2' hi; sterile seg sessile above the middle of the stalk, broadly triangular, thinly herbaceous, ternate; the short-stalked primary divisions once to twice pinnate, thence once or twice pinnatifid; lobes oblong, cut-toothed toward apex; fertile seg long-stalked, bi-tri-pinnate. Bud pilose, enclosed in a smooth upright cavity at one side of the lower part of stalk; fertile seg recurved its whole length, the longer sterile segs reclined upon it. New Brunswick to Fla; Arizona; Cal. Synonyms: *B. gracile* Pursh (a reduced form). *Botrypus Virginicus* Michx.—*Osmunda Virginica* L.

Other species of *Botrychium* credited to North America north of Mexico, are the following:

S: INTERMEDIUM (Lam.) Underwood.

S: COULTERI Underwood.

S: DISSECTUM Spreng.

S: MATRICARIAE (Schrank) Spreng.

S: OBLIQUUM Muhl.

Variety **INTERMEDIUM** (D. C. Eaton) Underwood.

S: OCCIDENTALE Underwood.

S: FUNICOLA Coville.

S: ELIATIFOLIUM Presl.

S: TENEBROSUM A. A. Eaton.

OSMIOGLOSSA Presl.

Fertile spikes several, arising from the base of sterile seg. Treated in the past by many botanists as a section of *Ophioglossum*, and monotypic, based on the Linnaean *Ophioglossum palmatum*.
O: PALMATA (L.) Presl.

Rootstalk fleshy, tuberous, covered with fine wool-like chaff; plant fleshy, 6'-2' hi, the sterile seg cuneate at base, 2-6-lobed or rarely entire, lobes elongate and tapering; fertile spikes ¼ or more, borne on the sides of the stipe just below the sterile seg on its margin. Fla.
OSMIOGLASSUM L.

Fertile spike single, arising from the base of sterile seg.

*Sterile portion near the middle of stalk.

O: VULGATUM L.

Rtstalk short, oblique; stalk 6-12' hi, sterile seg ovate or elliptical-oblong, 1½-4' long; somewhat fleshy, somewhat narrowed at base, sessile; fertile spike 1' or more long. Me. to Ky; Tenn; Tex; Arizona; Alaska. Synonym: *O. Engelmanni* Prantl (fide Underwood). Adder-Tongue.

**Sterile portion near base of stalks.

O: CROTALOPHOROIDES Walt.

Rtstalk tuberous, 3-5" thick; stalk 3-6' hi, sterile seg ½-1' long, ovate, slightly petioled, veins somewhat indistinct; fertile spike short and thick, 3-6" long. Fla. to La. Synonyms: *O. bulbosum* Michx.—*O. vulgatum* *Crotalophoroides* D. C. Eaton (all fide Underwood).

O: HUDICAULE Linnaeus f.

Rtstalk slightly tuberous; stalk 1-4' hi, sterile seg ½-1½' long, ovate or oblong,

veins indistinct; fertile spike linear-acuminate, 6" long, peduncle very slender. Ga; Fla; Cal. Synonyms: *O. ellipticum* H & G.—*O. Californicum* Prantl.—*O. vulgatum nudicaule* D. C. Eaton (all fide Underwood).

O: CALIFORNICUM Prantl.
Considered by Underwood as *O. nudicaule*.

"Plants small, only 2-6 cm hi; rtstalk cylindrical, tuberous, elongated with num large rts; lvs $\frac{1}{2}$ sheathed at base by the old ones of the previous year; petioles entirely subterranean, 1-3 cm long; sterile lamina 1-2 cm long; 0.4-0.7 mm wide, lanceolate or ovate-acute, rarely obtuse, or apiculate; fleshy, rugose when dry; basal veins 3, median the stronger, lateral ones branched; transverse veinlets oblique, forming long narrow areolae with few or no free veinlets near the margin; epidermis wrinkled, cells flexuous, stomata straight; peduncle arising from the base of the sterile lamina, only 5-15 mm long; spike 5-10 mm long; sporangia 10-15 pairs, apex short; spores .05 mm lg, reticulate, areolae 20-25, rounded, striae unequal, not elevated."—E. G. Britton. Torr cl b 24:555 (SD 1897). near SD.

Other species credited to North America north of Mexico are the following:

O: ALASKANUM E. G. Britton.

O: ARIZARIUM E. G. Britton.

O: ENGELMANNI Prantl.

"Plants 8-22 cm hi; rtstalk cilindric with long, brown rts, oft bearing 2-3 fr'ng and 1 sterile lf on the same plant with the sheathing base of the old lvs frequently persistent; petiole subterranean or partly exserted, 4-10 cm long; sterile lf elliptic or lanceolate-elliptic, obtuse but sharply apiculate, 3-9 cm lg, 1.5-5 cm broad; fleshy, becoming pellucid when old and dry, slightly paler beneath; basal veins 13 or more, median one slightly stronger and unbranched below the middle of the frond, forking and anastomosing with the lateral ones above; lateral inner veins parallel and approximate, outer ones arcuate-erect; transverse veinlets oblique and large, forming broad oblong-hexagonal areas with num anastomosing or free veinlets included; cells of the epidermis flexuous, much elongated in the middle beneath, stomata num; peduncle starting from the petiole or the base of the sterile lamina, 3-9 cm long; spike 1.5-2.5 cm long, apiculate, sporangia 12-27 pairs; spores .045-.05 mm in diam, areolae 15-20, angular, striae not elevated."—E. G. Britton, Torr Cl b 24:554 (SD 1897).

Considered by Underwood as *O. vulgatum*.

Order **MARSILIACEAE** R. Br.

Genus **MARSILIA** Linnaeus.

Sporocarps ovoid; lvs quadifoliate. A genus of 40 or more species.

*Sporocarps 2-8 on each peduncle.

M. QUADRIFOLIA L.

Plant com slender, 5-12 cm hi; lfts variable, 4-14 mm wide, 5-15 mm long, margins entire, smooth, or rarely with

2 (rarely 3) on a branching peduncle, scattered hairs when young; sporocarps which is com attached to the stipe near its base, but sometimes as much as 2 cm above; young sporocarp with short y'ish-brown hairs, later becoming naked and dark p; lower tooth obtuse, upper small, acute or obtuse; sori 8-9 in each valve. Bantam Lake, Litchfield Co. Conn (Dr. T. F. Allen). La (Dr. Hale), fide Wood, Cl-bk bot 810.

M: MACROPODA Engelmam, Am J Sci, sr 2, 3: 56 (1847).

Plant robust, 10-25 cm hi; lfts large, 2-5 cm lg, 2 cm wide or less, com undulate, clothed with w hairs on both sides when young, becoming smoother with age; sporocarps 2-6, on erect branching peduncles, ascending, densely villous, 6-8 mm lg, 5-6 mm wide; raphe short, lower tooth obtuse, upper inconspicuous or 0; sori 10 in each valve. Tex; NM. Synonym: *M. macropus* A. Br. (fide Underwood).

**Sporocarps 1 (rarely 2) on each peduncle.

M: UNOBNATA A. Br.

Plant 6-20 cm hi; lfts nearly smooth, entire, 10-16 mm lg; sporocarps 6 mm wide, 8 mm lg; peduncles 15-30 mm lg, 2-4 times as long as sporocarps; raphe long, terminating in 2 approximate teeth, upper longer and mostly uncinately curved; sori 12-14 in each valve. La (Hale) Tex (Reverchon).

MARSILIA VESTITA H. & G.

Plant 3-6 cm hi; lfts entire or slightly toothed; sporocarps 4-7 mm long, 3-5 mm wide; raphe short, lower tooth short and blunt, upper acute, a little longer, sometimes curved; paleae varying from soft, dense and spreading to short and appressed, in mucronata forms, where it is sometimes 0; sori 6-11 in each valve; a very variable species. Ark; Ar; Tex; Kans; Nev; Ore; Wash; Mont; Dak; SD. Synonym: *M. mucronata* A. Br.

M: TENUIFOLIA Engelmam.

Plant somewhat slender, 5-15 cm hi; lfts 2-4 mm wide, more or less falcate, apex often somewhat truncate and unequally toothed, villous with appressed hairs; sporocarps single, 5-8 mm long, 4-5 mm wide, teeth divergent, subequal; sori 9-11 in each valve. Texas. Synonym: *M. vestita tenuifolia*. Underwood & Cook.

Genus **FILULARIA** Linnaeus.

Sporocarps globose, lvs filiform. Six species.

FILULARIA AMERICANA Al. Br.

Lvs setiform, 1" long; sporocarps 1" in diam, attached by the side to a short, descending peduncle, com 3-celled; macrospores 15-17 in each cell, not constricted in middle. S Bar (Mrs. Cooper) Ark (Nuttall); SD!

SALVINIACEAE.

SALVINIA Schreb.

Lvs 6-9" long, with a distinct midrib. Named for Salvini, a Florentine professor. Contains 12 species.

S: NATANS Hoffm.

Lvs oblong, horizontal, rounded or slightly cordate at base, $\frac{1}{4}$ -1" long, bright g above, the under surface matted with brown, pellucid hairs; sporo-

carps 4-8 in a cluster. Bois Brule Bottoms, Perry Co, Mo (Demetrio). NY (Pursh). Synonym: *Marsilia natans* L. **AEOLIA** Lam. Al:380d.

Lvs minute, num, closely imbricate, deeply lobed. Small moss-like plants, with pinnately branched sts. Five species.

A: CAROLINIANA Willd, sp pl 5:541. B 2:352 Da 20. Z 1:100. A 1:380d.

Plant 4-12" broad, much branched; lvs with ovate lobes, the lower reddish, the upper g with a r'ish border; macrospores with a minutely granulate surface; masses of microspores barbed at tip. Synonyms: *A. microphylla* Kaulf.—*A. Mexicana* Schlecht.

A: FILICULOIDES Lam. A 1:38d. Z 1:101.

"La Honda, San Mateo Co. Cal, 1890 (Brandege), the plants so crowded as to stand upright. A larger and coarser plant than *A. Caroliniana*, easily distinguished in fr by the non-septate appendages to the massulae. Baker (Handbook of Fern Allies 187), gives its habitat as 'South America, mainly on the west side.' This adds another Chilian plant to the Cal flora."—Underwood, Zoe 1:101.

A: SONORIENSIS Greene.

Description not seen by the writer.

Order **ISQUISETACEAE** DC.

ISQUISETUM L.

Horse-tail or scouring-rush, the only genus known in this order.

Section **ISQUISETUM**. Sts ann, stomata scattered.

*Sts of 2 kinds, the pale or brownish fertile sts appearing earlier than the herbaceous sterile ones; fr'ng in spring. I.—Fertile sts simple, soon withering.

ISADENSE L.

Horsetail sterile sts g, rather slender, 1-2' hi, 6-19-furrowed; branches num, long, mostly simple, 4-angled, minutely roughened, lowest joint com longer than sheath of st; fertile sts 4-10' hi, light brown, the loose scarios sheath mostly distant, wish, ending in about 12 brown acuminate teeth; spike rarely over 1' long. Va to Cal; Greenland. Synonym: *E. boreale* Bong.

IS: TELMATHA Ehrh. B 2:330.

Sterile sts ivory w or g'ish, stout, 2-6' hi, 20-40-furrowed; branches very num, erect-spreading, simple, 4-5-angled, the ridges rough and sulcate, lowest joint shorter than sheath of st; fertile sts 10-15' hi, w, many-furrowed, the loose brownish sheaths elongate, deeply 20-30-toothed. Cal; Ore; north. Synonyms: *E. fluviatile* Sm.—*E. eburneum* Schreb.—*E. maximum* Und. not Lam.

II.—Fertile sts when older producing herbaceous branches, only the naked apex withering.

IS: PRATENSE Ehrh.

Sterile and finally fertile sts producing straight, simple branches; sheaths of st with about 11 short, ovate-lanceolate teeth, those of branches 3-toothed. Mich; Wis; north. Synonyms: *E. umbrosum* Willd.—*E. triquetrum* Bory.—*E. Drummondii* Hooker.

IS: SILVATICUM L.

Sterile and fertile sts com 12-furrowed,

producing compound branches, branchlets curved downward; sheaths loose, those of st with 8-14 bluntish teeth, those of branches with 4-5, of branchlets with 3 divergent teeth. Va; Mich; Labrador.

**Sts of 1 kind, herbaceous; branches simple or o; fr'ng in summer. I.—Sheaths somewhat loose.

IS: PALUSTRE L.

Sts slender, 10-18' hi, very deeply 5-9-grooved, the grooves separated by narrow, wing-like ridges, roughish; sheaths with about 8 loose-awl-shaped, whitish margined teeth; branches few in a whorl, with mostly 5-toothed sheaths. NY; Wis; BC; north. Synonym: *E. pratense* Reicheub.

IS: LITORALE Kuhl.

Sts slightly roughened, 6-19-grooved, the carinae convex; sheaths sensibly dilated above, the uppermost bell-shaped; lvs convex, angled beneath, separate at the commissural groove; teeth herbaceous, membranous at margin, narrow, lanceolate; branches of 2 kinds, the 4-angled hollow, the 3-angled solid, first joint a little longer or shorter than sheath of st; spores abortive, elaters com o. Bay of Quinte, Canada (Macoun); Vt (Pringle); Oswego river, NY (Wibbe).

II.—Sheaths appressed.

IS: FLUVIATILE L.

Sts 2-3' hi, slightly to many-furrowed, smooth, com producing upright branches after fructification; sheaths appressed, with about 18 dark brown, short, acute, rigid teeth; air-cavities o under the grooves, small under the ridges. Va to Wash; north. Synonyms: *E. limosum* L.—*E. uliginosum* Muhl.—*E. heliocharis* Ehrh.

Section **ISPOCKANTE**. Sts per, ever-g; spikes tipped with a rigid point; stomata in regular rows; fr'ng in summer.

*Sts tall and stout, com many-grooved.

I.—Branches num, regularly whorled.

IS: BAKOSISSEKUM Desf.

Sts grooved, more or less roughened, 6-26-furrowed; sheaths dilated, toothed; teeth not grooved, persistent or decid, leaving only a triangular, very rarely a truncated margin; lvs more or less distinct, 2-4-carinate; branches, when present, 4-9-angled; series of stomata in 1-4 lines; inner bark of ridges higher than grooves; ridges convex, marked with bands, never with 2-rowed tubercles. Cuba; Mexico; B C.

II.—Branches few and irregular or wholly o.

IS: ROBUSTAM A. Braun. B 2:330.

Sts 3-11' hi, sometimes nearly 1' thick, 20-48-furrowed; ridges roughened with a single series of transversely-oblong, siliceous tubercles; sheath short, cylindric, marked with black girdles at base, and at base of caducous teeth; ridges of sheaths tricarinate. O; La; Cal; north.

IS: NIEMALE L.

Scouring-rush. Sts 1-4' hi, rough, 8-34-furrowed; ridges with 2 indistinct lines of tubercles; sheaths rather long, cylindric, marked with 1 or 2 black girdles; ridges of sheath obscurely quadricarinate; teeth membranous soon decid.

NA in general.

ELAVIGATUM A. Br.

Sts not tuberculate, 1-5' hi, pale g. 14-30-furrowed; ridges almost smooth; sheaths elongate, enlarged upward, marked with a black girdle at base of the com decid w-margined teeth, and rarely also at base of sheath; ridges of sheath with a central-carina and sometimes with faint short, lateral ones. NC; O; La; Cal; Ore.

*Sts slender, tufted, 5-10-grooved.

VARIEGATUM Schleich.

Sts ascending, 6-18' long, com simple from a branched base, 5-10-furrowed; sheaths g, variegated with black above, teeth 5-10, tipped with a decid bristle; central air-cavity small. NH; Ill; Alk; Greenland.

SCIRPOIDES Michx.

Sts filiform, very num, 3-6' hi, flexuous and curving, mostly 6-furrowed, with acute ridges; sheaths 3-toothed, bristle-tips more persistent; central air-cavity 0. New England; Pa; Ill; north.

Order **LYCOPODIACEAE** Lindley.

PHLOTUM R. Br.

Lvs minute, abortive; sporangia 3-celled; 4 mostly tropical species.

TRIQUETRUM Swz.

Sts erect 8-10' hi, triquetrous at base, many-times forked at apex; ultimate divisions triquetrous-winged; lvs remote, awl-shaped, less than 1" long; sporangia in spikes. Fla; SC. Synonyms: P. Floridanum Michx.—P. dichotomum Link.—Bernhardia dichotoma Willd.—B. pedunculata Desv.—Lycopodium nudum L.

LYCOPIDIUM L.

Lvs well developed, in 4-many ranks; sporangia 1-celled. Near 100 species. Section **FLAVANTUM** Beauv. Sporangia borne in axils of lvs which are similar to those of sterile and fertile sts. *Sporangia com 0 in axils of upper lvs; lvs dark g, shining, about 8-ranked.

SELAGO L.

Sts 3-6' hi, thick, rigid, erect, 2-3-times forked, forming a level-topped cluster; lvs elongate-lanceolate, mucronulate, entire or spinulose-denticulate, nerved above, convex below. NC; Mich; New England; Alk; Greenland. Synonyms: L. recurvum Kit.—L. suberectum Lowe.—Plananthus selago Beauv.

LUODULUM Michx.

Sts ascending, thick, 2-3-times forked, branches 6-12' hi; lvs widely spreading or reflexed, flat, one-nerved, acute, minutely toothed. NC, northward. Synonyms: L. reflexum Swz.—L. serratum Desv.—Plananthus reflexus Beauv.

*Sporangia only in axils of upper lvs which form spikes; lvs many-ranked.

IMBUDATUM L.

Sterile sts creeping, flaccid, forking; fertile sts erect, simple, 1-4' hi, bearing a short, thick spike; lvs lanceolate or lance-awl-shaped, acute, entire, soft, spreading or curved upward on prostrate sts. New England; Mich; southward. Synonyms: L. palustre Lam.—Plananthus inundatus Beauv.

Variety **PINNATUM** Chapm.

Sts pinnately branched; lvs bristly-fringed below middle, unequal, the upper and lower shorter and somewhat

appressed, the lateral widely spreading; fertile sts 1' hi, very leafy; spike thick, cylindric, 2-3' long. Western Fla. Variety **BIGELOVII** Tuckerm.

A form having fertile sts 5-7' hi, with more pointed, often tooth-bearing lvs. Synonym: L. Carolinianum Bigel.

L. ALOPECUROIDES L.

Sts stout, densely lfy thruout; sterile branches flaccid, procumbent, creeping; fertile branches rigid, erect, 6-20' hi, bearing a single spike; lvs narrowly linear-awl-shaped, spinulose-pointed, spreading, conspicuously bristle-toothed below the middle, nerved above, those of the cylindric spike with long, setaceous tips. NJ to Fla; Miss. Synonyms: L. longipes H & G.—Plananthus alopecuroides Beauv.

Section **EULYCOPODIUM** (Lepidotis Beauv.). Sporangia borne in the axils of yellowish, scale-like, imbricated, ovate or cordate lvs which form a distinct spike; lvs of sterile branches very unlike those of the spikes.

*Sts lfy to base of spikes, or nearly so.

I.—Spikes nodding.

L. CERNUUM L.

Sts erect, branching, branches similar; lvs crowded, awl-shaped, incurved, terete in middle, spreading, grooved below; bracts 8-ranked. Fla; Ala. Synonyms: L. marianum Willd.—L. curvatum Blume.—L. Borganum Richard.—L. bryotium Vent.

II.—Spikes erect, closely sessile.

L. ANNOTINUM L.

Sts much branched, prostrate, creeping, 1-4' long; ascending branches similar, 5-8' hi, sparingly forked; lvs equal, spreading, 5-ranked, rigid, linear-lanceolate, minutely serrulate, nerved below; spike oblong, cylindric, thick. New England; NJ; Wash; Alk; Greenland. Synonyms: L. juniperifolium Lam.—L. bryophyllum Presl.—Lepidotis annotina Beauv.

Variety **FUNGENS** Desv.

A mt form with shorter and more rigid, pointed lvs. Synonym: L. reclinatum Michx.

L. OBSCURUM L.

Ground-pine. Sts erect, 6-9' hi, from a subterranean creeping rtstock, densely branched above, the crowded branches spreading fan-like; lvs 4-6-ranked, lanceolate-linear, acute, entire; spikes 4-10 on each plant; bracts many-rowed. Canada; NC; Ind; Mich. Synonym: Lepidotis dendroidea Beauv.—Lycopodium dendroideum et var. obscurum.

L. ALBUM L.

Sts elongate, creeping, with ascending densely clustered branches; lvs 4-ranked, erect, imbricated, adnate-decurrent, of 2 forms; those of lateral rows lanceolate, falcate, acute, carinate, concave within; those of intermediate rows scarcely 1-third smaller, lance-awl-shaped, the upper and lower rows not different. Lake Superior; Rocky Mts; Wash; Alk.

III.—Spikes erect, short-peduncled.

L. SABBASPOLIUM Willd.

Ground-fr, sts elongate, creeping, com underground; branches erect, short, dichotomous, clustered; lvs 4-rowed, small,

appressed, lanceolate, mucronate, entire, apparently terete; spikes cylindrical, solitary, with cordate, acuminate bracts. NY; NJ; north and west. Synonyms: *L. alpinum* Michx.—*L. armatum* Desv. **Fertile branches with minute lvs, so that the spikes appear long-peduncled.

I.—Lvs uniform, many-ranked; sts terete.

L: CLAVATUM L.

Running-pine. Sts extensively creeping; branches similar, ascending, short and lfy, the fertile terminated by a slender peduncle bearing 1-4 linear, cylindrical spikes; lvs much-crowded, linear-saw-shaped, tipped like bracts with a fine bristle. Canada; NC; Wash; Alk. Synonyms: *L. officinale* Neck.—*L. vulgare* Vall.—*L. inflexum* Swz.—*L. serpens* Presl.—*Lepidotis inflexa* Beauv. II.—Lvs of 2 forms, few-ranked; sts flattened.

L: CAROLINIANUM L.

Sterile sts and their few short branches entirely creeping; lateral lvs broadly lanceolate, acute, and somewhat oblique, 1-nerved, widely spreading in 2-ranks; upper row of lvs shorter, appressed; peduncle simple, slender, 2-4' hi, clothed with small bract-like lvs, bearing a single cylindrical spike. NJ; Fla; Ala; La. Synonyms: *L. repens* Swz.—*L. affine* Bory.—*Lepidotis repens* Beauv.

L: COMPLANATUM L.

Sts extensively creeping, with erect or ascending fan-like branches several times forked above; branchlets crowded, flattened; lvs minute, imbricate-appressed, 4-ranked; lateral rows with somewhat spreading tips; intermediate smaller, narrower, wholly appressed; peduncle slender, bearing 2-4 cylindrical spikes. New England; NC; Mich; northward. Synonyms: *L. thyroides* Humb & Bonpl.—*L. tristachyon* Pursh.—*L. anceps* Walls.—*L. chamaecyparissus* A. Br.—*Lepidotis complanata* Beauv.—Some botanists unite *Lycopodium alpinum* L. and *L. sabinaefolium* with this species.

Descriptions of the following species have not been seen by the writer.

L: ADPRESSUM (Chapm) Lloyd and Underwood.

L: CHAMAECYPARISSUS A. Br.

L: PINNATUM (Chapm) Lloyd and Underwood.

Based on *L. inundatum pinnatum*?

L: PODOPHILUM Lloyd and Underwood.

L: SITCHENSIS Rupr.

ISOETACEAE.

Genus ISOETES Linnaeus.

Quillwort. About 50 species. Section I. Submerged, rarely above water in driest seasons; lvs quadrangular, without peripheral bast-bundles; velum incomplete. *Stimata absent.

I: LACUSTRIS L.

Lvs 10-25, stout, rather rigid, obtusely quadrangular, acute but scarcely tapering, dark or olive-g, 2-6' long; sporangia orbicular—broadly-elliptic, with a narrow velum; ligula triangular, short or

somewhat elongate; macrospores 0.5-0.8 mm in diam, marked all over with distinct or somewhat confluent crests; microspores smooth, 0.035—0.046 mm long. NY; NH; Mass; Vt.

Variety **PAUPERCOLA** Engelmann.

Lvs fewer, shorter, thinner; spores smaller, microspores somewhat granulate, 0.026-0.036 mm long. Synonym: *I. macrospora* Durien. Grand Lake, Middle Park, Colo (Engelmann); Castle Lake, near Mt Shasta, Cal (Pringle). I: **PYGMAEA** E. B2:351.

Lvs 5-10, stout, rigid, bright g, ¼-1' long, abruptly tapering to a fine point, with very short often almost square epidermal cells; sporangia orbicular with a narrow velum; macrospores 0.36-0.5 mm thick, marked with minute, rather regular, distinct or rarely confluent warts; microspores brown, almost smooth, 0.024-0.029 mm long. Mon Pass, Cal. (Bolander).

I: TUCKERMANNI A. Br.

Lvs 10-30, very slender, tapering, olive g, 2-3' long, outer recurved; sporangia mostly oblong, w or rarely brown-spotted, upper third covered by the velum; macrospores 4.44-0.56 mm thick, the upper segs marked with prominent, somewhat parallel and branching ridges, lower half reticulate; microspores smooth or nearly so, 0.026-0.032 mm long. Mass.

I: SCHINOSPORA Durien, Soc bot Fr b 8:164.

One of the smaller species, with 10-30 or 40 soft bright g or sometimes r'ish lvs, gradually and regularly tapering from a thick base to a very slender elongated point absolutely without stomata, 2-4 or sometimes 5' long; sporangia orbicular to broadly oval, unspotted with a narrow, erect, truncate, or slightly forked spinules; microspores 0.03-0.034 mm long, almost smooth. Italy, France, Germany, England, Lapland, Iceland, apparently not in America. **Stomata present.

Variety **BRAUNII** E, St. Louis ac tr 4:379 (1882).

Rather small, with 13-15 g or r'ish-g, erect or spreading, rather short (3-6' long), tapering soft lvs, generally with few stomata towards the tip only; sporangia orbicular to broadly elliptical, spotted, generally ¼ or even ½ covered by a broad velum; macrospores 0.4-0.5 mm thick, rather a little longer, covered with broad, retuse spinules, sometimes somewhat confluent, and then dentate or incised at tip; microspores 0.026-0.03 mm long, smooth. Nova Scotia; New England; Pa; Mich; Utah; Greenland. Synonym: *I. Braunii* Durien, Soc bot Fr b 11:101.

Variety **BOBUSTA** Engelmann.

Similar to var. Braunii, but much stouter, with 25-70 lvs, 5-8' long, with abundant stomata all over their surface; velum covering about ¼ of the large, spotted sporangium; macrospores 0.36-0.55 mm thick, with the sculpture and microspores the same as of var. Braunii. North end of Isle of La Motte, Lake Champlain (C. G. Pringle).

Variety **BOOTTII** Engelmann.

Lvs erect, soft, bright g, fewer (12-20) short (4-5' long); stomata mostly few, near the tip; sporangia nearly orbicular, pale-spotted, two-thirds or more covered by the broad velum; macrospores 0.39-0.5 mm thick, with longer and slenderer, delicate, generally simple spinules; microspores 0.028-0.03 mm long. Mass (Boott). Synonym: *I. Boottii* A. Braun in litt.

Variety **MURICATA** Engelmann.

Lvs (15-20) long (6-12'), flaccid, bright g, with very few stomata; sporangium broadly oval, pale-spotted, about ¼ covered by velum; macrospores 0.4-0.58 mm thick, with shorter and more confluent, therefore sometimes almost crest-like spinules; macrospores slightly rough on the edges, 0.028-0.032 mm long. Near Boston, Mass (Boott). Synonym: *I. muricata* Duran, Soc Bot Fr b 11:101.

I. BOLANDER E, Am nat 8:214. B2:350, Und Z 1:98 Sber mts. 101 Brit Am.

One of the smaller species, with erect, soft, bright g lvs tapering to a fine point, 5-20 or 25 in number, 2-4½' long, with thin walls and partitions, and generally not many stomata; sporangium broadly oblong, mostly without any spots, with a narrow velum; ligula triangular; macrospores 0.3-0.4 or rarely 0.45 mm thick, marked with minute low tubercles or warts, rarely confluent to wrinkles; microspores 0.026-0.031 mm long, generally spinulose; rarely, in the Rocky Mt form, smooth, deep brown. Colo; Ut; Wash. Synonym: *I. California* E, ex G, Man (nomen nudum).

Section II.—Amphibious, partially emerged, submerged only in the earlier period of their growth or temporarily; stomata always present.

*Peripheral bast-bundles 0.

I.—Velum partial.

I. SACCHARATA Engelmann, Gray's Man, ed 5, 676 (1868).

Plant small, com with a flat, depressed trunk; lvs subulate, olive-g, spreading, 10-20 in number, 2-3' long; sporangium oblong, spotted, with a narrow velum; ligula triangular; macrospores 0.4-0.47 mm thick, covered with very minute distinct or sometimes a little confluent warts; microspores papillose, 0.024-0.028 mm long. Md Canby).

I. RIPARIA Engelmann.

Lvs 15-30, slender, rather rigid, deep g, 4-8' long, with num stomata; sporangia mostly oblong, distinctly brown-spotted, 1-fourth or 1-third covered by the velum; macrospores 0.45-0.65 mm thick, marked with isolated or anastomosing, jagged crests; microspores more or less tuberculate, 0.028-0.032 mm long. mm long. Md; (Canby).

II.—Velum complete.

I. MELANOSPORA Engelmann, St. Louis ac tr 3:395, note.

One of the smallest species, with a flat, only slightly bilobed trunk; lvs few (5-10, 2-2½' long), distichous, slender, tapering, light g, spreading; sporangium orbicular or almost orbiculate, ½-1' lg, entirely covered by the velum, unspotted; ligula short-triangular, obtuse, or about semi-orbicular; microspores 0.35-0.45 mm in diam, roughened with distinct or rare-

ly somewhat confluent warts, dark-colored; microspores 0.028-0.031 mm long, smoother or slightly papillose. Stone Mt. Ga.

**Peripheral bast bundles present.

I.—Velum partial.

I. ENGELMANNI A. Braun, A 1:33.

Lvs 25-100, light g, 9-20' long or more, with abundant stomata; sporangia oblong to linear-oblong, unspotted; velum narrow; ligula elongated from a triangular base; macrospores 0.4-0.52 mm thick, delicately honeycomb-reticulated; microspores 0.024-0.023 mm long, generally smooth. New England; NY; Mo; Ill.

Variety **GRACILIS** E, Ex G, Man, ed 5, 676.

Often submerged, lvs 8-12, 9-12' lg; bast-bundles oft quite sm, or only 2. New England; NJ.

Variety **VALIDA** E, Ex G, Man, ed 5, 676.

Lvs 50-100 or even 200, 18-25' lg, keeled on upper side; sporangia oft linear-oblong (4.9" lg), 1-third or oft ½ or even 2-third covered by the broad velum; macrospores rather smaller, 0.32-0.48 mm thick; microspores 0.024-0.027 mm lg, spinulose, Pa; Dela. Variety **GEORGIANA** Engelmann.

Similar to type; lvs few (15), 10-12' long, rather slender; oval sporangium with narrow velum; macrospores 0.48-0.56 mm thick; microspores 0.028-0.031 mm long, smooth. Ga.

I. HOWELLI Engelmann.

Middle-sized, lvs (10-25) bright g (5-8' long) with thick dissepiments; sporangium oval (1½-2½" long), unspotted, ¼-½ covered by velum; subulate ligula as long as sporangium; macrospores 0.43-0.48 mm in diam, rough, with prominent rounded single or sometimes confluent tubercles. Ore. Synonyms: *I. nuda* Engelmann.—I. Underwoodi. (fide Heller).

I. NUDA Engelmann.

Lvs 10-15, bright g, 6-9' long; sporangia oval, light-brown, attached to base of lvs by median line only, velum entirely 0; ligula somewhat triangular; macrospores 0.366-0.4 mm thick, slightly tuberculate, tubercles somewhat confluent. Hood river, Ore (Howell).

II.—Velum complete.

I. FLACCIDA Shuttleworth.

Lvs 10-35, bright g, 15'-2' long, submerged, floating on the surface, or wholly emerged; sporangia oval, 2-3" long, entirely covered by velum; macrospores 0.3-0.42 mm thick, covered with many or rarely few, large flattish tubercles, distinct, or confluent into labyrinthiform wrinkles. Fla. Variety **RIGIDA** Engelmann.

A smaller form with still more slender, erect, dark g lvs (about 10-15 in number, 5-6' long). Lake Flint, Fla (A. P. Garber).

Variety **CHAPMANI** Engelmann.

Lvs about 30, floating, 18' long; sporangia orbicular; macrospores 0.44-0.55 mm thick, almost smooth on upper side; microspores slightly papillose, 0.027-0.03 mm long. Near Mariana, Fla (Chapman).

Section III.—Terrestrial species, maturing entirely out of water, with abundant stomata and peripheral bast-bundles, thick dissepiments, and small air-cavities in the nearly triangular lvs.
*Trunk bilobed.

I.—Velum partial or almost wanting.
ISOETES MELANOPODA J. Gay.
A1:32d.

Variety **CALIFORNICA** A. A. Eaton.

A1:32 fdr.

Variety **PALLIDA** Engelmann.

A1:32 fdr.

I: **MARITIMA** Underwood.

Monococious; trunk sm, only slightly bilobed; lvs 8-15, rigid, g. $\frac{1}{2}$ ' long, $\frac{1}{2}$ to 2-thirds ll wide; sporangia oval 2" lg, $1\frac{1}{4}$ " wide, brownish w, 1-third to $\frac{1}{2}$ covered by velum; ligule small; macrospores 0.42-0.48 mm thick, densely spinulose, the spines blunt, rarely confluent; microspores smooth, w. 0.32-0.35 mm thick. In salt marsh, Alberni, Vancouver Island (Macoun).

I: **BUTLERI** Engelmann.

Dioecious; trunk sub-globose; lvs 8-12, rigid, bright g. 3-7' long; sporangia com oblong, spotted, with a very narrow velum or none; ligula awl-shaped from a triangular base; macrospores 0.5-0.63 mm thick, marked with knobs or warts, distinct or sometimes confluent; microspores papillose, dark brown, 0.028-0.38 mm long. "In saline flats, near Limestone Gap, Indian Territory."
Variety **IMMACULATA** Engelmann.

Larger, with unspotted sporangia, and spinulose microspores, the macrospores 0.4-0.56 mm. Cedar barrens near Nashville, Tenn (Gattinger).

II.—Velum complete.

I: **NUTTALLI** A. Braun. B2:351.

Trunk almost globose, slightly grooved; lvs 20-50, slender, bright g. 3-9' lg, with only 3 peripheral bast-bundles; sporangia oblong or oval, entirely covered by velum; macrospores variable, 0.25-0.5 mm thick, densely covered with minute but rounded warts, or rarely almost smooth; microspores papillose, brown, 0.026-0.028 mm long. Ore; Wash; Idaho; Vancouver Island. Synonym: I. opaca Nuttall.

**Trunk trilobed; velum complete.

I: **SUKSDORFII** Baker.

Lvs 12-20, firm, bright g. very slender, arcuate, deeply channelled, along the face, 2-3' long, less than $\frac{1}{2}$ " wide; sporangia orbicular, 2" long and broad; ligula deltoid; macrospores grayish-w, faintly granulated. Wash (Suksdorf).

Other species of Isoetes within our region are the following, of which descriptions have not been seen by the writer, except as noted.

ISOETES MEXICANA Underw.

Und, bot gaz 13:93, Chili; Z 1:98, 99, 101, A1:31d.

I: **DODGEI** A. A. Eaton.

I: **EATONI** Dodge.

I: **FOVEOLATA** A. A. Eaton.

I: **MACOUNII** A. A. Eaton.

I: **MINIMA** A. A. Eaton.

ISOETES ORCUTII A. A. Eaton.

A1:33 fdr.

Species not American, but cited in our literature.

I. **GARDNERIANA** A 1:34.

I. **GUNNII** A 1:34.

I. **HOOPERI** A 1:34.

I. **HOWELLI** A 1:33.

I. **MULLERII** A 1:34.

I. **NIGHTANA** A 1:34.

I. **SACCHARATA** E, Parry Wyo 24.

I. **STUARTI** A 1:34.

I. **WELWITSCHII** A 1:34.

SELAGINELLACEAE.

SELAGINELLA Beauv.

The only genus known in the order, largely tropical, containing over 300 species.

A 1:380d.

Section **EUSELAGINELLA**. St lvs of 1 kind, many-ranked; bracts uniform.

*Sts prostrate or spreading, somewhat rigid.

S. **EUPETRIS** Spreng. B 2:350. Da 20.

Br 1:205 Cruz. A 1:380d.

A1:380d.

Sts densely tufted, prostrate or ascending, much-branched, 2-12' long; lvs appressed-imbriate, linear to linear-lanceolate, convex and sulcate dorsally, rigid, bristle-tipped, ciliate; spikes strongly quadrangular, 6-12" long; sporangia of both sorts in the same axils; macrosporangia abundant; bracts ovate-lanceolate. New England to Fla; Texas; Cal; north. Synonyms: *Lycopodium rupestre* L.—*L. bryopteris* Wall.

Variety **TORTIPIA** Underwood.

Lvs sub-entire, gibbous dorsally near apex; terminal bracts tipped with a long, twisted, w awn; macrospores loosely reticulate. NC; SC.

Variety **FENDLERI** Underwood.

Description not seen.

S: **SELAGINOIDES** Link.

Sterile sts prostrate or creeping, small and slender; fertile sts thicker, ascending, simple, 1-3' hl; lvs lanceolate, acute, spreading, sparsely spinulose-ciliate; bracts lax, ascending, lanceolate or ovate-lanceolate, strongly ciliate. Greenland; NH to Colo. Synonyms: *S. spinosa* Beauv.—*Lycopodium selaginoides* L.—*L. ciliatum* Lam.

**Sts pendent, falcid.

S. **OREGANA** Eaton. B 2:350.

Sts 1-6' long, pinnately much branched; lvs loosely imbricate, scarcely 1" lg, linear-lanceolate, convex and grooved on back, acute, sparsely spinulose-denticulate, not bristle-tipped; spikes quadrangular, very slender; macrosporangia scarce. Ore.

Section **STACHYGYNANDRUM** Baker.

St lvs of 2 kinds, spreading in 2 planes, those of upper plane smaller and more ascending; bracts uniform.

*Main sts decumbent; rt fibres extending to upper nodes.

I.—Sts persistent; lvs rigid, firm in texture.

S. **DOUGLASSII** Spring. B 2:350.

Sts decumbent, 3-12' long; branches 2-6' long, bi-tri-pinnately divided; lvs of lower plane 1" long, obliquely oval, obtuse, faintly nerved; lvs of upper plane $\frac{1}{2}$ as long, oval, incurved, ending in a

short point, both sparingly ciliate at base; spikes 6-12" long, quadrangular, terminal; bracts deltoid-cuspidate, strongly imbricate. Cal; BC. Synonyms: *Lycopodium Douglasii* H & G.—L. ovalifolium H & G.

II.—Sts mostly ann, fugacious; lvs mostly membranous, flaccid.

S: APUS Spring.

Sts 1-4' long, slender, angled on face, prostrate, creeping, much branched flaccid; lvs of lower plane spreading above, lower reflexed, ovate, acute, serrulate, not distinctly ciliate; lvs of upper plane ovate, shortly cuspidate; spikes 3-6" lg; bracts ovate, acute, membranous, strongly serrulate, acutely keeled in upper half. Canada; Rocky Mts; Fla; Texas.

S: LUDOVICIANA A. Br.

Sts slender, copiously pinnate, flat on both sides, 4-6' long, lower branches slightly compound; lvs of lower plane rather distant except at tips of branches, spreading, ovate-oblong, subacute, firmer in texture than in *S. apus*, serrulate, not distinctly ciliate; lvs of upper plane $\frac{1}{2}$ as long, obliquely oblong, cuspidate; spikes 3-6" long; bracts ovate-lanceolate, strongly keeled. La; Fla. Synonym: *S. apus denticulata* Spring.

**Sts densely tufted, rolling into a nest-like ball when dry; sts confined to base of sts.

S. LEPIDOPHYLLA Spring. Baja. Ar. B 2:350.

Sts 2-4' long, densely tufted, pinnately branched to base, pinnae ascending, subflabellately compound; lvs of lower plane closely imbricate, ascending, obliquely ovate, obtuse, thick, rigid, minutely ciliate, g above, paler below, becoming r'ish-brown in age; lvs of upper plane nearly as long, obliquely ovate, obtuse; spikes 3-6" long, quadrangular; bracts deltoid, acutely keeled. Tex; Arizona; Cal?

S: FILIFERA A. Braun.

Primary branching varies from flabellate to pinnate, lvs cuspidate and serrulate. Mexico; Texas?

Descriptions of the following have not been seen by the writer.

S: ARENICOLA Underwood.

S: EBYOIDES (Nuttall) Underwood.

Synonym: *S. cinerascens* A. A. Eaton.

S: MUTICA D. C. Eaton.

S: FRINGLEI Baker.

S: RUFIN COLA Underwood.

S: STEUTHIOLOIDES (Presl) Underwood.

S: TORTIPILA A. Br.

Order **FILICES** Juss.

A large order of 70 to more than 200 genera (according to different botanists), and 3000 or more species. It contains six well-marked sub-orders (considered as orders by some recent authors).

Sub-order **OSMUNDACEAE** R. Br.

Sporangia naked, globose, mostly pedicelled, with no ring or mere traces of one around apex, opening into halves by a longitudinal slit.

OSMUNDA L.

Fertile fronds or fertile portions very much contracted, bearing short-pedicelled, naked sporangia on the margin of the rachis-like divisions. Sporangia large, globular, opening by a longitudinal cleft into halves, bearing near apex a few parallel striae, the rudiment of a transverse ring. Spores g. Named for Osmunder, a Saxon name for the divinity Thor. Six species, mostly north temperate.

*Fronds bipinnate, fertile at apex.

O: REGALIS L.

Canada to Fla; Miss. Synonyms: *O. spectabilis* Willd.—*O. glaucescens* Link.

*Sterile fronds bipinnatifid.

O: CLAYTONIANA L.

Stipes tufted, 1° or more long, clothed with loose woolly tomentum when young, naked when mature; fronds 1-2' long, 8-12' broad; pinnae oblong-lanceolate with oblong, obtuse divisions; 2-5 pairs of central pinnae fertile, fertile pinnules dense, cylindrical; texture herbaceous. Canada; Ky; northward. Synonym: *O. interrupta* Michx.

O: CINNAMOMEA L.

Cinnamon-fern. Stipes densely tufted, 1° or more long, sterile and fertile fronds distinct, clothed when young with ferruginous tomentum; sterile fronds smooth when mature, the pinnae bearing a tuft of tomentum at base beneath, lanceolate, cut into broadly oblong, obtuse divisions; fertile fronds contracted, bipinnate, with cinnamon-colored sporangia. New England; Wis; Fla. Synonym: *O. claytoniana* Conrad.

Variety **FRONDOSA** Gray.

Fronds in part sterile below, sparsely fertile at summit.

Sub-order **HYMENOPHYLLACEAE** Endl.

Sporangia borne on an elongate, often filiform, receptacle, surrounded by a complete transverse ring, opening vertically. Sorl terminal or marginal from the apex of a vein. Indusium inferior, com of same texture as frond. Fronds delicately membranous and pellucid.

TRICHOMANES Sm.

Indusia tubular, cup-shaped, or funnel-shaped, sometimes 2-lipped. Filmy fern. Near 100 species, of the tropics.

Section **EUTRICHOMANES**

T: PETERSII Gray.

Stipes 1-2" long; fronds 3-10" long, 1-2" broad, oblong-lanceolate or ovate, entire or variously pinnatifid, the younger ones with a few black hairs along the margins; indusium solitary, terminal, funnel-shaped, the mouth expanded and slightly 2-lipped, the receptacle included. Winston Co, Colo (Peters).

T: RADICANS Swz.

Rtstock wiry, tomentose; stripes ascending, 1-3' long, naked or nearly so, com broadly winged; fronds 2-8' long, 1-1½' wide, lanceolate or ovate lanceolate, bipinnatifid; pinnae ovate, obtuse, upper side of base parallel and appressed to the winged rachis, lower side cuneate; divisions toothed or divided into linear lobes; *indusia* terminal on short lobes, tubular or funnel-shaped, the mouth slightly 2-lipped; receptacle

exserted little or very much. Ala; Tenn; Ky. Synonym: *T. speciosum* Willd.

Sub-order **SCHEERACEAE** Presl.
Sporangia ovate, sessile, arranged in spikes or panicles, having a complete, transverse, articulated ring at apex, and opening by a longitudinal slit.
LYGODIUM Swz.

Sts scandent. Sporangia borne in a double row on narrow fertile segs, each on a separate veinlet and provided with a special indusium. Includes 16 species.

L: PALMATUM Swz. Climbing-fern. Mass; NY; Ky; Fla. Synonym: *Hydroglossum palmatum* Willd.

ORITHOPTERIS (Anemia Swz.).
Sts not scandent. Sporangia naked, attached by their bases to the narrow divisions of the panicle fertile segs of frond. Near 30 species, chiefly tropical.
O: ADIANTIFOLIA Bernh.

Rtstock creeping; stipes 1-1½' lg, firm, naked; fronds sparingly pubescent, the 2 lower branches elongate, pinnately decompound, fertile, sterile portion deltoid-ovate, bi-tri-pinnate; ultimate seg obovate or cuneate, entire or lobed, striate above with num flabellate veins. Fla. Synonym: *Anemia adiantifolia* Swz.

O: MEXICANA Underwood.

Rtstock creeping, covered with narrow blackish chaff; stipes slender, scattered, 6-12' long; the 2 lower branches of frond fertile, long-stalked, glandular, bi-pinnate with densely clustered fructification; the rest of the frond like the sterile ones, deltoid-ovate, simply pinnate; pinnae about 6 pairs and a rather large terminal one, short-stalked, ovate-lanceolate, subcoriaceous, smooth and somewhat glossy; midrib distinct, veins free, oblique, parallel, closely placed, once or twice forked. Western Texas. Synonym: *Anemia Mexicana* Klotzsch.

SCHEEREA Sm.

Sts not scandent. Sporangia naked, fixed in a double row to the midrib of the narrow fertile segs. Sterile fronds simple or dichotomously forked. Includes 16 species.

S: FUSILLA Pursh.
Sterile fronds linear, very slender, flattened and tortuous; fertile ones equally slender, 3-4' hl, and bearing at top the fertile appendage consisting of about 5 pairs of crowded pinnae, forming a distichous spike. NJ; Nova Scotia; Newfoundland.

Sub-order **POLYPODIACEAE** Presl, Tent Pterid 187 (1836).

Sporangia pedicelled, surrounded more or less completely by a jointed vertical, and elastic ring, bursting transversely. Sori dorsal or marginal, borne on a leafy frond, with or without indusia.

Tribe **ACROSTICHEAE**. Sporangia spread in a stratum over the under surface, or rarely over both surfaces of frond; indusia 0.

ACROSTICHUM L. sp Pl 1067 (1753).
Sori covering entire surface of upper pinnae. Near 200 species.

A: AUREUM L. Sp Pl 1069 (1753).
Stipes 1-2' long, tufted, strong, erect,

glossy; fronds 2-6' long, 1-2' broad, upper pinnae fertile, slightly smaller than the barren ones; texture coriaceous; areolae small, copious, without free veinlets. Southern Fla.
A: LOMARIOIDES Jenman, Bot Dept Jam b 11, 5:154 (1898).

Description not seen. Southern Fla. *Chrysodium lomarioides*, Jenm, Timehri 4:314 (1885).

Tribe **POLYPODIAE**. Sori dorsal, borne at or near ends of veinlets, indusia 0.

POLYPODIUM L.
Sp Pl 1082 (1753).

Characters of the tribe, as formerly treated; 350 or more species. Sections *Phelbodium*, *Campyloneuron* and *Phymatodes* are considered as distinct genera by recent writers.

Section **EUPOLYPODIUM**. Veins free; fronds in one species pinnate.
*Sori Large.

P: VULGARE L.
Stipes 2-4' long, firm, erect; fronds 4-10' long, 1-3' broad, cut nearly or quite to rachis into entire or slightly toothed, com blunt pinnae; veins once or twice forked. New England; Ore; Ala.
Variety **OCIDENTALE** Hooker.

Fronds larger, pinnae sharply serrated, long-pointed.

P: FALCATUM Kellogg.
Stipes 5-8' long, stramineous; fronds 12-15' long, 4-8' broad; pinnae num, tapering to a slender point, sharply serrate; sori nearest midrib; veins with 2-4 veinlets. Cal; Wash. Synonym: *P. glycyrrhiza* D. C. Eaton.

**Sori smaller, often minute.

P: FLUMIDA H B K.
Stipes 1-4' long, bk, slender; fronds narrowly lanceolate, 9-18' long, 1-2' broad; pinnae num, narrow, entire, blunt, lower gradually reduced; surfaces naked except the bk wiry rachis; veinlets forked, obscure. Fla. Synonym: *P. elasticum* Rich.

P: PECTINATUM L.
Stipes rigid, 2-6' long; fronds elliptical-lanceolate, 1-2½' long, 2-6' broad, cut to rachis into horizontal, entire or toothed pinnae, lower ones much reduced; rachis naked or finely villose; veinlets pellucid, once or twice forked; sori in long rows, of medium size. Fla.

Section **GONIOPELESIUM** Blume. Veins forming ample regular areolae (sometimes almost imperceptible), each with a single distinct free included veinlet, bearing a sorus at its terminus.

*Under surface squamous.

P: INCANUM Swz.
Rtstock woody, wide creeping, covered with small brown scales; stipes 1-4' lg, erect, densely scaly; fronds 2-6' long, 1-1½' broad, cut to rachis into entire pinnae; texture coriaceous; sori small; veins indistinct, united or frequently free. Va; Ill; southward.

P: TRYPAEOLIFIS A. Br.
Rtstock slender, firm, densely covered with minute lanceolate scales; stipes 3-12' long, erect, scaly; fronds ovate, 3-9' long, 2-3' broad; pinnae distinct, ascending, blunt, dilated at base (except lowest), thick, subcoriaceous, covered below

with ciliate scales with brown center and broad scarious border; areolae and sori in one series. Huachuca mts, Ariz; Mexico.

**Under surface mostly smooth.

P: CALIFORNICUM Kaulf, B 2:334.

Rtstock creeping, chaffy; stipes 2-6' long, stramineous when dry, naked; fronds ovate to oblong-lanceolate, 4-9' long, 1-5' broad, cut nearly or quite to midrib into finely-toothed pinnae; texture papyraceo-herbaceous; sori large; veinlets 4-8 to each vein. Cal; Baja. Synonym: *P. intermedium* H. & A.

P: SCOLERI H. & A.

Rtstock stout, creeping, scaly; stipes 3-4' long, erect, naked; fronds thick, 3-12' long, 2-6' broad, cut down to rachis into from 5-29 close, blunt pinnae; texture coriaceous, fleshy when recent; sori very large; veinlets regularly anastomosing forming a single series of large areolae. Cal; northward. Synonyms: *P. carnosum* Kellogg.—*P. pachyphyllum* D. C. Eaton. Section **PHLEBODIUM** R. Br. Veins forming ample areolae, each with 2 or more distinct, free, included veinlets bearing sori on their united points.

P: AUREUM L. Sp Pl 1087 (1753).

See *Phlebodium aureum*.

Section **CAMPYLONEURON** Presl. Primary veins distinct from midrib to edge, connected by parallel transverse veinlets; areolae similar, containing 2 or more sori.

P: PHYLLITIDIS L. Sp Pl 1033 (1753).

See *Campyloneuron phyllitidis*.

Section **PHYMATODES** Presl. Areolae fine, copious, irregular, the free veinlets spreading in various directions; sori \leftarrow rous in position.

P: SWARTZII Baker, in Hooker & Baker, Syn Fil ed 1, 357 (1868).

See *Phymatodes Swartzii*.

PHLEBODIUM J Sm, I Bot 4:58 (1842).

See *Polypodium*, section *Phlebodium*, for characters.

P: AUREUM J Sm, I Bot 4:59 (1842).

Rtstock stout, densely scaly; stipes 1-2' long, castaneous, naked; fronds 3-5' long, 9-18" broad, cut nearly to rachis into broad entire or slightly undulate pinnae; areolae copious. Fla. Synonym: *Polypodium aureum* L.

CAMPYLONEURON Presl, Tent Pterid 189 (1836).

See *Polypodium*, section *Campyloneuron*, for characters.

G: PHYLLITIDIS Presl, Tent Pterid 190 t 7 f 18 (1836).

Rtstock stout, scaly; stipes short or 0; fronds simple, 1-3' long, 1-4' broad, the point acute, lower part gradually narrowed; texture rigid, coriaceous, areolae in rows of 6-12 from midrib to edge. Fla. Synonym: *Polypodium phyllitidis* L.

PHYMATODES Presl, Tent Pterid 195 (1836).

See *Polypodium*, section *Phymatodes*, for characters.

P: SWARTZII Underwood, Our Native Ferns, ed 6, 84 (1900).

Rtstock wide creeping, slender, covered with linear ferruginous scales; stipes $\frac{1}{4}$ -1' long, slender, naked; frond simple, 2-4' long $\frac{1}{2}$ to $\frac{3}{4}$ ' broad, narrowed gradually toward both ends, edge entire, undulate,

or slightly lobed; sori uniserial on free veinlets. Key: Largo, Fla (Curtiss). Synonyms: *Polypodium serpens* Swz.—*P. Swartzii* Baker.

Tribe **GRAMMITIDAE**. Sori dorsal, variously arising from the veins, com linear. Indusia 0.

GYMNOPTERIS Bernh, Schrad J Bot. 1799 I: 297 (1799).

Sori oblong or linear, following course of veinlets.

G: HISPIDA Underwood. Our Native Ferns, ed 6, 84 (1900).

Rtstock creeping; stipes grayish, puberulent, 3-6' long; fronds 5-angled, 1-3' each way, hispid above, tomentose beneath, pinnate; lower pinnae much the largest, unequally triangular, pinnate; upper pinnae lobed or crenate. Tex; Arizona. Synonym: *Gymnogramme hispida* Mett in Kuhn, Linnaea 36:72 (1869-70).

G: TRIANGULARIS Underwood. Our Native Ferns, ed 6, 84 (1900).

Stipes densely tufted, slender, blackish-brown, polished, 6-12' long; triangular, bipinnatifid; upper pinnae more or less pinnately lobed; lower surface covered with yellow or white powder, finally more or less obscured by the fr. Ariz; Baja; Cal; BC. Synonym: *Gymnogramme triangularis* Kaulf, Enum Fil 73 (1824).

Genus **NOTHOLAENA** R. Brown.

Sori on the veins or near their extremities, roundish or oblong, soon confluent into a narrow marginal band.

Section **NOTHOLAENA**. Fronds not farinose beneath, scaly, hairy or tomentose.

*Fronds simply pinnate.

N: SINUATA Kaulf.

Rtstock short, thick, very chaffy; stipes 2-4' long, erect; fronds 6'-2" long, 1-3' broad; pinnae num, short-stalked, roundish or ovate, entire to pinnately lobed, lower surface densely scaly. Tex; Ariz.

N: FERRUGINEA Hooker.

Rtstock creeping, covered with dark rigid scales; tufted, 2-4' long, wiry, blackish, woolly at first; fronds 8-12' lg. $\frac{1}{2}$ -1' broad, narrowly lanceolate; pinnae num, ovate, pinnatifid, hairy above, densely tomentose beneath, the wool at first w'ish, but becoming ferruginous. Tex.—Ar. Synonym: *N. rufa* Presl.

**Fronds bi-quadripinnate.

I.—Fronds silky-hairy above.

NOTHOLAENA PARRYI Eaton.

Rtstock short, scaly, stipes 2-4' long, dark brown, pubescent with w'ish jointed hairs; fronds 2-4' long, oblong-lanceolate, tripinnate, lower pinnae distinct; seg crowded, roundish-obovate, 1" broad, densely covered above with entangled w hairs, beneath with a heavier pale-brown tomentum. Ut; Ar; CD; Baja!

NOTHOLAENA NEWBERRYI Eaton.

Rtstock with very narrow dark bristly scales; stipes tufted, 3-5' long, blackish-brown, woolly when young, with pale ferruginous tomentum; fronds 3-5' long, lanceolate-oblong, covered most densely beneath with fine w'ish hairs, tri-quadripinnate; ultimate seg roundish-obovate, one-third to $\frac{1}{2}$ " broad. SD; Baja!

Cotton fern, Southern and Baja Cal.

II.—Fronds slightly hispid above.

N: ASCHENBORNIANA Klotzsch

Rtstock short, creeping; stipes tufted, 2-3' long, wiry, ebeneous, densely scaly; fronds 4-10' long, 2-3' broad, oblong-lanceolate, tripinnatifid; pinnae lanceolate, cut into linear-oblong, crenate or pinnatifid pinnules; upper surface pale g, the lower densely matted with linear, ciliate, bright ferruginous scales, beneath which it is subfarinose; sori black. Huachuca mts. Ar (Lemmon); Texas (Drummond); Mex.

Section **CINCINALIS** Desv. Fronds farinose with w or y powder (in 1 sp naked).

*Fronds farinose below.

I.—Fronds deltoid or pentagonal, barely bipinnate.

N: CANDIDA Hooker.

Rtstock creeping, with narrow, rigid, nearly black scales; stipes tufted, 3-6' long, wiry, black and shining; fronds rather shorter than stipe, deltoid-ovate, pinnate; lowest pinnae with the lowest inferior pinnules elongate and again pinnatifid, the 3 or 4 succeeding pairs lanceolate, pinnatifid into oblong segs, the uppermost pinnae like the segs of the lower; upper surface g; lower surface w'ish farinose; margin slightly revolute. Southwestern Tex. (Reverchon); NM (Wright). Synonyms: *N. sulphurea* J. Sm.—*N. pulveracea* Kunze.

NOTHOLAENA CRETACEA Liebm.

Rtstock short, oblique, scales rigid, lanceolate, with a narrow membranous margin; stipes 2-7' long, brownish, wiry, scaly when young; fronds 1-2' long, broadly deltoid-ovate to pentagonal, tri-quadripinnatifid at base, gradually simpler above; ultimate segs oblong or triangular-oblong, num, crowded; upper surface more or less covered with decid glands; lower surface copiously farinose with y or w'ish powder except on the prominent dark brown rachises; margins more or less recurved, not covering the sporangia; spores globose, bk. SD Co! Baja! Ar (Ferry, Lemmon). Synonyms: *N. Californica* D. C. Eaton.—*N. candida* of collectors.

N: HOOKERI D. C. Eaton.

Rtstock short, densely covered with rigid lanceolate dark-brown scales; stipes tufted, 4-8' long, r'ish-brown, wiry, shining; fronds 2-3' each way, nearly pentagonal, composed of 3 divisions; middle one slightly stalked, rhomboid-ovate, pinnatifid into a few toothed segs, the 2d pair larger than the 1st; the side divisions sessile, deltoid, pinnatifid on upper side as in middle division, but each bearing on the lower side a single large pinnatifid basal seg, and above it smaller segs like those of the upper side; lower surface covered with pale y powder. Tex.; Ar. Synonyms: *N. cretacea* of check-lists, not of Liebm.—*N. candida* var. *5-fido-palmato* Hooker.

II.—Fronds lanceolate or linear-oblong, bipinnate or tripinnatifid.

N: GRAYI Dav.

Stipes tufted, 1½-3½' long, terete, chestnut-brown, with nearly bk, rigid, linear-acuminate scales below, paler, decid scales above; fronds 2-4' long, ¾-1¼' broad, oblong-lanceolate, once or

twice pinnate, upper surface sparingly, under thickly covered with w powder; rachises brown like the stipes, coated with a granular substance extending down the stipes, and clothed with long, slender, entire or ciliate, pale or w'ish scales; pinnae short-stalked, oblique, unequally triangular-ovate, ovate-lanceolate, or lanceolate, deeply pinnatifid or pinnately divided into 1 or 2 pairs of short-stalked or sessile, oblong, pinnatifid obtuse pinnules, the remaining portion obliquely pinnatifid with alt, lobed or entire segs; margins unchanged, reflexed; sori brown in a continuous line at the ends of the free veins. southeastern Ar.

N: LEMMONI D. C. Eaton.

Rtstock short, scaly with narrow, pointed, rigid, dark-brown chaff; stalks dark r'ish-brown, wiry, 4-6' long, chaffy at base with scales a little wider and more scarious margined than those of rtstock, otherwise smooth; fronds 6-7' long, 1-1½' wide, linear-oblong, pinnate with num deltoid or ovate, 1 or 2 pinnatifid pinnae, lowest ones a little shorter than middle ones; upper surface herbaceous-g, smooth; lower surface covered with w or slightly y'ish ceraceous powder; sori forming a narrow sub-marginal line; margins of segs very slightly recurved. Ar.

III.—Fronds deltoid-ovate, tri-quadripinnate at base.

N: NIVEA Desv.

Rtstock short, chaffy with narrow scales; stipes tufted, 4-6' long, wiry, bk polished; fronds 3-6' long, 1½-2' broad, ovate, lanceolate, triangular-ovate or deltoid, tripinnate; primary pinnae mostly opp, rachises nearly straight; pinnules long-stalked; segs roundish, nearly as broad as long, terminal ones larger, entire or 3-lobed; upper surfaces g, smooth, lower densely coated with pure w powder; sori brown, often descending the free veins half-way to midvein. Ar; NM.

Variety **DEALBATA** Dav.

Segs smaller, more num, longer than broad, terminal ones rarely lobed. Upper Missouri to NM; Ar. Synonyms: *N. dealbata* Kunze *Chelianthes dealbata* Pursh.

N: FENDLERI Kunze.

Stipes densely tufted, dark-brown, 3-5' long; rachis and all its branches zigzag and flexuous; fronds broadly deltoid ovate, 3-5' each way, quadripinnate below, gradually simpler above; pinnae alt; ultimate pinnules oval or elliptical, simple or 3-lobed. Colo; NM; Ar.

**Fronds naked below.

NOTHOLAENA TENERA Gillies.

Stipes tufted, brownish, smooth and shining; fronds 3-4' long, ovate-pyramidal, bi-tripinnate; pinnae mostly opp, distant, lower ones somewhat triangular; ultimate pinnules ovate, often subcordate, obtuse, smooth and naked on both surfaces; considered as possibly only a form of *N. nivia* by Underwood. Southern California; Arizona; Utah.

TAENTIS Swz.

Sori linear, central or submarginal; veins reticulate. Five tropical species.

T: LANCEOLATA R. Br.

Rtstock creeping; stipes 1-2' long; fronds simple, 6-13' long, $\frac{1}{4}$ - $\frac{3}{4}$ ' broad, tapering both ways, edge entire or sometimes crisped, midrib prominent; veins immersed, exterior free and clubbed at apices; sori anti-marginal, in a continuous line near apex. Old Rhodes Key, Fla (Curtiss). Synonyms: Lingua cervina Plum.—Pteris lanceolata L.—Pteropsis lanceolata Desv.—Neurodium lanceolata Fee.

Tribe **VITTARIEAE**. Sporangia borne in a continuous marginal or intramarginal furrow.

VITTARIA J. E. Smith, Ac Roy Sci Turin mem 5:413 (1793).

Fronds simple, linear, grass-like. Grass-fern. Thirteen tropical sp.

V: LINEATA J. E. Smith, Ac Roy Sci Turin mem 5:413 (1793).

Fronds 6-18' long, 1-5" broad, narrowed gradually downward to a stout compressed st, edge often reflexed; sori in a broad intramarginal line in a slight furrow, edge of frond at first wrapped over it. Fla. Synonym: V. angustifrons Michx.—Pteris lineata L. Sp Pl 1073 (1753).

Tribe **PTERIDAE**. Sori marginal or intramarginal, provided with an indusium formed of the reflexed margin of frond, opening inwardly.

*Sporangia borne on a reflexed portion of margin of frond. Adiantum.

**Sporangia borne on a continuous vein-like receptacle which connects apices of veins. Pteris.

***Sporangia at or near the ends of unconnected veins, borne on under surface of frond. Cheilanthes; Cryptogramme; Pellaea.

Genus ADIANTUM Linnaeus.

Sp Pl 1094 (1753).

Sori com num and distinct. Midrib of pinnae near lower margin or 0. Over 80 sp mostly tropical Am. Maidenhair.

Section EUADIANTUM.

*Fronds at least bipinnate, pinnules flabellate or cuneate.

I.—Fronds smooth.

A. CAPILLUS-VENERIS L, Sp Pl 1096. Da 20. B 2:342 d. Greene, Cal ac b 2:415, Cruz. P. 1:208, Cedros.

Stipes nearly bk, polished, very slender; fronds ovate-lanceolate, delicate, bipinnate, upper half or third simply pinnate; pinnules and upper pinnae wedge-obovate or rhomboid, rather long-stalked, upper margin rounded and more or less incised, crenate, or acutely dentato-serate, except where margin is recurved to form the lunulate separated indusia. Va; Ky; Fla; Ut; Baja! CD! SD Co!

Venus-hair or black maidenhair fern. United States, Mexico.

A. TENEBUM Swz, Fl Ind Occ 3:1719 (1806).

Stipes 1° hi, erect, glossy; fronds 1-3° long, 3-18" broad, deltoid, tri-quadrifid; pinnules articulated to their petioles, falling off at maturity, cuneate, upper edge rounded or somewhat angular, broadly often rather deeply lobed; sori num, roundish, or transversely oblong. Fla.

A. JORDANI Mue'l, in bot zeit 22:25 t 1 f 1. B 2:485 as A. emarginatum.

Stipes rather stout, nearly bk, polished; fronds ovate or deltoid-pyramidal, bi-tripinnate; pinnules and upper pinnae ample, smooth or nearly so, rounded or even reniform, upper margin rounded, slightly incised; sori 2-5, transversely linear-oblong, subconinuous. Cal; Ore; NM; Nev; SD! Baja! Synonyms: A. emarginatum Hooker.—A. tenerum Torrey.

California; Nevada; N. M.; Oregon.

II.—Fronds pilose, with wish hairs.

A: TRICHOLEPIS Fee. 8 me Mem Fam Fong 72 (1854-57).

Stipes smooth, polished, deep bk; fronds oval; pinnules roundish, moderately long-stalked; sori 3-7, of unequal size; indusia very velvety. West Tex; NM. Synonym: A. dilatatum Nuttall.

**Fronds dichotomously forked, with num pinnae springing from upper side of the two branches.

A. PEDATUM L, Sp Pl 1095. B 2:342. Z 1:148; 2:131. Greene, Cal ac b 2:415, Cruz.

Stipes 9-15' long, dark chestnut-brown, globose fronds nearly circular in outline; central pinnae 6-7' long, 1-2' broad; pinnules triangular-oblong, short-stalked sori roundish or transversely oblong. Maidenhair. Nova Scotia; BC; Alk; Ga; Miss; Ark; Kans; Ut; Cal.

Venus-hair fern; Black Maidenhair.

Variety LANGIPIPINUM Burgess.

Pinnules longer-stalked and deeply cleft into narrow-toothed lobes on upper side. Mt. Findlayson BC.

A. AETHIOPICUM, Baker, Syn Fil 123. B 2:342, in part as A. emarginatum.

A. AMERICANUM Carnutus, Can Pl Hist 7 t 6. B 2:343 as A. pedatum.

A. OCHLENSE Kaulfuss. Of American authors=A. emarginatum fide. B 2:342.

A. CONCINNUM Z 2:151.

A. DILATATUM Nutt, in Hook hb. B 2:342. Identity doubtful.

A. EMARGINATUM Hook, Sp Fil 2 t 75. Da 20. B 2:342, 485. Z 2:131, 382. Br 1:205. Cruz; 218 Rosa.

PTERIS L, Sp Pl 1073 (1753).

Sori continuous; indusium delicate, wish; midribs of pinnules central. A cosmopolitan genus of over 100 species (including Pteridium).

Section **EUPTERIS** Veins free stipes tufted, indusium single.

*Lower pinnae linear, undivided.

P: LONGIFOLIA L, Sp Pl 1074 (1753).

Stipes 6-12' long, clothed more or less below with pale brown scales; fronds 1-2° long, 4-8" broad, oblong-lanceolate; pinnae sessile, 2-5" broad, linear, entire; veins close and fine, com once branched; indusium wish-brown. Fla.

**Lower pinnae forked or slightly pinnate below.

P: GRETTICA L, Mant 1:130 (1767).

Stipes 6-12' long, erect, stramineous or pale brown; fronds 6-12' long, 4-8" broad, lateral pinnae com in 2-6 opp sessile pairs, sterile ones considerably the

broadest and spinulose-serrate, lower pairs often cleft nearly to base, into 2 or 3 linear pinnules; veins fine, parallel, simple or once forked; indusium pale. Fla.

P: SERRULATA L, f, Suppl Pl 445 (1781).

Ribbon-fern, spider-fern, saw-leaved bracken. Stipes 6-9' long, naked, pale or brownish; fronds 9-18' long, 6-9' broad, ovate, bipinnatifid, main rachis margined with a wing which is 1-2" broad at top and grows narrower downwards; pinnae in 6 or more distinct opp pairs, upper ones simple, lower ones with several long linear pinnules on each side, edge of barren ones spinulose-serrate; veins simple or once forked. Ala (Mohr); Macon, Ga (Farnell); SC. Probably an escape from cult.

Section **PALEIA** St. Hilaire. Veins free, rtstock creeping, stipes subdistant, indusium more or less double. See *Pteridium*.

PTERIDIUM Scop Fl Com ed 1, 169 (1760).

Section **Palais** of *Pteris*.

P: AQUILINUM Kuhn in Deckens Reisen III, Bot Ost-Afrika 11 (1879).

Brake, Bracken, Eagle fern, Umbrella fern, Hog brake. Rtstock stout, wide-creeping, subterranean; stipes 1-2' hi, erect, stramineous or brownish; fronds 2-4' long, 1-3' wide, ternate, the 3 branches each bipinnate; upper pinnules undivided, lower more or less pinnatifid. Newfoundland; Quebec to Ala; Mo; Manitoba. Synonym: *Pteris aquilina* L, Sp Pl 1075 (1753).

Variety **PSEUDOCAUDATUM** Clute, Fern b 8:39 (1900), as syn.

Long Island, NY, to Fla, Ala and Tex, mainly near coast.

Variety **PUBESCENS** Underwood, Our Native Ferns, ed 6, 91 (1900).

Fronds silky-pubescent or tomentose, especially on under surface; otherwise as type. Ar. Cal; Ut; BC. Synonym: *Pteris aquilina lanuginosa* Hooker, and American authors—not Bory, Willd, Sp Pl 5:403 (1810).

P: CAUDATUM Maxon, US Na MU pr 23:631 (1901).

Pinnules sometimes linear and entire, or with less crowded segs than *P. aquilina*; terminal lobe linear and entire. NJ; Fla; Tex. Synonyms: *Pteris caudata* L, Sp Pl 1075 (1753).—*Pteris aquilina caudata* Hook. Sp Fil 2:196 (1858).

Genus **CHEILANTHES** Swartz.

Syn Fil 126 (1806).

Sori minute, at ends of veins; indusium continuous or interrupted. Near 70 temperate and tropical sp.

Section **ADIANTOPSIS** Fee. *Indusia* distinct, roundish, confined to apex of a single veinlet.

CHEILANTHES CALIFORNICA Mett. cheil 44. B 2:386. Da 20. Z 1:147. 2:131. Greene, Cal ac b 2:415 Cruz.

Rtstock short, creeping chaffy; stipes densely tufted, dark brown, glossy, 4-8' long; fronds 4' or less each way, broadly deltoid-ovate, smooth on both surfaces, quadri-pinnatifid; lower pinnae largest, triangular; upper ones gradually smaller and simpler; ultimate segs lan-

ceolate, acute, incised or serrate; *Indusia* membranous. Cal; Baja! SD Col. Synonyms: *Aspidotis Californica* Nuttall, Hooker, Sp Fil 2:71 (1858) as syn.—*Hypolepis californica* Hook sp Fil 2:71 (1858).

Lace fern. Southern and Baja Cal. **C: FRINGLEX** Davenport, Torr cl b 10:61 t 34 (1833). Z 2:150.

Rtstock slender, creeping, clothed with linear-lanceolate scales; stipes 1½-4¼' long, r'ish or chestnut brown, scaly at base and sparingly above; fronds 1-2¼' long, nearly as broad, triangular or ovate-deltoid, 2-3-pinnately divided into 5-7 pairs of pinnae, opp and spreading in the smaller sterile fronds, alt and erecto-patent in the larger fertile fronds, naked, dark-g; pinnae 6-eighths to one and one-eighth inch long, lower unequally deltoid or ovate, bipinnate, uppermost oblong, pinnate or deeply pinnatifid; pinnules ovate or oblong, pinnately divided or cleft into oblique segs, which are again deeply cleft into cuneate strap-shaped divisions, those of largest segs again deeply cut into narrow, obtuse, cuneate lobes, recurved tips in fertile fronds forming distinct herbaceous inv with entire or crenulate margins; sori one to each ultimate lobe on apex of a free veinlet. Southeastern Ar (C. G. Pringle).

Section **EUCHEILANTHES**. *Indusia* more or less confluent, com extending over apices of several veinlets, but not continuous all round segs; segs mostly flat, not bead-like.

*Segs of frond smooth.

I.—Pinnae few, not more than 5-6 pairs.

C: WRIGHTII Hooker.

Stipes castaneous, slightly chaffy at base, 1-2' long; fronds 2-3' long, ovate-oblong, 3-pinnatifid, segs more or less incised; indusium subcontinuous or interrupted, similar to frond in texture. Tex; Ar.

II.—Pinnae num.

C: MICROPHYLLA Swz.

Rtstock short, creeping; stipes dark brown, glossy, rusty pubescent on upper side, 4-6' long; fronds 4-6' long, ovate-lanceolate, 2-3-pinnate; pinnae lanceolate, lowest ones com largest and more deltoid; pinnules oblong or deltoid-ovate, deeply incised or pinnate; indusium similar in texture to frond, interrupted or subcontinuous. Fla; NM.

C: ALABAMENSIS Kunze.

Rtstock creeping, clothed with slender brown scales; stipes bk with scanty ferruginous wool; fronds 2-10' long, narrowly lanceolate, 2-pinnate; pinnae close, ovate-lanceolate, lowest ones not enlarged, com smaller than those above; pinnules com acute, often articulate on upper side at base; *Indusia* pale, membranous, interrupted only by the incisings of pinnules. Va; Ala; Tenn; Tex; Ar. Synonyms: *Pellaea Alabamensis* Baker.—*Pteris Alabamensis* Buckley, Am J sci 45:177 (1843).

*Segs of frond glandular viscid.

CHEILANTHES VISCIDA Davenport.

Torr cl b 6:191. B 2:337.

Stipes 3-5' long, wiry, bk'ish, chaffy at

base with narrow ferruginous scales; fronds 3-5' long, $\frac{1}{4}$ -1' broad, narrowly oblong, pinnate, with 4-6 distant pairs nearly sessile, deltoid, 2-pinnatifid pinnae; segs toothed, minutely glandular and everywhere viscid; teeth of seg recurved, forming indusia. Cal; CD!

Colorado Desert near Whitewater.

***Fronds somewhat hairy and glandular, not tomentose.

I.—Fronds deltoid-ovate; stipes stramineous.

C: LEUCOPODA Link.

Stipes 3-4' long, stout, chaffy at base; fronds 2-4' long, deltoid-ovate, 4-pinnate at base, gradually simpler above, everywhere glandular-puberulent; lowest pair of pinnae unequally deltoid-ovate, upper ones oblong; pinnules short-stalked; ultimate pinnules divided into minute rounded lobules, strongly revolute when fertile. Tex.

II.—Fronds ovate-lanceolate; stipes brownish.

C: VESTITA Swz, Syn Fil 128 (1806).

Stipes tufted, 2-4' long, wiry, chestnut brown; fronds 4-9' long, 1-2' broad, 3-pinnatifid; pinnae somewhat distant, lanceolate-deltoid; segs more or less thickly covered with acute hairs; sori copious; indusia formed of ends of roundish or oblong lobes. Conn; NY; Kans; Ga; Tex. Synonyms: *Nephrodium lanosum* Michx, Fl B or Am 2:270 (1803).—*Chellanthus lanosa* Watt, J Bot Brit and Foreign 12: 48 (1874).

CHEILANTHES COOPERAE Eaton.

B 2:337. Da 20.

Stipes densely tufted, fragile, hairy with straightish nearly w articulated hairs which are com tipped with a glandular and viscid enlargement; fronds 3-8' long, 2-pinnate, pinnae rather distant, oblong-ovate; pinnules roundish-ovate, crenate and incised, ends of lobules forming herbaceous indusia.

Central and southern California.

Section **PHYSAPTERIS** Presl. Ultimate segs minute, bead-like, indusium com continuous all round the margin; fronds in one sp 2-4-pinnate, lower surface scaly or tomentose or both.

*Fronds hairy or tomentose beneath, not scaly.

I.—Upper surface naked or nearly so.

C: GRACILLIMA Eaton. B 2:337. Z 2: 131.

Lace fern. Stipes densely tufted, 2-6' long, dark brown; fronds 1-4' long, narrowly ovate-lanceolate, bipinnate; pinnae num, crowded, pinnately divided into about 9 oblong-oval pinnules, at first slightly webby above, soon smooth, heavily covered beneath with pale ferruginous matted wool; indusia y'ish-brown, formed of the continuously curved margin. Cal; Ore; Idaho; BC. Synonym: *C. vestita* Brack, in Wilkes' US Expl Exp 16:71 (1854), not Swz.

C: LENDIGERA Swz.

Rtstock cord-like, creeping, covered with narrow scales; stipes rather distant, 4-8' long, at first loosely tomentose at length nearly smooth; fronds 4-8' long, ovate-oblong, 3-4-pinnate; ultimate pinnules small, cuneate-obovate, pouch-like from the recurved margins, g above,

hairy below. Huachuca mts. Ar (Lemon).

II.—Upper surface decidedly pubescent

A.—Stipes tomentose or smooth.

C: FREI Moore, Index Fil XXXVIII (1857).

Stipes densely tufted, slender, at first clothed with woolly hairs, at length nearly smooth fronds 2-4' long, ovate-lanceolate, 3-pinnate or 3-pinnatifid, rarely bipinnate; pinnae deltoid below, oblong-ovate above, lowest distant; ultimate pinnules minute, terminal one slightly largest, crowded; upper surface scantily tomentose, lower densely matted with w'ish-brown woolly hairs; indusia narrow, formed of the unchanged margin. Ill; Tex; Ar; Minn; BC. Synonyms: *C. lanosa* D. C. Eaton.—*C. vestita* Hooker in part.—*C. gracilis* Mett, Abh Senck Nat Gesell 3:80 (1859-61), not Kaulf.—*C. lanuginosa* Nuttall, Hooker, Sp Fil 2:99 (1858) as syn.—*Myriopteris gracilis* Fee, Gen Fil 150 (1850-2).

C: TOMENTOSA Link, Hort Berol 2:42 (1833).

Woolly lip-fern. Stipes tufted, 4-6' long, rather stout, covered with pale brown tomentum; fronds 8-15' long, oblong-lanceolate, everywhere but especially beneath tomentose with slender, brownish-w, obscurely articulated hairs, 3-pinnate; pinnae and pinnules ovate-oblong; ultimate pinnules $\frac{1}{2}$ - $\frac{3}{4}$ " long, terminal ones twice as large; indusium pale, membranous, continuous. Va; Mo; Ga; Tex; Ar. Synonym: *C. Bradburii* Hooker.

II.—AA.—Stipe and rachises covered with very narrow scales.

C: EATONI Baker, Hook & Baker, Syn. Fil ed 1, 140 (1868).

Differs from *C. tomentosa* chiefly in having scaly rachises, and reduced to a variety (Eaton) by Davenport, Cat Dav Hb suppl 49 (1883). Maxon restores it to specific rank. Ar.

CHEILANTHES FIBRILLOSA Davenport.

Plant 3-6' hi; rtstock forming dense, entangled clumps of short rhizomes, clothed with dark linear-lanceolate scales, passing gradually into lighter brown scales, mixed with coarse fibres and tomentum at base of stipes; stipes 2-3' long, chestnut brown, terete, at first tomentose with fibrous scales and wool, becoming smooth with age; fronds 2-3' long, $\frac{3}{4}$ -1 $\frac{1}{4}$ " wide, 3-pinnate, loosely covered with decid tomentum, that along the rachises beneath persistent, mixed with coarse fibres. Synonym: *C. lanuginosa fibrillosa* Dav.

San Jacinto mts, California (Parish).

CHEILANTHES PARISHII Davenport.

Rtstock creeping, short, clothed with deep brown linear-lanceolate scales, with darker nearly bk mid-nerve; stipes 2-3' long, approximate, light to lark brown, clothed at base with scales similar to those on rtstock, passing gradually into broader pale brown or nearly w nerveless scales, with more or less decid, slender, pale scales and chaff above; fronds 3-4' long, 1-1 $\frac{1}{4}$ " broad, oblong-lanceolate, 3-4-pinnate, with both sur-

faces scantily clothed with a coarse tomentum; pinnae alt, oblong-ovate, obtuse, lowermost somewhat distant; segs roundish, terminal ones largest, 3-lobed; indusia very narrow, only partially enclosing the sori. Type locality: Riverside (formerly part of SD) Co, Cal (Parish).

**Fronds covered beneath with imbricated scales, not tomentose.

C. FENDLERI Hooker.

Stipes 2-5' long, chaffy with minute slender scales; fronds 3-4' long, ovate-lanceolate, 3-pinnate; scales of primary rachis like those of stipe, those of secondary and ultimate rachises larger, broadly-ovate, entire or nearly so, combed with w, imbricate and overlapping the (one-fourth to one-third line broad) subglobose ultimate segs; these are naked above, com bear at center a broad scale; indusium formed of the much incurved margin. Text: Colo; Cal.

CHEILANTHES CLEVELANDI Eaton. B 2:338.

Stipes scattered, 2-6' long, dark brown, scaly when young; at length nearly smooth; fronds 4-6' long, ovate-lanceolate, 3-pinnate, smooth above, deep fulvous brown below from the dense covering of closely imbricate, ciliate scales growing on the ultimate segs as well as on the rachises; segs nearly round, 1-3d to 1/2" broad, terminal ones larger, margin narrowly incurved. Named in honor of Daniel Cleveland.

Southern and Baja California.

***Under surface both tomentose and scaly.

C. ELEGANS Kuhn Beitr 8. B 2:338 as myriophylla.

CHEILANTHES MYRIOPHYLLA Desv. B 2:338. Z 2:131. Br 1:205 Cruz; 218 Rosa.

Rtstock very short, scaly; stipes tufted, 2-6' hl., castaneous, covered with pale brown scales and woolly hairs intermixed; fronds 3-8' long, oblong-lanceolate, 3-4-pinnatifid, smooth or pilose above, beneath matted-tomentose and densely clothed with pale brown, narrowly ovate-lanceolate, ciliate scales, those of ultimate segs with long, tortuous cilia; pinnae deltoid-ovate, narrower upwards; ultimate segs minute, 1/4" broad, crowded, innumerable, margin unchanged, much incurved; very variable. Synonyms: *C. elegans* Desv.—*C. villosa* Dav.

Texas; Arizona; southern and Baja Cal.

C. LINDBERGERI Hooker.

Rtstock long, slender, chaffy, stipes scattered, 4-7' hl, bk'ish-brown, at first covered with scales and woolly hairs; fronds 3-5' long, ovate-lanceolate, 3-4-pinnate; ultimate segs 1/4" long, crowded; upper surface w-tomentose, lower surface very chaffy, those of midrib ciliate at base, those of segs more and more ciliate, passing into entangled tomentum. Text: Ar.

Section **ALBURITOPTERIS** Fee. Indusia more or less confluent; fronds far-nose below.

C. ARGENTEA Kunze.

Stipes densely tufted, 3-6' long, castaneous; fronds 3-4' long, 2' broad, deltoid, 2-3-pinnatifid; lower pinnae much

the largest, cut nearly to rachis; rachis polished like stipe; upper surface naked, lower thickly covered with w powder; sori num, very small. ALK. Synonym: *Pteris argentea* S. G. Gmel, Nov Comm Ac Sci Petrop 12:519 t 12 f 2 (1768).

CYPTOGRAMME R. Br, App Frankl J 767 (1823).

Sporangia on back or near ends of veins forming oblong or roundish sori, which are at length confluent and cover back of pinnules; sterile and fertile fronds unlike, smooth. Two boreal species.

C. ACROSTICHOIDES R. Br, App Frankl J 767 (1823).

Parsley fern. Stipes densely tufted, stramineous; fronds dimorphous, sterile ones on shorter stalks, 3-4-pinnatifid, with toothed or incised segs; fertile ones long-stalked, less compound, with narrowly elliptical or oblong-linear pod-like segs. Alk, Mackenzie south to Cal; Colo; Lake Huron. Synonyms: *C. Crispa forma americana* Hook.—*Allosorus acrostichoides* Spreng.

C. STELLERI Prantl, Englers Bot Jahr 3:413 (1882).

Stipes scattered, slender, 2-3' long, stramineous or pale brown; fronds 2-4' long, 1-2' broad, ovate, 2-3-pinnatifid; pinnae lanceolate-deltoid, cut to rachis into a few broad, blunt, slightly-lobed pinnules; texture thinly herbaceous flaccid; indusium broad, continuous, membranous; veins of fertile fronds mostly only once-forked. Labrador; Alk; Mass; Ill; Ia; Pa; Colo.

Synonyms: *Pteris stelleri* S. G. Gmel Nov Comm Ac Sci Petrop 12:519 t 12 f 1 (1768).—*Pellaea stelleri* Watt, Can Fil No. 2 (1869-70).—*Pteris gracilis* Michx, Fl Bor Am 2:262 (1803).—*Pellaea gracilis* Hooker, sp Fil 2:138 t 133 B (1853).—*Allosorus crispus stelleri* Milde.—*A. gracilis* Presl.

Genus **PELLAEA** Link.

Link, Fil Sp Hort Berol 59 (1841).

Sori on the upper part of veins distinct, or mostly forming a marginal band of sporangia; sterile and fertile fronds com similar, smooth. Over 50 species.

Section **CHELOPLECTON** Fee. Texture herbaceous or subcoriaceous, veins clearly visible, indusium broad, in most of the species rolled over the sorus till maturity.

F. BREWERI D. C. Eaton.

Stipes densely tufted, covered with narrow, crisped, fulvous chaff; fronds 2-6' long, simply pinnate, pinnae short-stalked, 6-8 pairs, membranous, mostly 2-parted, upper seg larger; segs obtuse, in fertile frond narrower; indusium continuous, pale; veins repeatedly forked. Colo; Cal.

Section **ALLOSORUS** Baker. Texture coriaceous, veins not perceptible; indusium broad, conspicuous.

*Pinnules or segs obtuse or barely acute.

I.—Fronds pinnate or bipinnate.

F. ATROPURPUREA Link.

Stipes tufted, 2-6' long, dark p; fronds 4-12' long, 2-6' broad, lanceolate or

ovate-1, simply pinnate or bipinnate below; pinnules and upper pinnae 1-2' long, $\frac{1}{4}$ " broad or less, nearly sessile, smooth; indusium formed of slightly altered incurved edge of pinnules. Vt; Tex; Ar. Synonyms: *Allosorus atropurpureus* Kunze.—*Pteris atropurpurea* L.—*Platyloma atropurpurea* J. Smith.

F. ASPERA Baker.

Stipes slender, 2-3' long, bk with scurfy pubescence; fronds 4-6' long, oblong-lanceolate, bipinnate; pinnae and pinnules deltoid-lanceolate or oblg, pinnules next to main rachis often lobed; all of them rough on both surfaces with short harsh hairs. Tex; NM. Synonym: *Cheilanthes aspera* Hooker.

II.—Fronds 2-4-pinnate, ultimate segs oval or cordate.

PELLAEA ANDROMEDAEFOLIA Fee.

Stipes scattered, erect, pale brown, 2-12' long; fronds 6-12' long, 3-6' broad, ovate, 2-4-pinnate, 3-p; com pinnae rather distant, spreading; ultimate pinnules 2-5" long, oval slightly cordate coriaceous, margin of fertile ones sometimes revolute to midrib; veins num, parallel. Synonyms: *Allosorus andromedaefolia* Kaulf. —*Pteris andromedaefolia* Kaulf, Enum Fil 188 (1824).

Arizona; southern and Baja California.

F. PULCHELLA Fee, Gen Fil 129 (1850-2).

Stipes densely tufted, 3-6' long, chaffy at base, nearly bk; fronds 3-9' long, 1-5' broad, triangular-ovate, 4-pinnate below, gradually simpler above; lower pinnae deltoid, narrowly triangular above; ultimate pinnules num, 1-3" long, oval or often cordate-ovate, stalked, coriaceous, smooth, edges often much reflexed. Tex; NM. Synonym: *Allosorus pulchellus* Mart & Gal, mem ac Brux, 15 (5):47 (1842).

III.—Fronds 3-4-pinnatifid; segs linear-oblg; secondary rachises margined.

F. MARGINATA Baker.

Stipes tufted, 3-9' long, castaneous, shining, slightly fibrillose at base; fronds 4-6' long, nearly as broad, deltoid; lower pinnae much the largest; indusium broad, continuous, margins slightly erose; texture chartaceous. Huachuca mts. Ar (Lemmon). Synonym: *Cheilanthes marginata* Hooker.

*Pinnules mucronulate or decidedly acute.

I.—Fronds narrowly linear in outline, com bipinnate.

F. TERNIFOLIA Link.

Stipes tufted, nearly or quite bk, 2-6' long, fronds 4-10' long, narrowly linear; pinnae com 9-15 pairs, all but uppermost trifoliate; segs com linear, slightly mucronate, coriaceous, sessile or middle one indistinctly stalked, edges much inflexed in fertile fronds; indusium broad. Tex. Synonym: *Pteris ternifolia* Cav.

F. BRACHYPTERA Baker.

Stipes 2-8' long stout, p'ish-brown; fronds 3-8' long, narrow in outline from the ascending secondary rachises, bipinnate; pinnules crowded, 2-5" long, oblong-linear, simple or trifoliate, acute or mucronulate; margins inflexed to midrib in fertile fronds. Cal. Synonyms: *P. ornithopus brachyptera* D. C. Eaton.—

Platyloma bellum et *P. brachyptera* Moore.

II.—Fronds broader, lanceolate to ovate, 2-3-pinnate.

PELLAEA ORNITHOPUS Hook.

Stipes tufted, 3-8' long, rather stout, dark brown; fronds very rigid, 3-12' long, 2-3' broad, broadly deltoid-lanceolate, 2-3-pinnate; primary pinnae spreading or obliquely ascending, linear bearing 4-16 pairs of trifoliate (varying from simple to 5-7-foliate) mucronulate pinnules, $1\frac{1}{2}$ -2" long; margins inflexed to midrib in fertile fronds. Synonym: *Allosorus mucronatus* D. C. Eaton.

California; Baja Cal. Tea or wire fern.

PELLAEA WRIGHTIANA Hook.

Rtstock short, thick, densely chaffy; stipes crowded, p'ish-brown, 4-6' long; fronds 3-6' long, 1-3' broad, lanceolate to deltoid, trifoliate at apex, bipinnate below; pinnae short with 1-2 pairs of long, narrow pinnules besides the terminal one; mucro short, with broad cartilaginous margin; margin of fertile fronds inflexed to midrib. Extremely variable. Colo; Tex; Cal; Kans.

Variety **LONGIMUCRONATA** Davenport.

Fronds decreasing to simply pinnate at apex, longer but less broadly winged mucro. Synonym: *P. longimucronata* Hooker.

Variety **COMPACTA** Davenport.

Pinnules densely crowded.

Section **PLATYLOMA** J. Smith. Texture coriaceous, veins com hidden, ultimate segs broad and flat, indusium so narrow as to be soon hidden by fr.

F. BRIDGESII Hooker.

Stipes 2-6' long, tufted, castaneous; fronds 4-6' lg, 1' or more broad, simply pinnate; pinnae 5-18 pairs, mainly opp, nearly sessile, glaucous g. coriaceous, rounded or corbate at base; indusium narrow, formed of w'ish margin of pinna, soon flattened out exposing broad sorus. Cal.

F. FLEXUOSA Link.

Rtstock creeping, rather slender; stipes r'ish, passing into a more or less flexuous or zigzag rachis; fronds 6-30' long, ovate-oblong, 2-3-pinnate; secondary and tertiary rachises com deflected and zigzag, rusty puberulent or nearly smooth; pinnae mostly alt; ultimate pinnules 5-10" long, roundish-ovate or subcordate, smooth; margins at first reflexed, soon flattened out. Tex; Cal. Synonym: *Allosorus flexuosus* Kaulf.

F. INTERMEDIA Mett.

Rtstock long, wide-creeping, slender, chaffy; stipes scattered, 4-6' long, pinkish-stramineous, smooth; fronds 5-10' long, 3-8' wide, ovate-bipinnate; pinnae nearly opp, remote; pinnules 2-6 pairs, petiolate, subcoriaceous, oval or cordate-ovate; veins obscure, rachises not pubescent. Huachuca mts. Ar (Lemmon).

Tribe **CERATOPTERIDAE**. Sori on 2 or 3 longitudinal veins which are nearly parallel with edge of frond; aquatic **CERATOPTERIS** Brong, soc Philom b 1821:184.

Characters of the tribe.

C. TALIOTROIDES Brong. Soc Philom b 1821:186 t 1.

Floating fern. Southern Fla, the only

sp. Synonym: *Acrostichum thalictroides* L. sp Pl 1070 (1753).

Tribe **BLECHNEAE**. Sori dorsal, linear or oblong, borne on transverse veins, parallel to midrib; indusium fixed at outer, opening at inner, margin.

*Veins free. *Struthiopteris*; *Blechnum*. **Veins more or less reticulate. *Woodwardia*.

STRUTHIOPTERIS Scop, Fl Com ed 1, 168 (1760).

Sori in a continuous band next midrib; indusium elongate, formed of the recurved and altered margin of pinnae, or submarginal; fronds of 2 sorts, elongate, pinnate. Nearly 50 species, mainly of south temperate zone.

S. SPICANT Weiss, Pl Crypt 287 (1770).

Deer fern, Hard fern. Cal; Alk.

Synonyms: *Osmunda spicant* L sp Pl 1068 (1753).—*Lomaria spicant* Desv Mag Gesell Nat Fr Berlin 5:325 (1811).—*Blechnum boreale* Sws. Schrad J bot 1800 (2): 75 (1801).—*Blechnum spicant* J. E. Smith, Ac roy sci Turin mem 5:411 (1793).

BLECHNUM L.

Sori linear, elongate, continuous near midrib; indusium continuous; fronds pinnate. Near 20 sp.

B. SERRULATUM Richard.

Stipes 6-12' long, stout, erect, nearly naked; fronds oblong-lanceolate, 1-1½' long, 3-6' broad, with 12-24 pairs of distinct linear-oblong pinnae, margins finely incised; texture coriaceous; veins very fine and close, fertile pinnae narrower. Fla. Synonym: *Blechnum angustifolium* Willd.

Genus **WOODWARDIA** Smith.

Sori linear or oblong, forming chain-like rows; indusia separate. Chain fern. Six sp. Named for Thomas J. Woodward, an English botanist.

Section **EUWOODWARDIA**. Fronds uniform, veins forming at least one series of areolae between sori and margins. **W. CHAMISSOI** Brack, FUS Exp 138. B 2:344 as radicans.

W. RADICANS Am, mem ac Turin 5:412. B 2:344. Da 20. Baja! Greene, Cal ac b 2:416 Cruz.

W. SPINULOSA Mart & Gal, Mem Ac Brux 15 (5): 64 (1842).

Caudex stout, erect, rising a little above ground; stipes stout, 8-12' long; fronds 3-5' long, subcoriaceous, pinnate; pinnae 8-15' long, 2-4' broad, oblique to rachis, pinnatifid nearly to midrib; segs spinulose-serrate; veinlets forming a single row of oblong sorus-bearing areolae next midvein, besides a few oblique empty areolae outside the fringing ones, thence free to margin. Cal; Ar; Baja! Synonym: *W. chamissoi* Brock, in Wilkes' US Expl Exp 16:138 (1854).

Woodwardia radicans americana Hook, sp Fil 3:67 (1860).

Washington to Baja Cal.; Arizona.

Section **ANOMOSTEA** Fronds uniform, veins free between sori and margins.

W. VIRGINICA J. E. Smith.

Stipes stout, 12-18' long; fronds oblong-lanceolate, 12-18' long, 6-9' broad; pinnae linear-lanceolate, 4-6' long, ¼-1'

broad, cut nearly to rachis into linear-oblong lobes. Can; Fla; Mich; Ark. Synonyms: *W. Banisteriana* Michx.—*Blechnum Carolinianum* Walt.—*B. Virginicum* L.—*Doodia Virginica* Presl.

Section **LORIMERIA** Presl. Fronds dimorphous, veins everywhere forming areolae.

W. ANGUSTIFOLIA J. E. Smith.

Sterile frond with slender stipes, 9-12' long, 6-8' broad, deltoid-ovate, with num oblong-lanceolate sinuate pinnae; rachis broadly winged; fertile frond with an elongate, castaneous st; pinnae 3-4' long, narrowly linear. Me; Fla; Mich; Ark. Synonyms: *W. onocleoides* Willd.—*W. areolata* Moore.—*Acrostichum areolatum* L.

Tribe **ASPLENIEAE**. Sori dorsal, linear or oblong, oblique to midrib, or rarely parallel with it; indusium fixed by one margin to veinlet, opening at the other, sometimes double.

*Veins free. *Asplenium*; *Athyrium*; *Phyllitis*.

**Veins reticulate. *Camptosorus*.

ASPENIUM L.

Sori on upper side of a fertile veinlet, rarely on both sides, oblong or linear, oblique, separate; indusium straight or rarely curved. Near 850 cosmopolitan sp.

Section **EUASPENIUM**. Veins free, simple or branched; indusium straight or slightly curved, attached to upper side of a vein.

*Fronds simple.

A. SERRATUM L.

Fronds growing in a crown from a sh. stout, erect rtstock, 1½-2½' long, 2-4' broad, simple, spatulate or linear-oblong, margin crenulate or irregularly but finely serrate, subcoriaceous; midrib prominent, keeled and often bk-ish-p beneath; veins closely placed, 1-forked; sori elongate, following veins of upper ¼ of frond from near midrib halfway to margin; indusia single, free edge entire. Fla.

**Fronds pinnatifid or pinnate below, tapering to a point.

A. PINNATIFIDUM Nuttall.

Stipes tufted, 2-4' lg; fronds 3-6' lg, 1-2½' broad, lanceolate, pinnatifid, or pinnate below, tapering to a slender prolongation above; lobes roundish-ovate, or lowest pair acuminate; sori num. Pa; Ill; Ky; Ala.

T. BEHNOLDI R. R. Scott.

Fronds 4-9' long, broadly lanceolate, pinnatifid, pinnate below; apex prolonged and slender; divisions lanceolate from a broad base, lower ones shorter; stipes bk and polished, as is lower part of midrib, especially beneath. Ct; NY; Ill; Ala.

***Fronds once pinnate.

I.—Pinnae ¼-¾' long, mostly blunt.

A.—Rachis chestnut brown or bk-ish.

A. BEHNEDIUM Ait.

Stipes tufted, 3-6' long, chestnut brown; nearly naked; fronds 8-16' long, linear-lanceolate; pinnae 20-40, lanceolate, subfalcate, or lower oblong, ¼-1' long, dilated base auricled on upper or both sides; sori oft 10-12 on each side. Fla; Ky; Can. Synonym: *A. trichoman-*

oides Michx.

A. FERVULUM Mart & Gal.

Fronde tufted, erect, rigid, 4-10' long, narrowly linear-lanceolate; stipe and rachis bk and shining; pinnae num, oblong, obtuse, entire or crenulate, auricled on upper side, nearly sessile; middle pinnae longest, lower gradually shorter and deflexed; sori short, abundant. Va; SC; Fla; Ark; NM. Synonyms: *A. ebeneum* minus Hooker.—*A. resiliens* Kunze.

A. TRICHOMANES L.

Stipes densely tufted, p-brown, shining; fronds 3-8' long, $\frac{1}{2}$ ' or more broad, linear; pinnae 15-30 pairs, nearly opp, roundish-oblong or oval, the 2 sides unequal, obliquely wedge-truncate at base, attached by a narrow point, edge slightly crenate, midvein forking and evanescent; sori 3-6 on each side of midrib. Eastern US to Pacific Coast. Synonym: *A. melanocaulon* Willd.

Variety **INCISUM** Moore.
Fronde larger, often $\frac{3}{4}$ ' or more broad, pinnae more or less deeply incised. Vt.

A. MONANTHEMUM L.

Stipes densely tufted, 3-6' long, chestnut brown; fronds 6-12' long, narrow, with 20-40 pinnae on each side; pinnae crenate above, abruptly narrowed at base, oft auricled, lower much reduced; texture subcoriaceous; veins flabellate; sori 1-2, linear-oblong, parallel with lower edge of pinnae. Huachuca mts, Ar (Lemmon).

I.—AA.—Rachis g.

A. VIRIDE Huds.

Stipes densely tufted, 2-4' long, naked, lower part chestnut brown; fronds 2-6' long, $\frac{1}{2}$ ' broad, with 12-20 pinnae on each side, which are ovate or rhomboidal in outline, upper edge narrowed suddenly at base, lower obliquely truncate, outer part deeply crenate; rachis naked; sori copious. Vt; Can; New Brunswick.

A. DENTATUM L.

Stipes tufted, 2-6' long, naked, ebeneous below; fertile fronds 2-3' long, 1' broad, with 6-8 pairs of stalked, oblong-rhomboidal pinnae, lower side truncate with a curve, outer edge irregularly crenate; sterile fronds smaller on shorter stipes; rachis naked; sori copious in parallel rows. Fla; SC.

II.—Pinnae only 2-5, linear-cuneate.

A. SEPTENTRIONALE Hoffm.

Stipes densely tufted, 3-6' long, slender, naked, ebeneous toward base; fronds irregularly forking, consisting of 2-5 narrowly linear rather rigid segs, which are entire or more frequently cleft at end into few long narrow teeth; sori elongate, near margin, com facing each other in pairs, com 2-3 to each seg. NM; Colo.

III.—Pinnae num, linear or linear-oblong acute or acuminate.

A. ANGUSTIFOLIUM Michx.

Stipes 1' or more long, brownish, slightly scaly below; fronds $1\frac{1}{2}$ -2' long, 4-6' broad, lanceolate-oblong, flaccid; pinnae 20-30 pairs, linear-lanceolate, acuminate, entire or crenulate, those of fertile fronds narrower; texture thin herbaceous; sori linear, 20-40 each side of midvein. New England; Ky; Wis.

A. FIRMUM Kunze.

Stipes 4-8' long, erect; grayish, naked; fronds $\frac{1}{2}$ -1' long, 3-4' broad; pinnae 12-20 pairs, oblong-lanceolate, point bluntish, margin incisio-crenate, upper one narrowed suddenly at base, lower one obliquely truncate; sori short, falling short of both midvein and margin. Fla; Ar.

****Fronde 2-3-pinnatifid. A.—Texture somewhat coriaceous.

A. RUTA-MURARIA L.

Stipes tufted, 2-4' long, naked; fronds ovate-deltoid, 1-2' long, 2-3-pinnate below, simply pinnate above; divisions rhombic-wedge-shaped, toothed or incised at apex; veins flabellate; sori few, elongate, soon confluent. Vt; Mich; Ky.

A. MONTANUM Willd.

Stipes tufted, 2-3' long, naked; fronds 2-5' long, ovate-lanceolate, pinnate; pinnae 3-7-parted below, incised or toothed above; veins obscure; sori short, basal ones sometimes double. Ct; NY; Ga; Ky; Ark.

A. GLENNIE Baker.

Caudex erect, with dark brown, linear-setaceous scales; stipes densely tufted, $\frac{1}{2}$ -1' long, castaneous; fronds 3-4' long, oblanceolate, bipinnate; pinnae 20-25 pairs, lanceolate, lower gradually reduced, cuneate-truncate; pinnules 5-6 pairs, oblong, toothed or externally subentire; sori 1 at base of each pinnule or 2 or more on lowest anterior. Huachuca mts, Ar (Lemmon).

****AA.—Texture thinly herbaceous or membranous.

A. BRADLEYI D. C. Eaton.

Stipes tufted, 2-3' long, ebeneous, as also lower half of rachis; basal scales brown-bk, lanceolate-acuminate; fronds 3-7' long, oblong-lanceolate, bipinnatifid; pinnae 8-12 pairs, short-stalked or sessile, ovate-oblong, lowest not reduced, largest pinnatifid with oblong lobes toothed at tip; sori short, near midvein. NY; Tenn; Ky; Ark.

A. MYRIOPHYLLUM Presl, Rel Haenk 1:48 (1830).

Stipes tufted, 2-6' long; fronds 3-10' long, delicately membranous, lanceolate, narrowed below, 2-3-pinnate; ultimate segs obovate-oblong, entire or 2-3-lobed; veins single in each seg, bearing below middle a solitary oblong sorus. Fla. Synonyms: *A. rhizophyllum* myriophyllum Mett.—*Caenopteris myriophyllum* Sws Fl Ind Occ 3:1626 (1806).

A. CUCUTARIUM, Sws, Prodr Veg Ind Acc 130 (1788).

Stipes tufted, 4-8' long, fish, naked; fronds 6-15' long, 4-6' broad, with 10-15 horizontal pinnae on each side, lower ones 2-3' long, 1' broad, cut down to rachis into linear or oblong segs, which are once or twice cleft at apex; rachis compressed, oft winged; sori principally in 2 rows. Fla.

Section **ATERYRIUM** Roth. See Athyrium.

ATERYRIUM Roth, Tent Fl Germ 3:58 (1800).

Veins free; sori more or less curved, sometimes horseshoe-shaped, oft crossing to outer or lower side of fr'ing vein-

let. Treated as a section of *Asplenium* by many of the older botanists.

A. THELYPTEROIDES Desv, Mem Soc Linn Paris 6:266 (1827).

Silvery spleenwort. Stipes long, erect, stramineous; fronds 1-2' long, 6-12' broad, bipinnatifid; pinnae linear-lanceolate; segs crowded, oblong, minutely toothed; sori 5-6 pairs to each seg, slightly curved lower ones often double. Can; Ga; Ala; Minn; Ill. Synonyms: *Asplenium thelypteroides* Michx, Fl Bor Am 2:265 (1803).—*Asplenium acrostichoides* Swz, Schrad J bot 1800 (2):54 (1801), not *Athyrium acrostichodeum* Bory Merat, Fl Paris ed 4, 1:372 (1836).
A. FILIX-FOEMINA Roth, Tent Fl Germ 3:65 (1800).

Lady fern: Female fern. Stipes tufted, 6-12' long, stramineous or brownish; fronds delicate, 1½-3' long, broadly oblong-ovate, bipinnate; pinnae 4-8' long, lanceolate; pinnules oblong-lanceolate, pointed, more or less pinnately incised or serrate, distinct or confluent on secondary rachises by a very narrow inconspicuous margin; sori short; indusium straight or variously curved Newfoundland to Fla; Bc; Cal; Ut; Nev; Ar; Ala. Synonyms: *Polypodium filix-foemina* L, sp Pl 1090 (1753).—*Asplenium filix-foemina* Bernh, Schrad Neuer J bot 1 (2): 26 (1806).—*Aspidium filix-foemina* Swz.—*Nephrodium asplenoides* Michx.—and near 70 varieties which have been named and described.

A. CYCLOSORUM Rupr. Beitr Pflansenk Russ Reich 3:41 (1845).

Alk to Cal; Nebr. Based on *Athyrium filix-foemina cyclosorum* Ledeb, Fl Ross 4:519 (1853).—*Asplenium filix-foemina cyclosorum* Rupr, D. C. Eaton in US Geol Surv W 100th Merid 6:331 (1879).

PHYLLITIS Ludwig, Inst Hist Phys Reg Veg ed 2, 142 (1757).

Sori linear, confluent in pairs, which appear like a single sorus with the double indusium opening in middle.

P. SCOLOPENDRIUM Newm, Hist Brit Ferns ed 2, 10 (1844).

Hart's-tongue; Caterpillar fern; Hound's tongue fern. Stipes 2-6' long, fibrillose below; fronds oblong-lanceolate from an auricled heart-shaped base, entire or undulate, 7-18' long, 1-2' wide, bright g. Can; Vt; Tenn; Ark? Synonyms: *Asplenium scolopendrium* L, Sp Pl 1079 (1753).—*Scolopendrium vulgare* J. E. Smith, Mem ac Roy Sci Turin 5:421 (1793).—*S. scolopendrium* Karst, Deutsch Fl ed 1, 278 (1880-3).

CAMPTOSORUS Link, Hort Berol 2:69 (1833).

Sori oblong or linear, borne partly on veins parallel to midrib, partly on veins oblique to midrib, 2 sp.

C. RHIZOPHYLLUS Link, Hort Berol 2: 69 (1833).

Walking-leaf; walking fern; Wall link. Fronds evergreen, tufted, spreading or procumbent, 4-9' long, lanceolate from an auricled heart-shaped or oft hastate base, tapering above into a slender prolongation which oft rts at apex. Can; Me; Minn; Kans; Ala; Ga. Synonyms: *Antigramma rhizophylla* J. E. Smith.—*Scolopendrium rhizophyllum* Hooker.—

Asplenium rhizophyllum L. Variety **INTERMEDIUM** Arthur, bot gas 8:200 t 3 (1883).

Base acute, without proper auricles, with a single fibro-vascular bundle in stipe. Ia.

Tribe **ASPIDIACEAE**. Sori dorsal, round or roundish, on back or rarely on apex of a vein; indusium com membranous, rarely 0.

*Without Indusia. Phegopteris.

**With Indusia. A.—Indusia superior. *Aspidium*, *Nephrolepis*.

**AA.—Indusia fixed by a broad base partly under sorus. *Cystopteris*.

**AAA.—Indusia obscure; fertile frond much contracted, very unlike sterile *Onoclea*.

**AAAA.—Indusia inferior. *Woodisia*.

Genus PHEGOPTERIS Fee.

Sori round, rather sm, borne on back of the free veins below apex; stipe continuous with rtstock. Beech-fern, about 100 sp.

Section **SUPHEGOPTERIS**. Veins free.

*Fronds triangular, bipinnatifid; pinnae sessile, adnate to a winged rachis.

P. POLYPODIODES Fee, Gen Fil 243 (1850-22. B 2:345).

Stipes 6-9' long; fronds longer than broad, 4-9' long, 4-8' broad, hairy on veins especially beneath; pinnae linear-lanceolate, lowest pair deflexed and standing forward, segs oblong, obtuse, entire, basal ones decurrent and adnate to main rachis; sori near margin. Newfoundland; Ark; Va; Mich; Ia; Wash; Greenland. Synonyms: *P. vulgaris* Mett.—*Polypodium phegopteris* L, Sp Pl 1089 (1753).—*Phegopteris phegopteris* Undw, Small, Torr cl b 20:462 (1893).

P. HEXAGONOPTERA Fee.

Stipes 8-18' long, stramineous, naked; fronds as broad as long or nearly so, 7-12' long, slightly pubescent, oft finely glandular beneath; upper pinnae oblong, obtuse, toothed or entire, the very large lowest pinnae elongate and pinnately lobed; sori near margin or some between sinus and midrib. Can; Ill; Ky; Fla; La; Minn. Synonym: *Polypodium hexagonopterum* Michx, Fl Bor Am 2: 271 (1803).

**Fronds oblong lanceolate, 3-pinnatifid; rachis wingless.

P. ALPESTRIS Mettenus, Fil Hort Lips 83. B 2:345.

Rtstock short, thick, erect, or oblique; stipes 4-10' long, with a few brown, spreading scales near base; fronds 1-2' long; pinnae deltoid-lanceolate, lower one distant and decreasing moderately; pinnules oblong-lanceolate, incised and toothed; sori small, round, submarginal. Cal; Bc; Mont. Synonyms: *Polypodium alpestre* Hoppe, Taschenb 216 (1805).—*Aspidium alpestre* Swz.

**Fronds ternate, the 3 divisions petiolate; rachis wingless.

P. DRYOPTERIS Fee. B 2:345.

Oak fern. Rtstock slender, creeping; fronds broadly triangular, 4-8' wide; the 3 primary divisions 1-2-pinnate; segs ob-

long, obtuse, entire or toothed; sori near margin. Newfoundland; Alk; Va; Colo; Ore; Greenland. Synonyms: *Polypodium dryopteris* L, sp Pl 1093 (1753).—*Nephrodium dryopteris* Michx.

F. ROBERTIANA Underwood. Our Native Ferns, ed 6, 109 (1900).

Stipes 6-10' long, stramineous when dry, glandular; fronds 6-8' long, 5-7' wide, deltoid-ovate in outline, bipinnate, lowest pair of pinnae far the largest, pinnatifid or again pinnate; upper pinnae smaller, pinnatifid; lobed, or entire; sori copious, forming submarginal rows around segs. Minn; Ia; Id; Labrador to Manitoba. Synonyms: *Polypodium robertianum* Hoffm, Deutsch Fl 2: add 4 (1795).—*Phegopteris dryopteris robertiana* Dav, Cat Dav Hb Suppl 47 (1883).—*P. calcarea* Fee, Gen Fil 243 (1850-2).

Section **GONIOPTERIS** Presl. Veins pinnate, lower veinlets of contiguous groups uniting.

F. TETRAGONA Fee.

Rtstock creeping; stipes erect, 6-18' long, naked or slightly villose; fronds 1-2' long, 6-12' broad; pinnae num, spreading, 3-6' long, lowest narrowed at base and sometimes stalked, deeply pinnatifid; texture thinly herbaceous; rachis and under surface finely pubescent; sori in rows near midrib. Marion Co, Fla (Reynolds).

F. REPTANS D. C. Eaton, Torr cl b 10; 101 (1853).

Rtstock short, creeping; stipes 3-10' long, clustered, gray-stramineous, slender, naked; fronds 4-12' long, membranous, softly hairy with branched or stalked hairs, oblong-lanceolate, pinnate with nearly or quite sessile, oblong, crenately pinnatifid pinnae, apex pinnatifid, oft elongate and rt-ling; veins pinnate, simple, basal veinlets oft anastomosing; sori on middle of veinlets, rather small, sometimes with a minute rudimentary indusium, Fla. Synonyms: *Polypodium reptans* Swz, Fl Ind Occ 3: 1655 (1806).—*Aspidium reptans* Mett.

Genus **ASPIDIUM** Swartz.

Indusium orbicular and fixed by the center, or reniform and fixed by sinus, opening all round margin; sori mostly on back of veins. The sections of this genus, as formerly understood, now constitute the genera *Dryopteris*, *Polystichum*, *Phanerophlebia* and *Tectaria*, which see.

TECTARIA Cav.

Veins anastomosing copiously.

T. TRIFOLIATA Cav.

Stipes tufted, 1° or more long, brownish, scaly at base; fronds 1-1½' long, ½-1° broad, with a large ovate-acuminate terminal pinna narrowed or forked at base, and 1 or 2 lateral ones on each side, the lowest mostly forked; primary veins distinct to margin; areolae fine, copious, with free included veinlets; sori in rows near main veins; indusium orbicular, peltate, Fla; Tex. Synonyms: *Polypodium trifoliatum* L, sp Pl 1087 (1753).—*Aspidium trifoliatum* Swz, Schrad J bot 1800 (2):30 (1801).—*Dryopteris trifoliata* Kuntze, Rev Gen Fl 2:814 (1891). **PHANEROPHLEBIA** Presl, Tent Pterid 84 (1836).

Indusium peltate; fronds simply pinnate with broad pinnae; veinlets com uniting slightly near margin.

F. AURICULATA Underwood, Torr cl b 26:212 t 359 f 3-4, t 36 f 2 (1899).

Stipes tufted, clothed below with large scales; fronds ½-2° long, coriaceous; pinnae 2-12 pairs, short-stalked, ovate-oblong or broadly lanceolate, terminal one distinct, and in small fronds the largest, appressed-serulate, smooth on both surfaces; veins pinnate, veinlets few, free or uniting near margin; sori scattered in several irregular rows, Tex; Ar. Synonym: *Aspidium juglandifolium* in part of recent authors, not Kunze, Klotzsch, Linnæa 20:363 (1847).

POLYSTICHUM Roth, Tent Fl Germ 3: 69 (1800).

Indusium orbicular and entire, peltate, fixed by depressed center; pinnae and pinnules com auricled on upper side at base, mucronately serrate; veins free.

*Fronds simply pinnate, long-stalked, lanceolate.

F. ACROSTICHOIDES Schott, Gen Fil 1834.

Christmas fern; evergreen wood-fern; Shield fern. Stipes 6-8' long, densely clothed below with pale brown lanceolate scales; fronds ½-2° hl, 2-5' broad; pinnae linear-lanceolate, somewhat falcate, half-halbred-shaped at base, serrulate with appressed bristly teeth; fertile ones contracted and smaller, bearing contiguous sori near middle, soon covering entire surface. Nova Scotia; Wis; Ia; Miss; Fla. Synonyms: *Nephrodium acrostichoides* Michx, Fl Bor Am 3:267 (1803).—*Aspidium acrostichoides* Swz, Syn Fil 44 (1806).—*Dryopteris acrostichoides* Kuntze, Rev Gen Pl 2: 312 (1891).

F. MUNITUM Presl, Tent Pterid 83 (1836).

Stipes 4-12' long, chaffy like rachis with brown scales; fronds growing in a crown 1-4° long, tapering slightly toward base; pinnae num, linear-acuminate, 3-4' long, very sharply and oft doubly serrate, with appressed needle-like points; sori num, forming 1 row each side of midrib half-way to margin. Cal; Ore; Id; Alk. Synonyms: *Aspidium munitum* Kaulf, Enum Fil 236 (1824).—*Dryopteris munita* Kuntze, Rev Gen Pl 2:813 (1891.)

**Fronds simply pinnate, scarcely stalked, linear-lanceolate.

F. LONCHITIS Roth, Tent Fl Germ 3: 71 (1800).

Holly fern. Fronds 9-20' long rigid; pinnae 1° or more long, broadly lanceolate-falcate, or lowest triangular, strongly auricled on upper side, lower obliquely truncate, deeply spinulose-toothed; sori contiguous and near margin. Can; Wis; Ut; Cal; Wash; Mont; Colo; Artic Am. Synonyms: *Polypodium lonchitis* L, sp Pl 1088 (1753).—*Aspidium lonchitis* Swz, Schrad J bot 1800 (2):30 (1801).—*Dryopteris lonchitis* Kuntze, Rev Gen Fl 2:813 (1891).

***Fronds bipinnate or nearly so. **F. SCOPULINUM** Maxon, Fern b 8:29 (1900).

*Stalk very short; frond narrowly lan-

ceolate, less than 1° lg, scarcely 1½ wide, sub-coriaceous, chaff mostly decid, pinnate; pinnae num, 7-9" long, 4-6" wide at base, ovate, rather obtuse, lower part pinnately lobed, upper half serrate with pointed and barely aculeate teeth, sori remote from margins.—D. C. Eaton, Ferns NA 2:125 t 62 f 8 (1880), as *Aspidium aculeatum scopulinum*, citing *Aspidium Lonchitis* Eaton, in Coulter's report in Hayden's 6th ann r of Geol Surv Terr 1872:788, as synonym. Wash; Id; Ut; Southern Cal; Quebec.

F. LEMMONI Underwood, Our Native Ferns, ed 6, 116 (1900).

Stipes tufted, 2-8' long, more or less densely clothed with lanceolate dark brown scales; fronds ½-1° long, 2-3' broad, with num dense oft imbricated, lanceolate pinnae, which are cut below into slightly toothed oblong rhomboidal pinnules; teeth blunt or mucronate; texture coriaceous; both surfaces naked; rachis stout, compressed, scaly; veins close, immersed; sori copious. Cal; Alk. Synonym: *Aspidium Mohriodes* of Am authors, not Bory, Crypt Voy Duperr 267 (1828).

F. CALIFORNICUM Underwood, Our Native Ferns, ed 6, 116 (1900).

"Stalks rather long; frond much elongated, scarcely narrowed at base, thinly subcoriaceous, pinnae very num, lance-linear, but slightly incised above middle, more and more deeply cut towards rachis, segs rhomboid-ovate, acute, serrate with incurved aculeate teeth, but the lowest superior one the largest, but scarcely distinct as a pinnule, and not at all auricled."—D. C. Eaton, Ferns NA 2:124, as *Aspidium aculeatum californicum*, citing Ferns of the southwest 336, and *Aspidium californicum* Eaton, in Am ac pr 6:555 (1865), and Baker, Syn Fil 253, as synonym. Cal; Wash. Synonym: *Dryopteris aculeata californica* Underwood, Our Native Ferns ed 4, 112 (1893).

F. BRAUNII Lawson, Fern Fl Can [19] (1889).

"Stalk very short; frond elliptical-lanceolate, tapering from the middle to both base and apex, bipinnate; pinnules mostly distinct and very short-stalked, ovate or trapezoid-oblong, obtuse, truncate and almost rectangular at base, slightly auricled, sharply serrate with incurved teeth, chaffy and fibrillose beneath."—D. C. Eaton, Ferns NA 2:124, as *Aspidium aculeatum braunii*, and cites Doell, Rheinische Flora 27.—Gray, Man ed 2:599.—Milde, Fil Eur et Atlant 108.—*Aspidium Braunii* Spenner, Fl Frih 1:9 t 2; Mettenius, Fil Hort Lips 88.—*Aspidium aculeatum* Pursh, Fl Am Sept 2:682, and Am authors generally. Nova Scotia; Alk; BC; Mich; Pa; Vt; NH; Me. Synonyms: *Dryopteris aculeata braunii* Koch, Underwood, Our Native Ferns ed 4, 112 (1893).—D. braunii Underwood in Brit & Brown III Fl 1:15 (1896).

F. ACULEATUM Roth, Tent Fl Germ 3; 79 (1800).

Rtstock stout, erect; stipes variable in length, very chaffy with large and

small scales intermixed as in rachis; fronds 1-2° long, growing in a crown, oblong-lanceolate, pinnate; pinnae closely placed, lanceolate from a broad base, mostly curved upwards, incisely pinnatifid or again pinnate; segs or pinnules of variable shape, oval-rhomboidal, or unequally triangular-ovate and auriculate on upper side of slightly stalked base, teeth aculeate in various degrees; under surface more or less chaffy-fibrillose; sori in 2 rows, on segs nearer midvein than edge. Cal; Mt Peddo, Wash (Suksdorf). Synonyms: *Polypodium aculeatum* L, Sp Pl 1090 (1753).—*Aspidium aculeatum* Swz, Schrad J bot 1800 (2); 37 (1801).—*Dryopteris aculeata* Kuntze, Rev Gen Pl 2: 812 (1891).

DRYOPTERIS Adans, Fam Pl 2:20 (1763).

Indusium cordato-reniform or orbicular with a narrow sinus; veins free.

*Texture thin—membranous, veins simple or 1-forked, fronds 2-pinnatifid.

I.—Lowest pinnae gradually reduced to mere lobes.

D. OREOPTERIS Maxon, US Na Mu pr 23:638 (1901).

Heath fern. Rtstock short, erect or decumbent, scaly; stipes short, tufted, scaly below; fronds 1½-2° long firm, membranous, broadly lanceolate, gradually tapering and attenuated below, glandular; pinnae 2-3' long, sessile from a broad base, lanceolate-acuminate, deeply pinnatifid, gradually shorter to the lowest, which are more distant, deltoid, and less than 1' long; segs flat, nearly entire, oblong; sori quite marginal; indusia delicate, membranous, more or less toothed at margin, BC; Alk; Wash. Synonyms: *Aspidium oreopsis* Swz, Schrad J bot 1800 (2); 35 (1801).—*Polypodium montanum* J. A. Volger, Dissect Polyp Mont 1781, not Lam, 1778.—*Dryopteris montana* Kuntze, Rev. Gen Pl 2:813 (1891).

D. NEVADENSE Underwood, Our Native Ferns, ed 4, 113 (1893).

Rtstock creeping, densely covered with persistent bases of former stalks; fronds in a crown, 1½-3° long, lanceolate; pinnae linear-lanceolate from a broad base, deeply pinnatifid, lower pairs distant and gradually reduced to mere auricles; segs crowded, oblong, slightly hairy on veins beneath, and sprinkled with minute resinous particles; veins about 7 pairs to a lobe; sori close to margin; indusium minute, furnished with a few dark-colored marginal glands, and bearing several straight jointed hairs on upper surface, Cal; Ore. Synonym: *Aspidium Nevadense* D. C. Eaton, Ferns NA 1:73 t 10 (1873).

D. CONFERMINA (*Nephrodium conterminum* Desv).

Variety **STEGOSA** Underwood, Our Native Ferns, ed 4, 113 (1893).

Rtstock stout, erect, oft extending 1° above ground, bearing a crown of fronds; stipes very stout, narrowly wing-margined at base; fronds 1-4° long, lanceolate in outline, caudate-acuminate, much narrowed at base, somewhat rigid, pinnate; pinnae sessile, nar-

rowly lanceolate from a broader base, acuminate, deeply pinnatifid into oblong, obliquely subfalcate, obtuse segs; under surface copiously dotted with resinous globules; veins free, simple; sori near margin; indusium reniform, minute, glandular, somewhat pilose, evanescent. Fla. Synonyms: *Aspidium strigosum* Fee, Hist Fouget Lycop Antille 78 t 22 f 2 (1866).—*Aspidium conterminum* Strigosum D. C. Eaton, Torr cl b 7:62 (1880).—*Nephrodium conterminum* Desv. in part.

D. NOVEBORACENSIS A. Gray, Man ed 1, 630 (1848).

New York fern. Rtstock slender, creeping; fronds 1-2' long, 4-6' broad, lanceolate, tapering both ways from middle; pinnae lanceolate, 2 or more lowest pairs gradually shorter and deflexed, those of barren frond broader; segs flat, oblong, basal ones oft enlarged; veins simple or forked in basal lobes; sori distinct, near margin; indusium minute, margin glanduliferous. Newfoundland; Minn; Ga; Ala; Ark. Synonyms: *Polypodium noveboracense* L, Sp Pl 1091 (1753).—*Aspidium noveboracense* Swz, Schrad J bot 1800 (2): 38 (1801).—*A. thelypteroides* Ewz.—*Nephrodium noveboracense* Desv.—*Lastrea noveboracensis* J. E. Smith.

II.—Lower pinnae little smaller than those above.

D. THELYPTERIS A. Gray, Man ed 1, 630 (1848).

Marsh fern; Snuff-box fern: Rtstock slender; fronds 1-2' long, 4-6' broad, lanceolate, pinnae mostly horizontal, linear-lanceolate; segs oblong, entire, obtuse or appearing acute in fr from the strongly revolute margins; veins mostly forked, bearing sori near their middle; indusia minute, smooth, naked. New Brunswick; Manitoba; Kans; Tex; Fla. Synonyms: *Acrostichum thelypteris* L, sp Pl 1071 (1853).—*Aspidium thelypteris* Swz, Schrad J bot 1800 (2): 40 (1801).—*Polypodium thelypteris* L.—*Nephrodium thelypteris* Desv.—*Lastrea thelypteris* J. E. Smith.

D. PATENS Kuntze, Rev. Gen Pl 2:813 (1891).

Sweet fern. Rtstock rather stout, bearing several fronds at growing end; fronds 2-3' long, 4-10' broad, ovate-oblong, softly pubescent beneath; pinnae closely placed, linear-acuminate, lowest pair somewhat deflexed, all cut $\frac{1}{2}$ of way to midrib; segs num, acutifid, basal ones longest; veinlets evident, lowest ones of adjoining segs oft uniting; sori near margin; indusia very pubescent. Fla; Ala; Cal. Synonyms: *Polypodium patens* Swz, Prodr Veg Ind Occ 133 (1788).—*Aspidium patens* Swz, Syn Fil 49 (1806).—*A. molle* Swz, Schrad J bot 1800 (2): 34 (1801).

D. SIMULATA Davenport, bot gaz 19: 497 (1894), as syn.

Me to Md; Mo. Synonym: *Aspidium simulatum* Davenport, bot gaz 19:497 (1894).

*Texture firmer or subcoriaceous, veins forking freely.

I.—Fronds pinnate; pinnae cut into

spreading triangular lobes; sori confluent.

D. UNITA Kuntze, Rev Gen Pl 2:811 (1891).

Stipes 1-1 $\frac{1}{2}$ ' long, brownish, naked; fronds 1 $\frac{1}{2}$ ' or more long, 5-8' broad; pinnae narrow, cut from 1-3d to halfway down into sharp, pointed lobes; lower pinnae not reduced; veins pinnate in the broad lobes with 6-8 veinlets on each side, lower ones of contiguous groups united; sori near ends of veins principally in lobes. Fla. Synonyms: *Polypodium unitum* L, Sp Pl ed 2, 1546 (1764).—*Aspidium unitum glabra* Mett, Ann Mus bot Ludg Bat 1:230 (1863-4), not *A. glabrum* Mett (1856-8).

II.—Fronds bipinnatifid or bipinnate; indusia rather large; segs not spinulose. A.—Fronds small, narrowly lanceolate.

D. FRAGRANS Schott, Gen Fil 1834

Fragrant fern. Fronds 4-12' hi, glandular and aromatic; pinnae linear-oblong, pinnately parted; segs toothed or nearly entire, nearly covered beneath with very large thin imbricate indusia, which are orbicular with a narrow sinus, margin ragged and sparingly glanduliferous. Labrador; Alk; NY; Wis; Minn; Vt; NH; Me; Greenland. Synonyms: *Polypodium fragrans* L, sp Pl 1089 (1753).—*Aspidium fragrans* Swz, Schrad J bot 1800 (2):35 (1801).

II.—AA.—Fronds larger, mostly 2-4' hi.

(1). Fronds bipinnatifid or nearly twice pinnate; indusia large, thinish and flat.

D. FLORIDANA Kuntze, Rev Gen Pl 2: 812 (1891).

Stipes 6-10' long, sparingly clothed with ovate scales; fronds lanceolate, 18-20' long, 5-8' broad; fertile pinnae confined to upper half of frond, narrowly lanceolate, cut down to narrowly winged secondary rachises into oblong, distinct pinnules; sterile pinnae broader, shorter, and sub-deltoid below, less deeply cut. Fla; Ala. Synonyms: *Nephrodium floridanum* Hooker, Fil Exot t 99 (1859).—*Aspidium floridanum* D. C. Eaton, in Chapman's Fl So US ed 1,595 (1860).—*A. cristatum floridanum* Hooker.

D. CRISTATA A. Gray, Man ed 1, 631 (1848).

Crest fern; Crested shield fern. Fronds linear-oblong or lanceolate in outline, 1-2' long; pinnae short, 2-3' long, triangular-oblong or lowest nearly triangular, deeply pinnatifid; segs 6-7 pairs, finely serrate or cut-toothed; sori as near midvein as margin; indusia smooth, naked. Can; Ark; Id; Neb; Va. Synonyms: *Polypodium cristatum* L, sp Pl 1090 (1753).—*Aspidium cristatum* Swz, Schrad J bot 1800 (2): 37 (1801).—*A. lancastriense* Spreng.—*Nephrodium cristatum* Michx.—*Lastrea cristata* Presl. Variety **CLINTONIANA** Underwood, Our Native Ferns, ed 4, 115 (1893).

Fronds much larger, 2 $\frac{1}{2}$ -4' long; pinnae oblong-lanceolate, broadest at base, 4-6' long, 1-2' broad, deeply pinnatifid; segs 8-12 pairs, crowded or distant, linear-oblong, obscurely serrate; veins pinnately forking, bearing sori near mid-

vein. Me; Wis; Va. Synonym: *Aspidium cristatum* clintonianum D. C. Eaton, in Gray Man, ed 5, 665 (1867).

D. GOLDIANA A. Gray, Man ed 1, 631 (1848).

Goldie's fern. Fronds broadly ovate, 2-4' long; pinnae 6-9' long, broadest in middle, pinnately parted; segs about 20 pairs, oblong-linear, subfalcate, serrate with appressed teeth; veins bearing sori very near midvein; indusia very large, orbicular with a narrow sinus. New Brunswick; Minn; NC; Tenn; Ia; Ky. Synonyms: *Aspidium goldianum* Hooker, Edinb Phil J 6:333 (1822).—*Nephrodium goldieana* Hooker.—*Lastrea Goldieana* J. E. Smith.

Variety **CELSA** Palmer, Biol soc Wash pr 13:65 t 1 f 1-6, 8-12 (1899).

Log fern. Dismal swamp, Va (Wm. Palmer; Bartsch).

(2) Fronds mostly bipinnate; indusia convex, marginal glands 0.

D. FILIX-MAS Schott, Gen Fil 1834.

Male fern; Sweet fern. Rstock short, stout; fronds in a crown, 1-3' hl, broadly oblong-lanceolate, slightly narrowed toward base, bipinnatifid or bipinnate; pinnules oblong, smooth, polished beneath, larger ones pinnately incised; sori large, near midvein, com on lower half or 2-3 ds of seg; indusia firm, smooth; rachis more or less chaffy. Can; Colo; Ar; Cal; Ore; Alk; Mich; SDak. Synonyms: *Polypodium filix-mas* L sp Pl 1090 (1753).—*Aspidium filix-mas* Swz, Schrad J bot 1800 (2): 38 (1801).—*Nephrodium filix-mas* Rich.—*Lastrea filix-mas* Presl.

D. MARGINALIS A. Gray, Man ed 1, 632 (1848).

Marginal shield fern; Rock fern; Wood fern. Fronds smooth, nearly coriaceous in texture, 6'-2" long, ovate-oblong; pinnae lanceolate, broadest just above base; pinnules oblong or oblong-falcate, entire or crenately toothed; sori near margin. Nova Scotia; BC; Ark; Ala; Ga. Synonyms: *Polypodium marginale* L, Sp Pl 1091 (1753).—*Aspidium marginale* Swz, Syn Fil 50 (1806).—*Nephrodium marginale* Michx.—*Lastrea marginalis* J. E. Smith.

III.—Fronds bipinnate or 3-pinnatifid; segs spinulose-toothed.

D. RIGIDA (*Aspidium rigidum* Swz.).

Variety **ARGUTA** Underwood, Our Native Ferns, ed 4, 116 (1893).

Rstock short, stout; fronds in a crown on chaffy stalks, half-evergreen, smooth above, paler and more or less glandular beneath, 1-3' hl, ovate-lanceolate or triangular-l, bipinnate; pinnae broadly oblong-lanceolate, lowest ones broadest, scarcely shorter than middle ones; pinnules oblong, incised or doubly serrate with spinulose teeth; indusia firm, convex, edge bearing short-stalked glands. Cal; Ore; Alk; chiefly near coast. Synonyms: *Aspidium argutum* Kaulf, Enum Fil 242 (1824).—*A. rigidum argutum* D. C. Eaton, in US Geol Surv W 100th Merid 8:333 (1879).

D. SPINULOSA Kuntze, Rev. Gen Pl 2: 813 (1891).

Spiny shield fern. Stipes with a few, pale brown, decid scales; fronds ovate-

lanceolate, bipinnate, pinnae oblique to rachis, elongate-triangular, lower pairs broadly triangular; pinnules oblique to midrib, connected by a very narrow wing, oblong, incised or pinnatifid with lobes spinulose-toothed; indusia smooth, marginal glands 0. Newfoundland; Alk; Va; Ky; Nebr; Wash. Synonyms: *Polypodium spinulosum* Retz, Fl Sand ed 2, 260 (1795).—*Aspidium spinulosum* Swz, Schrad J Bot 1800 (2):38 (1801).—*Nephrodium s* Desv.—*Lastrea spinulosea* Presl.

Variety **INTERMEDIA** Underwood, Our Native Ferns, ed 4, 116 (1893).

Scales of stipes few, brown with a darker center; fronds oblong-ovate, 2-3-pinnate; pinnae spreading, oblong-lanceolate, lowest unequally triangular-ovate; pinnules crowded, pinnately divided; margin of indusium denticulate and beset with stalked glands. Can; Tenn; NC; Alk; Labrador. Synonyms: *Aspidium intermedium* Muhl, Willd sp Pl 5:202 (1810).—*A. americanum* Dav.—*A. spinulosum intermedium* D. C. Eaton in A. Gray, Man ed 5, 665 (1867).—*Dryopteris intermedia* A. Gray, Man ed 1, 630 (1848).

Variety **DILATATA** Underwood, Our Native Ferns, ed 4, 116 (1893).

Spreading wood fern. Scales of stipes large, brown with a darker center; fronds broadly ovate or triangular-ovate, com 3-pinnate; pinnules lance-oblong, lowest oft much elongated; indusia smooth and naked. Newfoundland; Alk; Cal; Ore; Mont; Va. Synonyms: *Polypodium dilatatum* Hoffm. Deutsch Fl 2: 7 (1795).—*Aspidium spinulosum dilatatum* Hooker, Brit Fl 444 (1830).—*Dryopteris dilatata* A. Gray Man ed 1, 631 (1848).—*Aspidium dilatatum* Swz.—*A. campylopterum* Kunz.—*Nephrodium dilatatum* Desv.—*Lastrea dilatata* J. E. Smith.

D. BOOTTII Underwood, Our Native Ferns, ed 4, 117 (1893).

Boott's wood fern. Scales of stipes pale brown; fronds elongate-oblong or elongate-lanceolate in outline; pinnules broadly oblong, very obtuse, lower pinnatifid, upper and smaller merely serrate; indusia minutely glandular. Can; Alk; Minn; Va. Synonyms: *Aspidium boottii* Tuckerman, Hovey's Mag hort 9:145 (1843).—*A. spinulosum boottii* D. C. Eaton, in Gray Man, ed 5, 665 (1867).

D. PATULA Underwood, Our Native Ferns, ed 4, 117 (1893.)

Stipes tufted, 8-12' long stramineous, scaly at base; fronds pale g, 1-2' long, ½-1" broad, ovate-lanceolate; pinnae lanceolate or lower subdeltoid; rachis and both surfaces naked; sori in rows midway between edge and midrib; indusium conspicuous, naked, Huachuca mts, Ar (Lemmon). Synonyms: *Aspidium patulum* Swz, Konigl Vetensk Ak ad Handl 1817:74.—*A. karwinskyanum* of Lemmon's distribution.—*Nephrolepis patulum* Baker.—*N. mexicanum* Hooker.

NEPHROLEPIS Schott.

Indusium reniform, fixed at sinus or at arcuate base, opening toward margin of frond; sori at end of free veins. Trop-

ical, 7 sp.

N. EXALTATA Schott.

Stipes tufted, 4-6' long, naked or slightly scaly; fronds 2-4' long, 3-6' broad; pinnae close, lanceolate-edge entire or slightly crenate, upper side auricled at base, lower rounded; rachis nearly naked; sori submarginal; indusia firm, distinctly reniform. Fla. Synonyms: *Polypodium exaltatum* L, sp Pl ed 2, 1548 (1763).—*Aspidium trifoliatum* Swz, Schrad J bot 1800 (2): 32 (1801). Frequent in cult.

N. BISERRATA Schott, Gen Fl 1834.

Stipes tufted, 4-8' long, naked or slightly scaly; fronds 2-4' long, 8-12' broad; pinnae 4-8' long, ½-1' broad, acute entire or slightly crenate, upper side auricled, lower rounded at base; rachis and both sides nearly naked; sori submarginal; indusia suborbicular, subpeltate. Fla (south bank of Miami river, Holden). Synonyms: *N. acuta* Presl. Tent Pterid 79 (1836).—*Aspidium acutum* Swz, Syn Fl 46 (1806).—*A. biserratum* Swz, Schrad J bot 1800 (2): 32 (1801).

PLIKK Adans, Fam Pl 2:20 (1763).**Cystopteris** Bernh.

Indusium convex, com reflected as sporangia ripen; texture delicate.

*Fronds ovate-lanceolate, 2-3-pinnate.

F. BULBIFERA Underwood, Our Native Ferns, ed 6, 119 (1900).

Bladder fern. Stipes 4-6' long; fronds lanceolate, elongate, 1-2' long, 2-3'-pinnatifid, pinnae lanceolate-oblong; pinnules crowded, toothed or pinnatifid; rachis wingless, often bearing bulblets underneath; indusia short, truncate on free side. Alk; Can; Ia; NC; Ark; Ala. Synonyms: *Aspidium bulbiferum* Swz.—*Nephrodium bulbiferum* Michx.—*Polypodium bulbiferum* L, Sp Pl 1091 (1753).—*Cystopteris bulbifera* Bernh, Schrad Neues J bot 1 (2): 26 (1806).

F. FRAGILIS Underwood, Our Native Ferns ed 6, 119 (1900).

Fronds oblong-lanceolate, 4-8' long, 1-2½' broad, 2-3-pinnate; pinnae and pinnules lanceolate or ovate in outline, decurrent along margined or winged rachis; indusia tapering or acute at free end. Labrador; Alk; Cal; Ar; Ala; Ga. Synonyms: *Aspidium tenue* Swz.—*Polypodium fragile* L, sp Pl 109 (1753).—*Cystopteris fragilis* Bernh, Schrad Neues J bot 1 (2): 27 (1806).—and many varietal names.

**Fronds deltoid-ovate, 3-4-pinnate.

F. MONTANA Underwood, Our Native Ferns ed 6, 119 (1900).

Rtstock long, slender, creeping; stipes 6-9' long, slender; fronds 6' each way; lowest pinnae deltoid-lanceolate, much larger than these above, their inferior pinnules 1-1½' long; segs cut to rachis into oblong lobes, deeply and sharply toothed; sori num. Labrador; Colo; Alk; BC. Synonyms: *Polypodium montanum* Lam, Fl Franc 1:23 (1778).—*Cystopteris montana* Bernh, Schrad Neues J bot 1 (2): 26 (1806).

ONOCLEA L, sp Pl 1062 (1753).

Sori dorsal on veins of contracted pinnae, concealed by their revolute mar-

gins; veins of sterile frond copiously anastomosing.

O. SENSILLIS L, sp Pl 1062 (1753).

Sensitive fern; Oak-leaved fern. Fertile fronds bipinnate, much contracted; pinnules short, com rolled up and converted into berry-shaped closed involucre, and forming a 1-sided panicle; sterile fronds broadly triangular, deeply pinnatifid into lanceolate-oblong pinnae, which are entire, undulate, or lowest pair sinuate pinnatifid; veins copiously anastomosing. Can; Fla; Kans; Nebr; La.

Variety **OSTUSILOBATA** Torrey.

Sterile fronds again pinnatifid, more or less contracted and revolute, and bear a few sori; fertile fronds more or less foliose.

MATTEUCCIA Todaro, Syn Pl Acot Vasc Sicilia 30 (1866).

Veins all free, oft included in Onoclea (section *Struthiopteris* Willd.)

M. STRUTHIOPTERIS Todaro, Syn Pl Sicilia 30 (1866).

Ostrich fern. Fertile fronds 1-1½' long, simply pinnate with necklace-shaped pinnae formed of strongly revolute margins; sterile fronds 2-6' long, growing in a crown, broadly lanceolate, bipinnatifid, lowest pinnae gradually much shorter; veins pinnate, free and simple; sori crowded and confluent. Nova Scotia; Va; Ia; BC. Synonyms: *Onoclea struthiopteris* Hoffm. Deutsch Fl 2:11 (1795).—*O. germanica* Willd.—*O. nodulosa* Michx.—*Struthiopteris pennsylvanica* Willd.—*S. germanica* Willd. Enum Pl Hort bot Berol 1071 (1809).—*Osmunda struthiopteris* L, sp Pl 1066 (1753).

Genus WOODSIA R. Brown.

Prodr Fl Nov Holl 1:158 (1810).

Indusium roundish or stellate, delicate, cleft into irregular lobes. Named for Joseph Woods, an English botanist; 15 sp, high temperate or boreal.

Section **EUWOODSIA** Indusium minute or evanescent, open and flat from an early stage, concealed under sorus, its margin cleft into slender hairs or cilia.

*Stipes obscurely jointed near base; cilia of indusium long, inflexed over sporangia.

I.—Fronds thickly clothed beneath with rusty bristle-like chaff.

W. ILVENSIS R. Br, Prodr Fl Nov Holl 1:158 (1810).

Rusty Woodsia. Fronds broadly lanceolate, smoothish above, pinnate; pinnae crowded, sessile, pinnately-parted, crowded segs oblong, obscurely crenate; sori near margin, somewhat confluent in age. Va; Ky; NC; Alk; Greenland; Minn. Synonyms: *Acrostichum ilvensis* L, Sp Pl 1071 (1753).—*Polypodium ilvense* Swz.—*Nephrodium rufidulum* Michx.—*Aspidium rufidulum* Willd.—*Woodsia rufidula* Beck.

II.—Fronds glabrous or nearly so.

W. ALPINA S. F. Gray, Nat Arr Brit Pl 2:17 (1821).

Alpine woodsia. Stipes and rachis sometimes slightly hairy; fronds linear-lanceolate, pinnate; pinnae cordato-ovate, pinnatifid with 5-7 broadly obo-

vate entire lobes. Vt; NY; Can; Alk; Greenland. Synonyms: *Acrostichum alpinum* Bolton, Fil Brit 76 t 42 (1790).—*A. hyperboreum* Liljeb., Kongl Vetensk Akad Nya Hendl 14:201 (1793).—*Woodisia hyperborea* R. Br., Prodr Fl Nov Holl 1:158 (1810).
W. GLABELLA R. Br.

Smooth and naked throat; fronds linear, tapering slightly below, 2-5' hi, pinnate; pinnae deltoid or ovate, lower rather remote, cut into 3-7 rounded or subcuneate entire lobes. Vt; NY; BC; Alk; Greenland.

**Stipes not jointed; cilia of indusium very short, hidden by sporangia.
W. SCOPULINA D. C. Eaton. Can Nat II, 2:90 (1865). B 2:348.

Rtstock short, creeping, very chaffy; stipes 2-4' long, puberulent like rachis and under surface of frond with minute flattened hairs and stalked glands; fronds lanceolate, 4-8' long, pinnate; pinnae num, oblong-ovate, pinnatifid with 10-16 sh ovate or oblg toothed divisions; indusia very delicate, deeply cleft into laciniae which terminate in short hairs. Colo; Ar; Cal; Ore; Alk.
WOODSIA OREGANA Eaton.

B 2:348.
Stipes and fronds smooth; fertile fronds taller than sterile ones; pinnae triangular-oblong, pinnatifid; segs oblong or ovate, toothed or crenate; teeth often reflexed and covering submarginal sori; indusia very minute, divided almost to center into a few beaded hairs. Ar; Ut; Colo; Ore; Cal; Wis; Mich; Ok; Nebr; BC, Manitoba.

WOODSIA MEXICANA Fee.
7 me Mem Fam Foug 66 (1854).
Stipes 2-3' long, smoothish, or with a few scattered scales; fronds 3-9' long, lanceolate; pinnae sub-opp, triangular-lanceolate, pinnately divided into finely toothed segs, teeth in young fronds ending in delicate, semi-transparent, ciliated tips; sori near margin, broad, confluent; receptacles dot-like, scales of indusium 4, lacinate, narrow, dividing at end into articulated hairs; sporangia nearly sessile. Ar; NM; Baja mts!

Section **HYOPELTIS** Torrey. Indusium conspicuous, at first enclosing sporangium, but early opening at top and splitting into several spreading jagged lobes.

W. OBTUSA Torrey, Cat Pl in Geol R NY 195 (1840).

Stipes not jointed, 3-6' long; fronds broadly lanceolate, minutely glandular-hairy, 6-12' hi, nearly bipinnate; pinnae rather remote, triangular-ovate or oblong, pinnately parted; segs oblong, obtuse, crenately toothed, lower ones pinnatifid; veins forked. Nova Scotia; Ga; Ala; Tex; Wis; Nebr; Alk; BC. Synonyms: *Polypodium obtusum* Spreng, Anleit Kenn Gewachse ed 1, 3:92 (1804).—*Woodisia perriniana* H & G.—*Aspidium obtusum* Willd.—*Chellanthus crenata* Kunze.—*Hypopeltis obtusa* Torr.

Variety **PLUMMERAE** Maxon, US Nat Mu pr 23:644 (1901).
Smaller and more glandular. NM; Ar. Synonyms: *W. obtusa glandulosa* D. C. Eaton and Faxon, Torr cl b 9:50 (1882).

—*W. plummerae* Lemmon, bot gaz, 7:6 (1882).

Tribe **DICKSONIAE**. Sori roundish or transversely elongate, borne at ends of veins or on marginal cross-veinlets, with an indusium attached at base or base and sides and opening toward margin of seg.

DICKSONIA L'Her.

Sori marginal, small, indusium cup-shaped, somewhat 2-valved, under portion confluent with a lobule of frond. Named for James Dickson, an English botanist; about 50 sp, many arborescent.
D. PILOSTUSCULA Willd., Enum Pl Hort Berol 1076 (1809).

Rtstock slender, extensively creeping, naked; stripes stout, chaffless; fronds 1-2½' long, 5-9' broad, ovate-lanceolate and pointed, com 3-pinnatifid; pinnae lanceolate, pointed; pinnules cut into oblong and obtuse cut-toothed lobes; rachis and under surface minutely glandular and hairy; sori minute, each on a recurved toothlet, com 1 at upper margin of each lobe. Can; Minn; Tenn; Ga; Ala. Synonyms: *Dicksonia punctiloba* Hooker, sp Fil 1:79 (1846).—*Nephrodium punctilobulum* Michx Fl Bor Am 2:268 (1803).—*Aspidium punctilobulum* Torrey.—*Dennstaedtia punctilobula* Moore, Index Fil xcvi (1857).

MEXICAN FERNS.

Species collected by C. R. Orcutt.

Determinations by W. R. Maxon.

- ADIANTOPSIS RADIATA** (L) Fee.
Orcutt 2930: Sanborn, VC, 23 F 1910.
ADIANTUM ANDICOLA Liebm.
Orcutt 4025: Teztlutlan, Pue, 7 S 1910.
ADIANTUM CONCINNUM Willd.
Orcutt 4639: Alzada, Col, 4 N 1910.
ADIANTUM FETIOLATUM Desv.
Orcutt 3:83: Rincon Antonio, Oax, 21 Ap 1910.
Orcutt 3201: Chinameca, VC, 30 Ap 1910.
ADIANTUM FOIRETII Wikstr.
Orcutt 4298: Churubusco, Mex, 4 O 1910.
Orcutt 3980: Teztlutlan, Pue, 6 S 1910.
Orcutt 3842: El Parque, Mor, 31 Ag 1910.
Orcutt 3480: Contreras, Valley of Mexico, 9 Ag 1910.
ADIANTUM TENERUM Swartz.
Orcutt 3379: Omealca, VC, 7 Ap 1910.
Orcutt 4692: Tuxpan canyon, Col, 3 N 1910.
ADIANTUM TRICHOLEPIS Fee.
Orcutt 4206 et 4207: Rio Balsas, Gro, 26 Ag 1910.
ADIANTUM VILLOSUM L.
Orcutt 2988: Sanborn, VC, 10 Mr 1910.
ALSOPHILA ARMATA (Sw) Presl.
Orcutt 3195: Chinameca, VC, 30 Ap 1910.
ALSOPHILA MICRODONTA Desv.
Orcutt 3194: Chinameca, VC, 30 Ap 1910.
ALSOPHILA QUADRIPINNATA (Gmel) C Chr.
Orcutt 3997: Teztlutlan, Pue, 7 S 1910.
ALSOPHILA SCHEIDTIANA Presl.
Orcutt 3213: Cordova, VC, 6 Ap 1910.
ANEMIA MEXICANA Klotzsch.

Orcutt 4165: Río Balsas, Gro, 26 Ag 1910.
ANEMIA PHILLIPIDIS (L) Sw.
 Orcutt 3378: Cordova, VC, 7 Ap 1910.
ASPLENIUM AURITUM Sw.
 Orcutt 2827: Jalapa, VC, 10 F 1910.
ASPLENIUM CRISTATUM Lam.
 Orcutt 3385: Omeaca, VC, 7 Ap 1910.
ASPLENIUM FORMOSUM Willd.
 Orcutt 4638: Alzada, Col, 4 N 1910.
ASPLENIUM MONANTHES L.
 Orcutt 3791: Cima, Mex, 24 Ag 1910.
 Orcutt 3482: Contreras, Valley of Mexico, 9 Ag 1910.
 Orcutt 3987: Teziutlan, Pue, 6 S 1910.
ASPLENIUM FRAMMORSUM Sw.
 Orcutt 4297: Churubusco, Valley of Mex, 4 O 1910.
ASPLENIUM SERRATUM L.
 Orcutt 3271: Rincon Antonio, Oax, 21 Ap 1910.
ATHYRIUM SP.
 Orcutt 4653: Alzada, Col, 4 N 1910.
 Orcutt 4013: Teziutlan, Pue, 7 S 1910.
BLECHNUM BLECHNOIDES (Lag) C Chr.
 Orcutt 3217: Cordova, VC, 6 Ap 1910.
BLECHNUM FRAXINUM Willd.
 Orcutt 3207: Cordova, VC, 6 Ap 1910. (?)
 Orcutt 3384: Rincon Antonio, Oax, 21 Ap 1910.
BLECHNUM OCCIDENTALE L.
 Orcutt 3981: Teziutlan, Pue, 6 S 1910.
 Orcutt 2842: Jalapa, VC, 11 F 1910.
BLECHNUM SEEBULATUM Rich.
 Orcutt 3196: Chinameca, VC, 30 Ap 1910.
BOMMERIA FEDATA (Sw) Fourn.
 Orcutt 4390: El Parque, Mor, 1 S 1910.
CEROPTERIS CALOMELAENA (L) Link.
 Orcutt 3200: Chinameca, VC, 30 Ap 1910.
 Orcutt 4694: Tuxpan canyon, Col, 3 N 1910. (?)
 Orcutt 4701: Tuxpan canyon, Col, 3 N 1910.
CEROPTERIS PERUVIANA (Desv) Link.
 Orcutt 4699: Tuxpan canyon, Col, 3 N 1910.
CEROPTERIS TARTAREA (Cav) Link.
 Orcutt 3854: El Parque, Mor, 31 Ag 1910.
CHEILANTHES FARINOSA Kaulf.
 Orcutt 3854: El Parque, Mor, 31 Ag 1910.
CHEILANTHES KAULFUSSII Kunze.
 Orcutt 3843: El Parque, Mor, 31 Ag 1910.
 Orcutt 3646: Tlalpam, Valley of Mex, 16 Ag 1910.
CHEILANTHES LENDIGERA Sw.
 Orcutt 3979: Teziutlan, Pue, 6 S 1910.
CHEILANTHES MARGINATA HBK.
 Orcutt 3503: Contreras, Valley of Mexico, 9 Ag 1910.
 Orcutt 3642: Tlalpam, Mex, 16 Ag 1910.
 Orcutt 4654: Alzada, Col, 4 N 1910. (?)
 Orcutt 3996: Teziutlan, Pue, 6 S 1910.
CHEILANTHES MICROMERA Link.
 Orcutt 4044: Teziutlan, Pue, 9 S 1910.
 Orcutt 3648: Oltivar, Valley of Mexico, 17 Ag 1910.
 Orcutt 3373: Cordova, VC, 6 Ap 1910.
CHEILANTHES MYRIOPHYLLA Desv.
 Orcutt 3927: Pachuca, Hgo, 5 S 1910.
 Orcutt 3855: El Parque, Mor, 31 Ag 1910.
 Orcutt 3638: Tlalpam, Valley of Mexico, 16 Ag 1910.
 Orcutt 3615: Tlalpam, Valley of Mexico,

16 Ag 1910.
DICRANOPTERIS RIFIDA (Willd) Maxon.
 Orcutt 3203: Chinameca, VC, 30 Ap 1910. Und.
DICRANOPTERIS FLEXUOSA (Schrad) Orcutt 3205: Chinameca, VC, 30 Ap 1910.
DICRANOPTERIS PALMATA (Schaffn) Und.
 Orcutt 2837: Jalapa, VC, 11 F 1910.
DICRANOPTERIS PECTINATA (Willd) Und.
 Orcutt 3202: Chinameca, VC, Ap 1910.
DIPLAZIUM INAEQUILATERUM Liebm.
 Orcutt 3209: Cordova, VC, 6 Ap 1910.
DRYOPTERIS ATHYRIODES (M & G) Kuntze.
 Orcutt 3994: Teziutlan, Pue, 6 S 1910.
DRYOPTERIS DAVENPORTI C Chr.
 Orcutt 3214: Cordova, VC, 6 Ap 1910.
DRYOPTERIS FILIX-MAS Schott. (Var.)
 Orcutt 3999: Teziutlan, Pue, 7 S 1910.
DRYOPTERIS MENISCOIDES (Liebm) C Chr.
 Orcutt 2915: Sanborn, VC, 23 F 1910.
DRYOPTERIS PANAMENSIS (Presl) C Chr.
 Orcutt 3380: Tezonapa, VC, 5 Ap 1910.
DRYOPTERIS PATENS (Sw) Kuntze.
 Orcutt 4695: et 4696: Tuxpan canyon, Col, 3 N 1910.
 Orcutt 4599: Colima, Col, 24 O 1910.
DRYOPTERIS FATULA (Sw) Und.
 Orcutt 3995: Teziutlan, Pue, 6 S 1910.
 Orcutt 4393: El Parque, Mor, 1 S 1910.
 Orcutt 4652 et 4700: Near Alzada, Col, 4 N 1910.
DRYOPTERIS SPRENGELII (Kaulf) Kuntze.
 Orcutt 2977: Sanborn, VC, 18 Ap 1910.
DRYOPTERIS TETRAGONA (Sw) Urban.
 Orcutt 3391: Sanborn, VC, 24 F 1910.
ELAPHOGLOSSUM
 Orcutt 3984: Teziutlan, Pue, 6 S 1910.
 Orcutt 3528: Contreras, Valley of Mexico, 9 Ag 1910.
FILIX FRAGILIS (L) Und.
 Orcutt 3477: Contreras, Valley of Mexico, 9 Ag 1910.
 Orcutt 3845: El Parque, Mor, 31 Ag 1910.
 Orcutt 3983: Teziutlan, Pue, 6 S 1910.
HYMENOPHYLLUM
 Orcutt 404: Teziutlan, Pue, 7 S 1910.
LINDSAYA TRAPEZIFORMIS Dry.
 Orcutt Sanborn, VC, 24 F 1910.
 Orcutt 3204: Chinameca, VC, 30 Ap 1910.
LINDSAYA
 Orcutt 3197: Chinameca, VC, 30 Ap 1910.
LOPHIDIUM ELEGANS (Vahl) Presl.
 Orcutt 2913: Sanborn, VC, 23 F 1910.
LYCOPODIUM CERNUUM L.
 Orcutt 3199: Chinameca, VC, 30 Ap 1910.
LYGODIUM HETERODOXUM Kuntze.
 Orcutt 3015: Sanborn, VC, 10 Mr 1910.
LYGODIUM MEXICANUM Presl.
 Orcutt 3208: Chivela, Oax, 16 Ap 1910.
 Orcutt 3016: Sanborn, VC, 10 Mr 1910.
NOTHOLAENA AFFINIS (Mett) Hook.
 Orcutt 3315: Tehuantepec, Oax, 19 Ap 1910.
NOTHOLAENA BRACHYPUS (Kunze) J Sm.
 Orcutt 4703: Tuxpan canyon, Col, 3 N

1910.
NOTHOLAENA CANDIDA (M & G) Hook.
 Orcutt 4228: Rio Balsas, Gro, 26 Ag 1910.
NOTHOLAENA FERRUGINEA Desv.
 Orcutt 3831 et 3852: El Parque, Mor, 31 Ag 1910.
 Orcutt 3539: Contreras, Valley of Mex, 9 Ag 1910.
 Orcutt 3616: Tlalpam, Valley of Mexico, 16 Ag 1910.
OPHIOGLOSSUM CALIFORNICUM Prantl.
 Orcutt 3733: Ajusco, DF, 20 Ag 1910.
PELLAEA ANGUSTIFOLIA (HBK) Baker.
 Orcutt 4231: El Parque, Mor, 31 Ag 1910.
PELLAEA CORDATA (Cav) J Sm.
 Orcutt 3853: El Parque, Mor, 31 Ag 1910.
 Orcutt 3485: Contreras, Valley of Mexico, 9 Ag 1910.
PELLAEA INTRAMARGINALIS (Kaulf) J Sm.
 Orcutt 4232 et 4233: El Parque, Mor, 31 Ag 1910.
 Orcutt 3982: Teziutlan, Pue, 6 S 1910.
PELLAEA LOZANI Maxon.
 Orcutt 4188: Rio Balsas, Gro, 26 Ag 1910.
PELLAEA RIGIDA Hook.
 Orcutt 4229: Rio Balsas, Gro, 26 Ag 1910.
PELLAEA SKINNERI Hook.
 Orcutt 4672: Alzada, Col, 4 N 1910.
 Orcutt 4191: Rio Balsas, Gro, 26 Ag 1910.
PELLAEA TERNIFOLIA Cav.
 Orcutt 3827: El Parque, Mor, 31 Ag 1910.
POLYPODIUM FLERUM C & S.
 Orcutt 4032: Teziutlan, Pue, 7 S 1910.
 Orcutt 3484: Contreras, Valley of Mexico, 9 Ag 1910.
 Orcutt 2806: Jalapa, VC, 10 F 1910.
POLYPODIUM FLUMULA HBK.
 Orcutt 2819: Jalapa, VC, 10 F 1910. (?)
POLYPODIUM ANGUSTIFOLIUM Swartz.
 Orcutt 3992 Teziutlan, Pue, 6 S 1910.
 Orcutt 2823: Jalapa, VC, 10 F 1910.
 "Lengua de clerbo."
 Orcutt 2994: Sanborn, VC, 10 Mr 1910.
POLYPODIUM FLEHOSOBUM Kunze.
 Orcutt 3377: Cordova, VC, 7 Ap 1910.
 Orcutt 2838: Jalapa, VC, 11 F 1910.
 Orcutt 2830: Jalapa, VC, 10 F 1910.
 "Pasma."
POLYPODIUM SQUMATUM L.
 Orcutt 2839: Jalapa, VC, 11 F 1910.
POLYPODIUM LANCEOLATUM L.
 Orcutt 3993: Teziutlan, Pue, 6 S 1910.
 Orcutt 3844: El Parque, Mor, 31 Ag 1910.
 Orcutt 3483: Contreras, Valley of Mexico, 9 Ag 1910.
 Orcutt 2841: Jalapa, VC, 11 F 1910. ?)
POLYPODIUM LATUM Moore.
 Orcutt 2952: Sanborn, VC, 28 F 1910.
POLYPODIUM PURPURACEUM C & S.
 Orcutt 4637: Alzada, Col, 4 N 1910.
 Orcutt 3208: Cordova, VC, 6 Ap 1910.
POLYPODIUM XALAPENSIS (Fee) Moore.
 Orcutt 3212: Cordova, VC, 6 Ap 1910.
POLYPODIUM ELONGATUM Mett.

Orcutt 3215: Cordova, VC, 6 Ap 1910.
POLYPODIUM FALLAX C & S.
 Orcutt 3216: Cordova, VC, 6 Ap 1910.
POLYPODIUM CRASSIFOLIUM L.
 Orcutt 3372: Cordova, VC, 6 Ap 1910.
POLYPODIUM POLYPODIODES (L) Hitchc.
 Orcutt 3374: Cordova, VC, 6 Ap 1910.
 Orcutt 4023: Teziutlan, Pue, 7 S 1910.
POLYPODIUM LYCOPODIODES L.
 Orcutt 3389: Sanborn, VC, 24 F 1910.
POLYPODIUM TETSAOLEPIS A. Br.
 Orcutt 3933: Pachuca, Hgo, 5 S 1910.
 Orcutt 3647: Oliver, Valey of Mexico, 17 Ag 1910.
POLYPODIUM SUBPETIOLATUM Hook.
 Orcutt 4084: El Parque, Mor, 3 S 1910.
PTERIDIUM AQUILINUM (L) Kuhn (form).
 Orcutt 4029: Teziutlan, Pue, 7 S 1910.
PTERIDIUM CAUDATUM (L) Maxon.
 Orcutt 3392: Sanborn, VC, 24 F 1910.
PTERIS CRETICA L.
 Orcutt 4028: Teziutlan, Pue, 7 S 1910.
PTERIS FUNGENS Willd.
 Orcutt 3376: Ormeasca, VC, 7 Ap 1910.
 Orcutt 3388: Sanborn, VC, 24 F 1910.
PTERIS QUADRIURETA Retz.
 Orcutt 3390: Sanborn, VC, 24 F 1910.
PTERIS SPINOSA (L) Desv.
 Orcutt 2978: Sanborn, VC, 18 Ap 1910.
TECTARIA DILACHERATA (Kunze).
 Orcutt 3210: Cordova, VC, 6 Ap 1910.
TECTARIA HERAOLEPIS (Willd) Und.
 Orcutt 3119: Tezonapa, VC, 5 Ap 1910.
TECTARIA MARTINICENSIS (Spreng) Copel.
 Orcutt 2979 et 3011: Sanborn, VC, Mr et Ap 1910.
TRICHOMANES PINNATUM Hedw.
 Orcutt 3198: Chinameca, VC, 30 Ap 1910.
WOODSIA MEXICANA Fee.
 Orcutt 3931: Pachuca, Hgo, 5 S 1910.
WOODSIA MOLLIS (Kaulf) J Sm.
 Orcutt 3621: Tlalpam, Valley of Mexico, 16 Ag 1910.

MEXICAN GRASSES.

Collected in Mexico by C. R. Orcutt during 1910, and determined by Dr. A. S. Hitchcock, of the United States Department of Agriculture.

ARGOPOGON GEMINIFLORUS HBK.
 Orcutt 4248: Xochimilco, DF, 3 O 1910.
 Orcutt 3925: Pachuca, Hgo, 5 S 1910.
ARGOSTIS HIEMALIS subsp.
 Orcutt 3953: Teziutlan, Pue, 6 S 1910.
 Orcutt 3744 et 4441: Tres Marias, Mex, 23 Ag 1910.
ARGOSTIS TOLUCENSIS HBK.
 Orcutt 3789: Cima, Mex, 24 Ag 1910.
ANDROPOGON BARKINODIS Lag.
 Orcutt 3687: S Angel, DF, 18, Ag 1910.
ANDROPOGON BREVIFOLIUS Sw.
 Orcutt 4681: Alzada, Col, 4 N 1910.
ANDROPOGON INCOMPLETUS Presl.
 Orcutt 4707: Tuxpan canyon, Col, 3 N 1910.
ANDROPOGON
 Orcutt 4632: Alzada, Col, 4 N 1910.
ANTHOPHORA KERMAFERODITA (L)

Kuntze.

Orcutt 4567: Colima, Col, 24 O 1910, 4709;
Tuxpan canyon, Col, 3 N 1910.
ARISTIDA BROMOIDES HBK.
Orcutt 4180; Telles, Hgo, 21 S 1910.
ARISTIDA RUMBOLDIANA Trin &
Rupr.
Orcutt 3676; Olivvar, DF, 17 Ag 1910.
ARISTIDA MANZANILLOANA Vasey.
Orcutt 4569: Colima, Col, 24 O 1910.
ARISTIDA SCABRA Kunth.
Orcutt 4633: Alzada, Col, 4 N 1910.
Orcutt 4463: Manzanillo, Col, 20 O 1910.
ARISTIDA TRINII Scribn.
Orcutt 3863: Alarcon, Mor, 31 Ag 1910.
Orcutt 3732: Ajusco, DF, 20 Ag 1910.
ARUNDINELLA DEFFREANA Nees.
Orcutt 3062: Sanborn, VC, 4 Mr 1910.
ELEPHARONEURON TRICHOLEPIS
(T) Nash.
Orcutt 3796: Cima, Mex, 24 Ag 1910.
BRACHIARIA MEXIANA Hitchc.
Orcutt 3692: S Angel, DF, 18 Ag 1910.
BRACHIARIA PLANTAGINEA (Link)
Hitchc.
Orcutt 4616: Colima, Col, 24 O 1910.
Orcutt 3890: Cuernavaca, Mor, 31 Ag
1910.
BRACHYPODIUM MEXICANUM Link.
Orcutt 4005: Tezulutlan, Pue, 7 S 1910.
Orcutt 3738: Tres Marias, Mex, 23 Ag
1910.
BROMUS LACINIATUS Beal.
Orcutt 3722: Ajusco, DF, 19 Ag 1910.
BROMUS PROXIMUS Shear.
Orcutt 4037: Tezulutlan, Pue, 7 S 1910.
BULBELIS DACTYLOIDES (Nutt)
Rafn.
Orcutt 4148: Telles, Hgo, 21 S 1910.
BOUTELOUA BROMOIDES (HBK) Lag.
Orcutt 3885: Cuernavaca, Mor, 31 Ag
1910.
Orcutt 3675: Olivvar, DF, 17 Ag 1910.
BOUTELOUA CURTIPENDULA
(Michx) T.
Orcutt 3666: Olivvar, DF, 17 Ag 1910.
3690: S Angel, DF, 18 Ag 1910.
BOUTELOUA FILLIFORMIS Fourn.
Orcutt 4568: Colima, Col, 24 O 1910.
Orcutt 3255: Coatzacoalcos, VC, 21 Mr
1910.
BOUTELOUA OLIGOSTACHYA (Nutt)
T.
Orcutt 3641: Tlalpam, DF, 16 Ag 1910.
BOUTELOUA PROSTRATA Lag.
Orcutt 4153: Telles, Hgo, 21 S 1910.
Orcutt 3903: Pachuca, Hgo, 5 S 1910.
Orcutt 3608: Olivvar, DF, 15 Ag 1910.
BOUTELOUA REPENS HBK.
Orcutt 4459: Manzanillo, Col, 20 O 1910.
BOUTELOUA SCORPIOIDES Lag.
Orcutt 4107: Mexico, DF, 20 S 1910.
CATECHESCHUM STOLONIFERUM
Orcutt 4166: Rio Balsas, Gro, 26 Ag 1910.
CENCREUS CAROLINIENSIS Walt.
Orcutt 4446: Tecoman, Jal, 20 O 1910.
CENCREUS VIRIDIS Spreng.
Orcutt 3074: Sanborn, VC, 10 Mr 1910.
CHAETOCHELOA GRISEBACHII S & M.
Orcutt 4428: Las Amates, Mor, 25 Ag
1910.
Orcutt 4481: Manzanillo, Col, 20 O 1910.
Orcutt 4342: Xochimilco, DF, 6 O 1910.
Var: **AMPLA** S & M.
Orcutt 3697: S Angel, DF, 18 Ag 1910.
CHAETOCHELOA IMBERBIS (Poir)
Scribn.

Orcutt 4624: Alzada, Col, 4 N 1910.
Orcutt 3613: Olivvar, DF, 15 Ag 1910.
Orcutt 3237: Sanborn, VC, 24 F 1910.
Orcutt 3534 et 3535 Contreras, DF, 9 Ag
1910.
Orcutt 3861: El Parque, Mor, 31 Ag 1910.
CHAETOCHELOA SETOSA (Sw) Scribn.
Orcutt 4194: Rio Balsas, Gro, 26 Ag
1910.
CHLORIS ELEGANS HBK.
Orcutt 4374 et 4438: SFe, Mor, 25 Ag
1910.
Orcutt 3698: S Angel, DF, 18 Ag 1910.
CHLORIS RADIATA Sw.
Orcutt 3242: Sanborn, VC, 10 Mr 1910.
CHLORIS SUBMUTICA HBK.
Orcutt 3690: S Angel, DF, 18 Ag 1910.
CITRA POAEFORMIS (HBK) S & M.
Orcutt 3790: Cima, Mex, 24 Ag 1910.
DACTYLOCTENIUM AEGYPTIUM (L)
Richt.
Orcutt 3258: Coatzacoalcos, VC, 21 Mr
1910.
Orcutt 4452: Tecoman, Jal, 20 O 1910.
Orcutt 2895: Vera Cruz, VC, 16 F 1910.
DESCHAMPSIA
Orcutt 3740: Tres Marias, Mex, 23 Ag
1910.
DISTICHELIS SPICATA (L) Greene.
Orcutt 4110: Mexico, DF, 20 S 1910.
ECHINOCHLOA CRUGALLI (L)
Beauv.
Orcutt 4105: Mexico, DF, 20 S 1910.
ELEusine INDICA (L) Gaertn.
Orcutt 3050 et 3056: Sanborn, VC, 5 et
8 Mr 1910.
Orcutt 4248: Xochimilco, DF, 3 O 1910.
Orcutt 4542 et 4615: Colima, Col, 24 O
1910.
EPICAMPES ROBUSTA Fourn.
Orcutt 4317: Churubusco, DF, 4 O 1910.
ERAGROSTIS CILIARIS (L) Link.
Orcutt 3239: Sanborn, VC, 10 Mr 1910.
Orcutt 2895: Vera Cruz, VC, 16 F 1910.
Orcutt 4586: Colima, Col, 24 O 1910.
ERAGROSTIS ELLIOTTI Wat.
Orcutt 3251: Vera Cruz, VC, 28 Mr 1910.
ERAGROSTIS LIMBATA Fourn.
Orcutt 3253: Omealca, VC, 7 Ap 1910.
3254: Cordova, VC, 6 Ap 1910. 4149:
Telles, Hgo, 21 S 1910. 3948: Oriental,
Pue, 6 S 1910. 3594: Olivvar, DF, 15 Ag
1910.
ERAGROSTIS LUGENS Nees.
Orcutt 3694: S Angel, DF, 18 Ag 1910.
ERAGROSTIS MAYPURIENSIS (HBK)
Steud.
Orcutt 3103: Coatzacoalcos, VC, 21 Mr
1910.
ERAGROSTIS MEXICANA Link.
Orcutt 3532: Contreras, DF, 9 Ag 1910.
3696: S Angel, DF, 18 Ag 1910.
ERAGROSTIS FILOSA L.
Orcutt 4111: Mexico, DF, 20 S 1910.
Orcutt 3884: Cuernavaca, Mor, 31 Ag
1910.
ERAGROSTIS SECUNDIFLORA Presl.
Orcutt 3250: Vera Cruz, VC, 28 Mr 1910.
FESTUCA AMPLISIMA Rupr.
Orcutt 3743: Tres Marias, Mex, 23 Ag
1910.
Orcutt 3773: Cima, Mex, 24 Ag 1910.
FESTUCA REPENSTOPHILA Nees.
Orcutt 3775: Cima, Mex, 24 Ag 1910.
FESTUCA MYRUSA L.
Orcutt 3804: Parres, Mex, 30 Ag 1910.
Orcutt 3860: El Parque, Mor, 31 Ag 1910.

FESTUCA TOLUENSIS HBK.
Orcutt 3748: Tres Marias, Mex, 23 Ag 1910.

GLAUCARIA CHYNOIDES HBK.
Orcutt 3891: Olivar, DF, 15 Ag 1910.

MOMALOUSECHLUS BERLANDIERI (Sw.) Kuntze
Orcutt 4278: Churubusco, DF, 4 O 1910.

MOMADUM JUBATUM L.
Orcutt 4101: Mexico, DF, 20 S 1910.

KYMERACOLA AMPLEXICAULIS (Kunze) Nees.
Orcutt 4563: Colima, Col, 24 O 1910.
Orcutt 3249: Sanborn, VC, 10 Mr 1910.

IMPBRATA HOOKERI Rupr.
Orcutt 3075: Sanborn, VC, 12 Mr 1910.

LOPHOCHEUS PRINGLEI Scribn.
Orcutt 4407: Near Trinita, Mor, 25 Ag 1910.

LEPTOCHELOA DURIA (HBK) Nees.
Orcutt 3917: Pachuca, Hgo, 5 S 1910.
Orcutt 3691: S Angel, DF, 18 Ag 1910.

LEPTOCHELOA MUCRONATA (Michx) Kunth.
Orcutt 4193: Rio Balsas, Gro, 26 Ag 1910.

Orcutt 4478: Manzanillo, Col, 20 O 1910.
Orcutt 4371: SFe, Mor, 25 Ag 1910.

LEPTOCHELOA VIRGATA (L) Beauv.
Orcutt 3240: Sanborn, VC, 10 Mr 1910.

LYCURIUS PLEUROIDES HBK.
Orcutt 4308: Churubusco, DF, 4 O 1910.
Orcutt 3606 et 3677: Olivar, DF, 15 et 17 Ag 1910.

MICROCHELOA SETACEA R Br.
Orcutt 3592: Olivar, DF, 15 Ag 1910.
4135: Telles, Hgo, 21 S 1910.

MUELENBERGIA AFFINIS Trin.
Orcutt 4305: Churubusco, DF, 4 O 1910.

MUELENBERGIA CILIATA Trin.
Orcutt 4247: Xochimilco, DF, 3 O 1910.

MUELENBERGIA ELATA Vasey.
Orcutt 4649: Alzada, Col, 4 N 1910.

MUELENBERGIA EXILIS Fourn.
Orcutt 4571: Colima, Col, 24 O 1910.

MUELENBERGIA IMPLICATA (HBK) Trin.
Orcutt 4307: Churubusco, DF, 4 O 1910.
Orcutt 3915: Pachuca, Hgo, 5 S 1910.

MUELENBERGIA NEBULOSA Scribn.
Orcutt 4629: Alzada, Col, 4 N 1910.

MUELENBERGIA SCHAFFNERI Fourn.
Orcutt 4311: Churubusco, DF, 4 O 1910.

OPLISMENUS CRISTATUS Presl.
Orcutt 4529: Colima, Col, 24 O 1910.

OPLISMENUS HIETELLUS (L) R & S.
Orcutt 3067: Sanborn, VC, 28 F 1910.

ORTHOCLADA RARIFLORA Beauv.
Orcutt 2932: Sanborn, VC, 23 F 1910.

PANICUM ARIZONICUM S & M.
Orcutt 4195: Rio Balsas, Gro, 26 Ag 1910.

PANICUM BULBOSUM HBK.
Orcutt 3518: Contreras, DF, 9 Ag 1910.

PANICUM ELEPHANTIFES Nees.
Orcutt 4269: Churubusco, DF, 4 O 1910.

PANICUM GOUDII Fourn.
Orcutt 4890: Coatzacoalcos, VC, 21 Mr 1910.

PANICUM HIRTICAULE Presl.
Orcutt 4197: Rio Balsas, Gro, 26 Ag 1910.

PANICUM LAKUM Sw.
Orcutt 3238: Sanborn, VC, 28 F 1910.

PANICUM PARCUM H & C.

Orcutt 4687: Alzada, Col, 4 N 1910.

PANICUM REPTANS L.
Orcutt 4888: Tezonapa, VC, 5 Ap 1910.

PANICUM SPHAEROCARPON Ell.
Orcutt 3952: Teztlutlan, Pue, 6 S 1910.

PANICUM TRICHOIDES Sw.
Orcutt 4515: Colima, Col, 24 O 1910.
Orcutt 3241: Sanborn, VC, 10 Mr 1910.

PANICUM UNCINATUM Radoll.
Orcutt 4889: Tezonapa, VC, 5 Ap 1910.

PASPALUM CONJUGATUM Berg.
Orcutt 4585: Colima, Col, 24 O 1910.
Orcutt 3248: Sanborn, VC, 4 Mr 1910.

PASPALUM DEBILE Michx.
Orcutt 2891: Vera Cruz, VC, 16 F 1910.

PASPALUM INOPS Vasey.
Orcutt 3889: Cuernavaca, Mor, 31 Ag 1910.

PASPALUM ORBICULATUM Poir.
Orcutt 3245: Sanborn, VC, 5 Mr 1910.

PASPALUM PANICULATUM L.
Orcutt 3246: Sanborn, VC, 5 Mr 1910.

PELALIS CANARIENSIS L.
Orcutt 3695: S Angel, DF, 18 Ag 1910.

PERCUS PARVIFOLIUS Nash.
Orcutt 3236: Sanborn, VC, 24 F 1910.

POA ANNUA L.
Orcutt 3858: El Parque, Mor, 31 Ag 1910.

SCLEROPOGON BREVIFOLIUS Phil.
Orcutt 4143: Telles, Hgo, 21 S 1910.

SETARIOPSIS LATIGLUMIS (Vas) Scribn.
Orcutt 4198: Rio Balsas, Gro, 26 Ag 1910.

SPOBOBOLUS ARGUTUS (Nees) Kunth.
Orcutt 4106: Mexico, DF, 20 S 1910.

SPOBOBOLUS INDICUS (L) R Br.
Orcutt 3533: Contreras, DF, 9 Ag 1910.
Orcutt 4036: Teztlutlan, Pue, 7 S 1910.
Orcutt 3678: Olivar, DF, 17 Ag 1910.
Orcutt 3234: Rincon Antonio, Oax, 21 Ap 1910.

Orcutt 4069: Mexico, DF, 16 S 1910.

STIPA IOHU (R & P) Kunth.
Orcutt 3788: Cima, Mex, 24 Ag 1910.

STIPA VIRESCENS HBK.
Orcutt 3731: Ajusco, DF, 20 Ag 1910.

STIPA VIRIDULA Trin.
Orcutt 3947: Oriental, Pue, 6 S 1910.

STREPTOGYNE ORNATA Beauv.
Orcutt 2933: Sanborn, VC, 23 F 1910.

SYNTHESMA DIGITATA (Sw) Hitchc.
Orcutt 4541: Colima, Col, 24 O 1910.

SYNTHESMA SANGUINALIS (L) Dulac.
Orcutt 3244: Sanborn, VC, 5 Mr 1910.
Orcutt 4473: Manzanillo, Col, 20 O 1910.

TRACHYPOGON MONTUFARI (HBK) Nees.
Orcutt 4322: Churubusco, DF, 4 O 1910.

VALOTA INSULARIS (L) Chase.
Orcutt 3070: Sanborn, VC, 11 Mr 1910.

MEXICAN LICHENS.

Determined by Dr. H. E. Hasse.

ACAROSPORA BELLA (Nyl) Hepar.
A: xanthophana (Nyl).
Orcutt 4849 et 4869: Aguascalientes, Ags, 7 D 1910.

ACAROSPORA.
Orcutt 4715: Cardenas, SLY, on calcar-

eous rock, N 1910.
ARTHONIA ARMORICANA Nyl.
 Orcutt 4771: Salina Cruz, Oax.
ARTHONIA COMPENSATA Nyl.
 Orcutt 4765: Jalitipan, VC, in Hasse herb.
ARTHONIA DISPERSILLA Mull Arg.
 Orcutt 4769: Salina Cruz, Oax.
ARTHONIA MELANOPETALMA Desf
 Orcutt 4756: Ojapa, VC, on bark.
ARTHONIA VARIA (Ach) Nyl.
 Orcutt 4825 et 4864: Cardenas, SLP, N 1910.
ARTHOZYRIA CONOIDEA (Fr) A. Zahibrucker.
 Orcutt 4848: Villar, SLP, N 1910.
ARTHOZYRIA
 Orcutt 4844: Aguascalientes, Ags, N 1910.
BACIDIA ENDOLEUCA (Nyl) Glickx.
Blatori atrogisea (Della) Hepp.
 Orcutt 4757: Ojapa, VC, 30 Je 1910.
BAEOMYCES FUNGICIDUS Ach.
 Orcutt 4755: El Parque, Mor, in Hasse herb.
BIATORA ORRHATA (Tayl Nyl) Tuck.
 Orcutt 4716 et 4839: Cardenas, SLP, N 1910.
BIATORA IOTERICA Mont.
 Orcutt 4798: Telles, Hgo.
BIATORA
 Orcutt 4857: Near Belleville, Oax, on bark.
 Orcutt 4797: Telles, Hgo.
BIATORELLA FRUINOSA (Sw) Mull.
 Orcutt 4841 et 4875: Aguascalientes, Ags, 7 D 1910.
 Orcutt 4714 et 4816: Cardenas, SLP, N 1910.
BIATORELLA SIMPLEX (Dav) Br & Roster.
 Orcutt 4855: Aguascalientes, Ags, 7 D 1910.
BLASTENIA FLORIDANA Tuck.
 Orcutt 4814: Villar, SLP, in Hasse herb.
BLASTENIA ORCUTTI Hasse.

(Hasse, W 18:60.)

Thallus thin of a gamboge or rich yellow color, smoothish, determinate, finely rimose, limited by a narrow black hypothallic border; apothecia sessile and elevated sessile, from 0.5-1.0 cm wide, disk flat to plano-convex, orange-red, with a suburgid, entire or slightly crenate and elevated margin, somewhat lighter in color than the disk; with Iod the disk stains purple, its margin and the thallus are not affected. Epithecium granulose, faint straw color; thecium colorless, 64-84 mic hi; paraphyses loosely adglutinated, barely thickened above; hypothecium colorless; asci clavate and subinflated clavate, 62 mic lg, 18 mic thick, the membrane thickened above; spores 8, polar bilocular, 12 mic lg, 6 mic thick, the loculi are small with a lg connecting tube, but few of the asci are seen with spores and these are ill defined; hymenial gelatine with Iod. a deep blue, KHO stains the epithecium carmine, thecium and hypothecium are not affected; spermogones not seen. The bright yellow-green protococcus gonidia are 8-12 mic in diam.—H. E. Hasse (original).

On calcareous rock, Lagunas, Oax, Mexico, C. R. Orcutt, 1910.

The abundant, the material available for examination was scanty, type in Hasse herb.

BOMBYLIOSPORA TUBERCULOSA (Fee) Mass.
 Orcutt 4862: Near Belleville, Oax.
BUELIA MALONIA (Ach) Tuck.
 Orcutt 4802: Colima, Col.
BUELIA LEPTOCYLINDRUS Nyl.
 Orcutt 4848: Cardenas, SLP, N 1910.
BUELIA MYRIOCARPA (DC) Mudd.
 Orcutt 4851: Aguascalientes, Ags, 7 D 1910, on mesquite.
BUELIA PARAKEMA (Ach) Koerb, Syst Lich 228 (1855).
 Variety **VULGATA** Th Fr.
 Orcutt 4824: Cardenas, SLP, N 1910.
BUELIA RHODINOIDES Ang.
 Orcutt 4751: Ajusco, DF.
CALOPLACA AURANTIACA (Lightf)
 Orcutt 4846: Aguascalientes, Ags, in Hasse herb.
 Orcutt 4762: Ojapa, VC.
 Var: **ALBA** (Nyl).
 Th Fr.
 Orcutt 4718: Tehuantepec, Oax, on bark.
CALOPLACA MOLACINA (Tuck) Herre (L. Fl, Santa Cruz Penins. 233, 1810).
 Orcutt 4854 et 4865: Aguascalientes, Ags, 7 D 1910.
CALOPLACA CALOPHISMA (Ach) Th Fr.
 Var: **RADIATA** Th Fr.
 Orcutt 4712 et 4804: Cardenas, SLP, N 1910, on calcareous rock.
CALOPLACA EUGYEA (Tuck).
 Orcutt 4874: Villar, SLP, N 1910.
 Orcutt 4870: Cardenas, SLP, N 1910, in Hasse herb.
 (Plarodium cugyrum Tuck. Syn N. A. hi T, 171).
CALOPLACA MICROPHYLLINA (Tuck). (Placodium Tuck, Syn. N. A. hi I, 174).
 Orcutt 4789: Salina Cruz, Oax.
CALOPLACA MURBORUM (Hoffm) Th Fr.
 Orcutt 4811: Villar, SLP, in Hasse herb.
 Orcutt 4718: Cardenas, SLP, N 1910.
 Var: **MINIATA** Th Fr.
CANDELARIA CONOLOB (Dicks) Wain.
 Orcutt 4792: Salina Cruz, Oax.
CEIODECTON SANGUINEUM (Sw.) Wainio.
 Orcutt 4837: Alzada, Col, 4 N 1910.
CLADONIA CARIOSA (Ach) Spreng.
 Orcutt 4746: Ajusco, DF.
CLADONIA DECORTICATA (Flk) Spreng.
 Orcutt 4786: Idins Cruz, Oax, in Masse herb.
CLADONIA FIMBRIATA (L.) E. Fr.
 Var: **FIBULA** Nyl.
 Orcutt 4799: Telles, Hge, in Hasse herb.
 Var: **CONISTA** Ach. T.
 Orcutt 3728: Ajusto Mex, 20 Ag. 1910, in Hasse herb.
 Var: **BORRIONICA** (Del) Wainio.
 Orcutt 4767: Jalitipan, VC.
CLADONIA FETTEREA Flk.
 Orcutt 4747: Ajusco, DF, 20 Ag 1910.
CLADONIA FRYIDATA (L.) Fr.
 Var: **CEIOGYPHAEA** Flk.
 Orcutt 4879: Ajusco, Mex, 20 Ag 1910.
COCOCLEPIS MOLYBDAEA Pers.
 Var: **INCISA** (Nyl.)
 Orcutt 4868 et 4842: Alzada, Col, N 1910.

DERMATOCARPON HEPATICUM (Ach)

A Zahlr.

Orcutt 4836: Cardenas, SLP, N 1910.

DERMATOCARPON.

Orcutt 4810: Villar, SLP, N 1910. (??).

EVERNIA PURPUREA (L) Mann.

Orcutt 4774: Teztlutlan, Puebla, S 1910.

GRAPHINA VIRGINEA Mull Arg.

Orcutt 4887: Lagunas, Oax, on bark, in

Hases herb. (?):

GRAPHIS APPELLI Ach.

Orcutt 4838: Alzada, Col, 4 N 1910.

Orcutt 4766 et 4876: Jaltipan, VC, 5 JI

1910.

GYROPHORA HIRUTA Ach.Var: **PAPYRIA Ach.**

Orcutt 4808: Villar, SLP, N 1910.

HEBETOTHECIUM VULPINUM Tuck.*Lopadium vulpinum (Tuck).*

Orcutt 4860: Near Belleville, Oax, on

bark.

LECANORA ALLOPHANA Nyl.

Orcutt 4821 et 4867: Cardenas, SLP, N

1910.

LECANORA CALCAREA (L) Nyl.

Orcutt 4826 et 4873: Cardenas, SLP, N

1910.

Known from Africa, Europe, and thru-

out N. Am.

LECANORA CHLORONA Nyl.

Orcutt 4793: Salina Cruz, Oax.

LECANORA COILOCARPA Nyl.

Orcutt 4720: Tehuantepec, Oax, on bark.

LECANORA CONIZAEA Ach.

Orcutt 4722: Tehuantepec, Oax, on bark.

LECANORA EXFALLENS Ach.Var: **LUTESCENS Nyl.**

Orcutt 4794: Salina Cruz, Oax; in Hasse

herb.

LECANORA MURALIS (Schreb) Schaer.

Orcutt 4749: Ajusco, DF.

LECANORA PALLESCHENS (L) Schaer.

Orcutt 4829: Cardenas, SLP, N 1910.

Orcutt 4779: El Parque, Mor, on trees, I

S 1910.

LECANORA PABELLA Ach.

Orcutt 4780: Salina Cruz, Oax, in Masse

herb.

LECANORA PURICEA Ach.

Orcutt 4768: Salina Cruz, Oax.

LECANORA SUBFUSCA (L) Ach.

Orcutt 4725: Tehuantepec, Oax, on bark.

LECANORA VARIA (Ehreh) Nyl.

Orcutt 4770: Salina Cruz, Oax.

LECIDEA HETEROLEUCA Fr.Var: **HYPOLEUCA Th Fr.**

Orcutt 4791: Salina Cruz, Oax.

Var: **ACHRISTA Flk.**

Orcutt 4790: Salina Cruz, Oax.

LECIDEA METELERI (Kerb) Th Fr.

Orcutt 4840 et 4866: Cardenas, SLP, N

1910.

LECIDEA FERRALEIDA Th Fr.

Orcutt 4807: Villar, SLP, N 1910.

LECIDEA.

Orcutt 4820: Villar, SLP, N 1910.

LEPIDOCOLLERA CARACONENSIS Wain

Orcutt 4743: El Parque, Mor (?)

LEPTOCIUM CORRUPTULUM Nyl

Orcutt 4741: El Parque, Mer, Ag 1910.

PANNARIA MOLYBDANA (Pers) Tuck.

Orcutt 4752: Telles, Hgo, in Hasse herb.

PANNARIA PRALEDOTA (Mont) Nyl.

Orcutt 4750: Ajusco, DF, Ag 1910.

PANNARIA.

Orcutt 4858: Near Belleville, Oax, on

bark.

FARMELIA BORRERI Turn.

Orcutt 4830: Villar, SLP, N 1910.

Orcutt 4785: Salina Cruz, Oax.

FARMELIA TILIACEA Ach.

Orcutt 4754: Cardenas, SLP, N 1910.

FARMELIA CONSPERSA Ach.

Orcutt 4729: Sanborn, VC, on rock.

Var: **STENOPYLLA Ach.**

Orcutt 4745: Ajusco, DF, Ag 1910.

FARMELIA CARACONENSIS Tayl.

Orcutt 4776: Salina Cruz, Oax, in Hasse

herb.

FARMELIA CYLISPERA (Ach). Wain.*Parmelia caperata (L) Ach.*

Orcutt 4828: Cardenas, SLP, N 1910.

FARMELIA EXASPERATA (Ach) Nyl.*Parmelia laerigata (Sm) Nyl Salina Cruz.*

Orcutt 4783: Salina Cruz, Oax.

FARMELIA FULIGINOSA (Fr) Nyl.Var: **LAEDEVIRENS Flk.**

Orcutt 4784: Salina Cruz, Oax.

FARMELIA LATISSIMA Fr.

Orcutt 4728: Sanborn, VC, on trees.

FARMELIA OLIVETOBIUM Nyl.

Orcutt 4744 et 4800: Ajusco, DF, Ag 1910.

FARMELIA PERLATA (L) Ach.

Orcutt 4753: El Parque, Mor, Ag 1910, in

Hasse herb. (Subsp P: ciliata Nyl, forma

excrescens. Arn.

Orcutt 4759: Ojapa, VC, sterile.

FARMELIA TILIACEA (Hoff) Ach.

Orcutt 4827: Cardenas, SLP, N 1910.

Orcutt 4782: El Parque, Mor, Ag 1910.

Var: **MUMBRANACEA Nyl. Teller, Htzo.**

(Orcutt).

Orcutt 4011: Teztlutlan, Pue, 7 S 1910, in

Hasse herb.

Orcutt 3493: Contreras, DF, 9 Ag 1910.

FELTIGERA CANINA Hoffm.Var: **SOBEDIATA Schaer.**

Orcutt 4777: Salina Cruz, Oax.

FERTUSARIA MULTIPUNCTA Nyl.

Orcutt 4823: Cardenas, SLP, N 1910.

FERTUSARIA VERRUCOSA Mont.

Orcutt 4764: Ojapa, VC.

Orcutt 4723: Tehuantepec, Oax, on bark.

FERTUSARIA WULFENII DC.

Orcutt 4795: Salina Cruz, Oax.

FETYSIA ADGLUTINATA (Flk) Nyl.

Orcutt 4822: Cardenas, SLP, N 1910, in

Hasse herb.

FETYSIA AEGILIATA (Ach) Nyl.

Orcutt 4761: Ojapa, VC.

FETYSIA AIPOLIA (Ach) Nyl.

Orcutt 4815: Cardenas, SLP, N 1910.

FETYSIA CRISPA (Pers.) Nyl.

Orcutt 4719: Tehuantepec, Oax, on bark

of shrubs.

In Hasse Herbarium—determined by

Dr. H. F. Hasse.

FETYSIA LEUCOMELA (L) Mx.

Orcutt 4775: Salina Cruz, Oax, in Hasse

herb.

FETYSIA PULVERULENTA (Hoffm.)

Nyl.

Var: **MUSCIGENA Nyl. Salina Cruz, Oax.**

Orcutt 4796: Salina Cruz, Oax, in Hasse

herb.

FETYSIA STELLARIS L.

Orcutt 4787 et 4877: Salina Cruz, Oax.

FETYSIA TRIBACA (Ach) Tuck.

Orcutt 4845 et 4872: Aguascalientes, Ags,

7 D 1910.

FETYSIA.

Orcutt 4856: Near Belleville, Oax, sterile.

FLOCOIDIUM AURANTIACUM N & H.

Orcutt 4718: Tehuantepec, Oax, on bark of shrubs.
PLACODIUM ORCUTTI Hasse.
 Orcutt 4861: on limestone, Lagunas, Oax.
PTERIS
 Orcutt 4859: Tehuantepec, Oax, on bark.
PTERIS COCOS (Ach) Nyl.
 Orcutt 4646 et 4832: Alsada, Col, 4 N 1910.
PTERIS MUSENBERGII Tuckerman.
 Orcutt 4724: Tehuantepec, Oax, on bark.
PTERIS FROTA (Sw) Tuck.
 Orcutt 4833: Alsada, Col.
PTERIS SORBIATA Th Fr.
 Orcutt 4803: Colima, Co., N 1910.
 Orcutt 4760: Ojapa, VC, sterile.
RANALINA CALICARIA (L) Fr.
 Orcutt 4788: Salina Cruz, Oax, in Hasse herb.
RHODINA BESCHOFFII (Hepp) Keerb.
 Orcutt 4852: Cardenas, SLP, N 1910.
RHODINA CONFRAGOSA (Ach) Keerb.
 Orcutt 4772: Salina Cruz, Oax.
RHODINA EXIGUA Nyl.
 Orcutt 4721: Tehuantepec, Oax, on bark, in Hasse herb.
RHODINA BADIATA Tuck.
 Orcutt 4812: Villar, SLP, N 1910, in Hasse herb.
RHODINA
 Orcutt 4847: Aguascalientes, Agu, 7 D 1910.
STENOCAULON CORALLOIDES Fr.
 Orcutt 3730: Telles, Hgo, in Hasse herb.
THELIDIUM
 Orcutt 4809: Villar, SLP, N 1910, on rocks.
TELOSCHISTES OCHYSOPHTHALMUS (L) Th Fr.
 Orcutt 4818: Villar, SLP, in Hasse herb.
TELOSCHISTES FLAVICANS Mull Arg.
 Orcutt 4817: Cordinas, SLP, in Hasse herb.
TREMOLIUM
 Orcutt 4835: Cardenas, SLP, N 1910.
TRYPTHELIUM ELAURIA Sprengel
 Trypethellum Sprengelii Ach.
 Orcutt 4726: Tehuantepec, Oax, on bark.
TREMOTYLUM SFRUCHI Mull Arg.
 Orcutt 4834: Alsada, Col, 4 N 1910.
TRYPTHELIUM SPRENGELII Ach.
 Orcutt 4728: Tehuantepec, Oax, on bark.
 Orcutt 4763: Ojapa, VC.
UMBILICARIA PUSTULATA (L) Hoffm.
 Orcutt 4748 et 4801: El Parque, Mor, 1 S 1910, on lava.
VENEA FLORIDA (L) Hoffm.
 Orcutt 4773: Ajusco, DF, 20 Ag 1910.
VERUCARIA (THELIDIUM) CONOIDEA Fr.
 Orcutt 4727: Lagunas, Oax, on limestone.
XANTHORIA LORATA Fr.
 Orcutt 4742: El Parque, Mor, in Hasse herb.
XANTHORIA LYCOPHARA (Ach).
XANTHORIA LYCOPHARA (Ach) Th Fr.
 Var: **PYGMARA** Th Fr.
 Orcutt 4810: Villar, SLP, N 1910.
 Var: **LACINIOSA** Schae.
 Orcutt 4813: Villar, SLP, N 1910, on twigs.
XANTHORIA PARVITINA (L) Th. Fr.

Orcutt 4853: Aguascalientes, Agu, 7 D 1910.
XANTHORIA POLYCARPA (Ehrh) Th Fr.
 Orcutt 4850: Aguascalientes, Agu, 7 D 1910, on mesquite.

AMERICAN PLANTS.—MEXICO.

Collected by Charles Russell Orcutt. 1910.
 Determination by Jesse More Greenman.

ABUTILON ABUTILIODES (Jacq.) Garcke
 Orcutt 4497: Manzanillo, Col, 20 O 1910.
ABUTILON TRIQUETRUM (L) Presl.
 Orcutt 4417: Manzanillo, Col, 20 O 1910.
ACACIA FARNESIANA Willd.
 Orcutt 3191: Chivela, Oax, 16 Ap 1910.
ACACIA HINDSI Benth.
 Orcutt 3185: Chivela, Oax, 16 Ap 1910.
ACALYPHA MEXICANA Muell, Arg.
 Orcutt 4341: Xochimilco, DF, 8 O 1910.
ACALYPHA OREOPALA Greenm.
 Orcutt 4219: Rio Balsas, Gro, 26 Ag 1910.
ACALYPHA RHOMBIFOLIA Schlecht.
 Orcutt 4180: Rio Balsas, Gro, 26 Ag 1910.
 Orcutt 4431: Los Amates, Mor, 25 Ag 1910.
ACHILLEA MILLEFOLIUM L.
 Orcutt 3716. Ajusco, DF, 19 Ag 1910.
ACHIMENES GRANIFLORA DC.
 Orcutt 4212: Rio Balsas, Gro, 26 Ag 1910.
 Orcutt 4431: Los Amates, Mor, 25 Ag 1910.
ACHYRANTHES ASPERA L.
 Orcutt 3173: Sanborn, VC, 31 Mr 1910.
 Orcutt 3353. Cordova, VC, 7 Ap 1910.
AGAVEPPEA BELLIDIFLORA DC.
 Orcutt 4277: Churubusco, DF, 4 O 1910.
AGERATUM CONTEZODES L.
 Orcutt 3060: Sanborn, VC, 28 F 1910.
AGERATUM CORYMBOSUM Zucc.
 Orcutt 4324: Churubusco, DF, 4 O 1910.
ALLIUM GLANDULOSUM Link & Otto.
 Orcutt 3846: El Parque, Mor, 31 Ag 1910.
ALNUS ARGUTA Spach.
 Orcutt 4051: Teziutlan, Pue, 8 S 1910.
ALTERNANTHERA ACHYRATHA R Br.
 Orcutt 4145: Telles, Hgo, 21 S 1910.
AMARANTHUS HYBRIDUS L.
 Orcutt 3919: Pachuca, Hgo, 5 S 1910.
AMARANTHUS FRINGLII Wat.
 Orcutt 4501: Manzanillo, Col, 20 O 1910.
AMARANTHUS SPINOSUS L.
 Orcutt 3080: Sanborn, VC, 10 Mr 1910.
AMARANTHUS TRISTIS L.
 Orcutt 4493: Manzanillo, Col, 20 O 1910.
 (?)
AMARANTHUS VIRIDIS L.
 Orcutt 3083: Carmen, FCNT, Oax, 21 Mr 1910.
AMBROSIA ARTEMISIAEFOLIA L.
 Orcutt 3559: San Angel, DF, 12 Ag 1910.
ANODA HASTATA Cav.
 Orcutt 3563: San Angel, DF, 12 Ag 1910.
 Orcutt 3567: San Angel, DF, 12 Ag 1910.
 Orcutt 3577: Olivar, DF, 15 Ag 1910.
 Orcutt 4603: Colima, Col, 24 O 1910 (in part).
ANODA TRIANGULARIS DC.
 Orcutt, 4368: Vidal, Mor, 25 Ag 1910.

Orcutt 4603: Colima, Col, 24 O 1910 (in part).
ANTHERICUM NANUM Baker.
 Orcutt 3634: Tlalpam, DF, 16 Ag 1910.
 Orcutt 4133: Telles, Hgo, 21 S 1910.
ANTIGONON LEPTOPUS Hook & Arn.
 Orcutt 3325: Tehuantepec, Oax, 19 Ap 1910.
 Orcutt 4458: Manzanillo, Col, 20 O 1910.
APHANOSTEPHUS HUMILIS Gray.
 Orcutt 4156: Telles, Hgo, 21 S 1910.
ARISTOLOCHIA FARDINA Dichar.
 Orcutt 4560: Colima, Col, 24 O 1910.
ARTEMISIA MEXICANA Willd.
 Orcutt 4255: Xochimilco, DF, 3 O 1910.
ARTEMISIA KLOTESCHIANA Bess.
 Orcutt 4117: Telles, Hgo, 21 S 1910.
ASCLEPIAS CURASSAVICA L.
 Orcutt 2873: VC, 16 F 1910.
 Orcutt 4511: Colima, Col, 24 O 1910.
ASCLEPIAS LINARIA Cav.
 Orcutt 3673: Olivar, DF, 17 Ag 1910.
ASCLEPIAS LONGICORNIS Benth.
 Orcutt 3107: Coatzacoahuas, VC, 5 Ap 1910.
ASTER EXILIS Ell.
 Orcutt 3013: Sanborn, VC, 12 Mr 1910.
 Orcutt 3552: San Angel, DF, 12 Ag 1910.
 Orcutt 4562: Colima, Col, 24 O 1910.
 Orcutt 4577: Colima, Col, 24 O 1910.
BACCHARIS CONFERTA HBK.
 Orcutt 2803: Jalapa, VC, 10 F 1910.
BACCHARIS GLUTINOSA Pers.
 Orcutt 4075: Mexico, DF, 16 S 1910.
BACCHARIS RHESOIDES HBK.
 Orcutt 3115: Tezonapa, VC, 5 Ap 1910.
 Orcutt 3153: Cordova, VC, 6 Ap 1910.
BACOPA MONNIERA (L.) Wettst.
 Orcutt 3422: Sanborn, VC, 10 Mr 1910.
BACOPA PROCUMBENS (Mill.) Greenm.
 Orcutt 3001: Sanborn, VC, 11 Mr 1910.
 Orcutt 4090: El Parque, Mor, 3 S 1910.
BACOPA SALEMANNI (Benth.) Edwall.
 Orcutt 3284: Chinameca, VC, 30 Ap 1910.
BANIA XYLOPODA Greenm.
 Orcutt 3920: Pachuca, Hgo, 5 S 1910.
BEGONIA GRACILIS HBK.
 Variety **MARTIANA** (L. & O.) DC.
 Orcutt 4262: Xochimilco, DF, 3 O 1910.
 Orcutt 3829: El Parque, Mor, 31 Ag 1910.
 Variety **NERVIFLOSA** DC.
 Orcutt 3867: Alarcon, Mor, 31 Ag 1910.
BEGONIA HERACLEIFOLIA C & S.
 Orcutt 3076: Sanborn, VC, 28 F 1910.
BEGONIA UNIFLORA Rose.
 Orcutt 4172: Rio Balsas, Gro, 26 Ag 1910.
BELLIS MEXICANA Gray.
 Orcutt 3768: Cima, Mex, 24 Ag 1910.
BETA VULGARIS L.
 Orcutt 4071: Churubusco, DF, 4 O 1910.
BIDENS GRANDIFLORA Balb.
 Orcutt 4271: Churubusco, DF, 4 O 1910.
BIDENS HETEROPHYLLA Ort.
 Orcutt 4076: Mexico, DF, 16 S 1910.
 Orcutt 4125: Telles, Hgo, 21 S 1910.
BIDENS LEUCANTHA Willd.
 Orcutt 3656: Olivar, DF, 17 Ag 1910.
 Orcutt 4335: SFe, Mor, 25 Ag 1910.
BIDENS OSTRETHIODES Schz. Bip.
 Orcutt 3517: Contreras, Valley of Mexico, 9 Ag 1910.
BIDENS TERETICAULIS DC.
 Orcutt 4024 Teztlitlan, Pue, 7 S 1910.
 Orcutt 3031: Sanborn, VC, 8 Mr 1910.
BIGELOVIA VENETA Gray.

Orcutt 4115: Telles, Hgo, 21 S 1910.
BLEPHARUM BROWNEI Juss.
 Orcutt 2876: VC, 16 F 1910.
BLOCCONIA ARBOREA Watson.
 Orcutt 4392: El Parque, Mor, 1 S 1910.
BOERHERIA CAUDATA Sw.
 Orcutt 3132: Cordova, VC, 6 Ap 1910.
BOLDIA OVATIFOLIA Lag.
 Orcutt 4621: Colima, Col, 24 O 1910.
BOMAREA ACUTIFOLIA Herb.
 Orcutt 4022: Teztlitlan, Pue, 7 S 1910.
BOUSSINGAULTIA BASELLOIDES HBK.
 Orcutt 4598: Colima, Col, 24 O 1910.
BRICKELLIA COULTERI Gray.
 Orcutt 4496: Manzanillo, Col, 20 O 1910.
BRICKELLIA DIFFUSA Gray.
 Orcutt 3066: Sanborn, VC, 28 F 1910.
 Orcutt 4552: Colima, Col, 24 O 1910.
BRICKELLIA HARTWEGI DC.
 Orcutt 3227: Rincon Antonio, Oax, 21 Ap 1910.
BRICKELLIA VERONICAEFOLIA Gray.
 Orcutt 3899: Pachuca, Hgo, 5 S 1910.
BRONGNIARTIA INCONSTANS Watson.
 Orcutt 4668: Alzada, Col, 4 N 1910.
BUDDELEIA AMERICANA L.
 Orcutt 3468: Rincon Antonio, Oax, 21 Ap 1910.
 Orcutt 3081: Sanborn, VC, 28 F 1910.
BUDDELEIA LANCEOLATA Benth.
 Orcutt 4094: El Parque, Mor, 3 S 1910.
BUDDELEIA MICROPHYLLA HBK.
 Orcutt 3783: Cima, Mex, 24 Ag 1910.
BUDDELEIA VERTICILLATA HBK.
 Orcutt 4333: Xochimilco, DF, 6 O 1910.
BUNCHOSIA BIODELLATA Schlecht.
 Orcutt 3882: Cuernavaca, Mor, 31 Ag 1910.
BUNCHOSIA
 Orcutt 4207: Rio Balsas, Gro, 26 Ag 1910.
CALEA AXILLARIS DC.
 Orcutt 2815: Jalapa, VC, 10 F 1910.
 2900: VC, 16 F 1910, 3276: Chivela, Oax, 16 Ap 1910.
CALEA INTEGRIFOLIA Hemsl.
 Orcutt 3151: Cordova, VC, 6 Ap 1910.
CACALIA SILPHIFOLIA Rob. & Greenm.
 Orcutt 3746: Tres Marias, Mex, 23 Ag 1910.
CAESALPINIA FULCIBERRIMA (L.) Sw.
 Orcutt 4192: Rio Balsas, Gro, 26 Ag 1910.
CALCEOLARIA Mexicana Benth.
 Orcutt 4041: Teztlitlan, Pue, 7 S 1910.
CALLIANDRA GRANDIFLORA Benth.
 Orcutt 4381: El Parque, Mor, 3 S 1910.
CANAVALLIA OBTUSIFOLIA DC.
 Orcutt 4456: Manzanillo, Col, 20 O 1910.
CANAVALLIA VILLOSA Benth.
 Orcutt 3114: Tezonapa, VC, 5 Ap 1910.
CARICA PAPAYA L.
 Orcutt 2982: Sanborn, VC, 10 Mr 1910.
CARMINATA TENUIFLORA DC.
 Orcutt 4655: Alzada, Col, 4 N 1910.
CASSIA OCCIDENTALIS L.
 Orcutt 2871: VC, 16 F 1910.
 Orcutt 4416: Los Amates, Mor, 25 Ag 1910.
CASSIA SERICEA Swartz.
 Orcutt 4414: Treinte, Mor, 25 Ag 1910.
CASSIA TORA L.

- Oreutt 4606: Colima, Col, 24 O 1910.
CASTILLEJA ARVENIS Cham. & Schlecht.
 Oreutt 4340: Xochimilco, DF, 6 O 1910.
 Oreutt 4596: Colima, Col, 24 O 1910.
CASTILLEJA COMMUNIS Benth.
 Oreutt 3154: Cordova, VC, 6 Ap 1910.
CASTILLEJA SCORZONERAEFOLIA
 Oreutt 3651: Olivar, DF, 17 Ag 1910.
CASTILLEJA TENUIFLORA Benth.
 Oreutt 4096: El Parque, Mor, 3 S 1910.
 Oreutt 4391: El Parque, Mor, 1 S 1910.
CELOSIA MOQUINI Guillerm.
 Oreutt 4688: Alzada, Col, 4 N 1910.
CELOSIA OREUTII Greenm.
 Oreutt 4587: Colima, Col, 24 O 1910.
CERATOPHYLLUM DEMERSUM L.
 Oreutt 4285: Churubusco, DF, 4 O 1910.
CESTRUM DUMETORUM Schlecht.
 Oreutt 2826: Jalapa, VC, 10 F 1910.
 Oreutt 2902: Vera Cruz, VC, 16 F 1910.
CHAMISSOA ALTISSIMA HBK.
 Oreutt 4595: Colima, Col, 24 O 1910.
CHAPTALIA NUTANS Hemsl.
 Oreutt 3429: Sanborn, VC, 15 Ap 1910.
CHAPTALIA SEEMANNII Hemsl.
 Oreutt 3810: Parres, Mex, 30 Ag 1910.
CHENOPODIUM ALBUM L.
 Oreutt 4074: Mexico, DF, 16 S 1910.
CHENOPODIUM AMBROSIODES L.
 Oreutt 4352: Xochimilco, DF, 6 O 1910.
 Oreutt 4038: Tezuitlan, Pue, 7 S 1910.
CHENOPODIUM FOETIDUM Schrad.
 Oreutt 4151: Telles, Hgo, 21 S 1910.
CISSAMPELOS FAREIRA L.
 Oreutt 311: Tezonapa, VC, 5 Ap 1910.
 Oreutt 4561: Colima, Col, 4 N 1910.
CITHAREXYLUM CINERUM L.
 Oreutt 2904: Vera Cruz, VC, 16 F 1910.
CLERODENDRON FRAGRANS L.
 Oreutt 3143: Cordova, VC, 6 Ap 1910.
COCCOLOBA HUMBOLDTII Meisn.
 Oreutt 3162: Coatzacoalcos, VC, 21 Mr 1910.
COLUMBEEA SCHIEDRANA Schlecht.
 Oreutt 3128: Tezonapa, VC, 5 Ap 1910.
COMMELINA FALLIDA Willd.
 Oreutt 4292: Churubusco, DF, 4 O 1910.
CONOBEA FUSILLA Benth. & Hook, f.
 Oreutt 4184: Rio Balsas, Gro, 26 Ag 1910.
CONVOLVULUS INCANUS Vahl.
 Oreutt 3611: Olivar, DF, 15 Ag 1910.
CORDIA BREVIPLICATA Mart. & Gal.
 Oreutt 3186: Chivela, Oax, 16 Ap 1910.
CORDIA ELAEGNOIDES DC.
 Oreutt 4175: Rio Balsas, Gro, 26 Ag 1910. (?)
CORDIA FERRUGINEA R & S.
 Oreutt 4503: Campos, Col, 20 O 1910.
CORDIA GERASCANTHUS Jacq.
 Oreutt 3053: Sanborn, VC, 8 Mr 1910.
CORNUS TOLUCENSIS HBK.
 Oreutt 3568: San Angel, DF, 12 Ag 1910.
CONYZA CORONOPHOLIA HBK.
 Oreutt 3704: Ajusco, DF, 19 Ag 1910.
CONYZA LYRATA HBK.
 Oreutt 3187: Chivela, Oax, 16 Ap 1910.
COSMOS SCABIOSOIDES HBK.
 Oreutt 4378: El Parque, Mor, 3 S 1910.
COSMOS SULPHUREUS Cav.
 Oreutt 4691: Tuxpan canyon, Col, 3 N 1910.
CRESSENTIA ALATA HBK.
 Oreutt 3474: Salina Cruz, Oax, 27 Ap 1910.
CROTOM CILIATOGLANDULOSUS
- Ortega.
 Oreutt 3877: Cuernavaca, Mor, 31 Ag 1910.
CROTOM GLANDULOSUS L.
 Oreutt 3091: Coatzacoalcos, VC, 21 Mr 1910.
CROTOM GOSSYPIFOLIUS Vahl.
 Oreutt 3965: Tezuitlan, Pue, 6 S 1910.
CROTOM LOBATUS L.
 Oreutt 4174: Rio Balsas, Gro, 26 Ag 1910.
CROTOM PANAMENSIS Muell, Arg.
 Oreutt 2825: Jalapa, VC, 10 F 1910.
CROTOM PUNCTATUS Jacq.
 Oreutt 2888: VC, 16 F 1910.
CRUEEA COCINEA DC.
 Oreutt 4081: El Parque, Mor, 3 S 1910.
CUCCUMIS ANGURIA L.
 Oreutt 4451: Tecoman, Jal, 20 O 1910.
CUSCUTA GRACILLIMA Engelm.
 Oreutt 4457: Manzanillo, Col, 20 O 1910.
CYCLANTHERA NAUDINIANA Cogn.
 Oreutt 4525: Colima, Col, 24 O 1910.
CYCLANTHERA FRINGLEI Rob. & Sea.
 Oreutt 3864:
 Oreutt 4241: Xochimilco, DF, 3 O 1910.
 Oreutt 4380: El Parque, Mor, 3 S 1910.
DAKILIA COCINEA Cav.
 Oreutt 3498: Contreras, DF, 9 Ag 1910.
 Oreutt 3775: Cimn, Mex, 24 Ag 1910.
DALEA ALPECURIOIDES Willd.
 Oreutt 4237: Xochimilco, DF, 3 O 1910.
DALEA CRETICORUM Willd.
 Oreutt 4127: Telles, Hgo, 21 S 1910.
 Oreutt 4287: Churubusco, DF, 4 O 1910.
DALEA INCONSPICUA Schauer.
 Oreutt 4310: Churubusco, DF, 4 O 1910.
DALEA LEUCOSTOMA Schlecht.
 Oreutt 4265: Xochimilco, DF, 3 O 1910.
DALEA MUTABILIS Willd.
 Oreutt 3941: Acajeta, Pue, 6 S 1910.
DALEA TRIPHYLLA Pav.
DALEA TUBerculata Lag.
 Oreutt 4354: Xochimilco, DF, 6 O 1910.
DATURA TATULA L.
 Oreutt 4384: Rio Balsas, Gro, 26 Ag 1910.
 4423: Los Amates, Mor, 25 Ag 1910.
 4434: Vista, Mor, 25 Ag 1910. (?)
DICLIPTERA ASSURGENS Juss.
 Oreutt 3165: VC, 28 Mr 1910.
DICLIPTERA RESUPINATA Juss.
 Oreutt 4527: Colima, Col, 24 O 1910.
DICHONDRA ARGENTEA Humb. & Bonpl.
 Oreutt 4129: Telles, Hgo, 21 S 1910.
DIOSCOREA CONVOLVULACEA C & S.
 Oreutt 4396: El Parque, Mor, 1 S 1910.
DIOSCOREA MACROSTACHYA Bth.
 Oreutt 3126: Tezonapa, VC, 5 Ap 1910.
DIOSCOREA REMOTIFLORA Kunth.
 Var: **MACULATA** Uline.
 Oreutt 4173: Rio Balsas, Gro, 26 Ag 1910.
DIOSCOREA ULINAE Greenm.
 Oreutt 4395 (in part): El Parque, Mor, 1 S 1910.
DIOSCOREA URCEOLATA Uline.
 Oreutt 4395 (in part): El Parque, Mor, 1 S 1910.
DISTREPTUS SPICATUS (Juss.) Cass.
 Oreutt 4570: Colima, Col, 24 O 1910.
 Oreutt 4680: Alzada, Col, 4 N 1910.
DYSODIA CHRYSANTHEMOIDES Lag.
 Oreutt 3585: Olivar, DF, 15 Ag 1910.
DYSODIA POROPHYLLA Cav.
 Oreutt 4684: Alzada, Col, 4 N 1910.

Var: **DISCOIDBA** DC.
 Orcutt 4553: Colima, Col, 24 O 1910.
DORSTENIA DRAKENA L.
 Orcutt 4189: Rio Balsas, Gro, 26 Ag 1910.
ECHINANDIA MACROCARPA Greenm.
 Orcutt 3741: Tres Marias, Mex, 23 Ag 1910.
 Orcutt 3533: Contreras, DF, 9 Ag 1910.
ECLIPSA ALBA (L.) Haussk.
 Orcutt 3010: Sanborn, VC, 10 Mr 1910.
EGLIETH FRINGLEI Greenm.
 Orcutt 2983: Sanborn, VC, 10 Mr 1910.
EICHKORNIA CRASSIFES Kunth.
 Orcutt 3461: Coatzacoalcos, VC, 21 Mr 1910.
ELVIRA BIFLORA Cass.
 Orcutt 3037: Sanborn, VC, 4 Mr 1916.
ELIPHANTOPUS SPICATUS Juss.
 Orcutt 2896: VC, 16 F 1910.
ELYTRARIA TRIDENTATA Vahl.
 Orcutt 4466: Manzanillo, Col, 20 O 1910.
 Orcutt 4602: Colima, Col, 24 O 1910.
 Orcutt 2996: Sanborn, VC, 12 Mr 1910.
EMILIA SONCHEFOLIA (L.) DC.
 Orcutt 3036: Carmen, on FCNT, VC, 21 Mr 1910.
ENCYLLA FRINGLEI Fernald.
 Orcutt 3912: Pachuca, Hgo, 5 S 1910.
EQUISETUM ROBUSTUM A. Br.
 Orcutt 4273: Churubusco, DF, 4 O 1910.
EPALTES MEXICANA Less.
 Orcutt 3087: Coatzacoalcos, VC, 21 Mr 1910.
EPICOTTIS HIRACIFOLIA (L.) Raf.
 Orcutt 3016: Sanborn, VC, 12 Mr 1910.
ERIGERON CANADENSIS L.
 Orcutt 3557: San Angel, DF, 12 Ag 1910.
 Orcutt 3020: Sanborn, VC, 10 Mr 1910.
ERIGERON MUCRONATUS DC.
 Orcutt 3145: Cordova, VC, 6 Ap 1910.
ERIGERON REPENS Gray.
 Var: **PSAMMOPHILUS** Greenm.
 Orcutt 2381: sand dunes, VC, 16 F 1910.
ERRITRIUM HISPIDUM Buckley.
 Orcutt 4128: Teziutlan, Pue, 7 S 1910.
ERYTHRINA BREVIFLORA DC.
 Orcutt 3866: Alarcon, Mor, 31 Ag 1910.
ESCOBEDIA LAEVIS Cham. & Schlecht.
 Orcutt 4678: Alzada, Col, 4 N 1910.
ESCOBEDIA LINEARIS Schlecht.
 Orcutt 4678: Alzada, Col, 4 N 1910.
EUPATORIUM CONYZOIDES Vahl.
 Orcutt 3065: Sanborn, VC, 28 F 1910.
 Orcutt 2903: VC, 16 F 1910.
EUPATORIUM DALEOIDES DC.
 Orcutt 3343: Cordova, VC, 6 Ap 1910.
EUPATORIUM ERYTHROPAFFUM Rob.
 Orcutt 3962: Teziutlan, Pue, 6 S 1910 (?)
 Orcutt 4007: Teziutlan, Pue, 7 S 1910.
EUPATORIUM MACROPHYLLUM L.
 Orcutt 3058: Sanborn, VC, 5 Mr 1910.
EUPATORIUM POPULIFOLIUM HBK.
 Orcutt 3181: VC, 29 Mr 1910.
EUPATORIUM QUADRANGULARE DC
 Orcutt 4574: Colima, Col, 24 O 1910.
EUPATORIUM SCORODONIOIDES Gray.
 Var: **GROSSEDENTATUM** Rob.
 Orcutt 4138: Telles, Hgo, 21 S 1910.
EUSTOMA EXALTATUM (L.) Griseb.
 Orcutt 3023: Sanborn, VC, 10 Mr 1910.
EVOLVULUS ALSINOIDES L.
 Orcutt 4309: Churubusco, DF, 4 O 1910.
 Orcutt 4540: Colima, Col, 24 O 1910.

Orcutt 3916: Pachuca, Hgo, 5 S 1910.
EVOLVULUS FLORENSISSIMUS Mart. & Gal.
 Orcutt 3093: Coatzacoalcos, VC, 21 Mr 1910.
 Orcutt 4539: Colima, Col, 24 O 1910.
EYENHARDTIA AMORPHOIDES HBK.
 Orcutt 3649: Tlalpam, DF, 16 Ag 1910.
FLORESTINA LIEBMANII Schz. Bip.
 Orcutt 3183: VC, 28 Mr 1910.
FLORESTINA FEDATA Cass.
 Orcutt 3575: Olivar, DF, 15 Ag 1910.
 Orcutt 4370: Santa Fe, Mor, 25 Ag 1910.
 Orcutt 4251: Xochimilco, DF, 3 O 1910.
 Orcutt 4205: Rio Balsas, Gro, 26 Ag 1910.
FLAVERIA TRINERVA (Spreng.) Mohr.
 Orcutt 4100: Mexico City, DF, 20 S 1910.
 Orcutt 2872: VC, 16 F 1910.
GALINSOGA PARVIFLORA Cav. var. *hiplida* DC.
 Orcutt 4349: Xochimilco, DF, 6 O 1910.
 Orcutt 3339: Cordova, VC, 6 Ap 1910.
 Orcutt 4109: Mexico, DF, 20 S 1910.
 Orcutt 3914: Pachuca, Hgo, 5 S 1910.
 Orcutt 3553: San Angel, DF, 12 Ag 1910.
 Orcutt 3928: Pachuca, Hgo, 5 S 1910.
 Orcutt 4052: Teziutlan, Pue, 7 S 1910.
GALIUM MEXICANUM HBK.
 Orcutt 4367: Xochimilco, DF, 6 O 1910.
GALIUM ORIABENSE Hems.
 Orcutt 4058: Teziutlan, Pue, 8 S 1910.
GALIUM ORIABENSE Hems.
 Orcutt 3963: Teziutlan, Pue, 6 S 1910.
GALPHIMIA GLAUCA Cav.
 Orcutt 4183: Rio Balsas, Gro, 26 Ag 1910.
GNAPHALIUM ATTENUATUM DC.
 Orcutt 3433: Cordova, VC, 7 Ap 1910.
GNAPHALIUM PURPUREUM L.
 Orcutt 3354: Cordova, VC, 7 Ap 1910.
 Orcutt 3625: Tlalpam, DF, 16 Ag 1910.
 Orcutt 3706: Ajusco, DF, 19 Ag 1910.
GNAPHALIUM SPRENGELI Hook & Arn.
 Orcutt 3705: Ajusco, DF, 19 Ag 1910.
GOMPERINA DECUMBENS Jacq.
 Orcutt 3090: Coatzacoalcos, VC, 21 Mr 1910.
 Orcutt 3645: Tlalpam, DF, 16 Ag 1910.
 Orcutt 3689: San Angel, DF, 18 Ag 1910.
 Orcutt 3886: Cuernavaca, Mor, 31 Ag 1910.
 Orcutt 4484: Manzanillo, Col, 20 O 1910.
GONORHA FUSILLA Benth. & Hook. f.
 Orcutt 4184: Rio Balsas, Gro, 26 Ag 1910.
GUILLEMINA DENSEA (Humb. & Bonpl.) Moq.
 Orcutt 3945: La Venta, Pue, 6 S 1910.
 Orcutt 4144: Telles, Hgo, 21 S 1910.
GYMNOSPERMA MULTIFLORUM DC.
 Orcutt 4360: Xochimilco, DF, 6 O 1910.
HABENARIA CRASSICORNIS Lindl.
 Orcutt 4405: El Parque, Mor, 1 S 1910.
HAMELIA VESICOLOR Gray.
 Orcutt 4424: Los Amates, Mor, 25 Ag 1910. (?)
 Orcutt 3092: Coatzacoalcos, VC, 21 Mr 1910. (?)
HAMISSOGA MACROCARPA HBK.
 Orcutt 3005: Sanborn, VC, 8 Mr 1910.
HELIOTROPIMUM CURASSAVIUM L.
 Orcutt 3475: Salina Cruz, Oax. 27 Ap 1910.

HELIOTROPIDIUM INDICUM L.
Orcutt 3089: Coatzacoalcos, VC, 21 Mr 1910.
Orcutt 4433: Puente de Ixtla, Mor. 25 Ag 1910.
Orcutt 4417:
HELIOTROPIDIUM PARVIFLORUM L.
Orcutt 4470: Manzanillo, Col. 20 O 1910.
HELIOTROPIDIUM PHYLLOSTACTYUM DC.
Orcutt 4453: Tecoman, Jal. 20 O 1910.
HELIOTROPIDIUM IMUNDATUM Sw.
Orcutt 2981: Sanborn, VC, 10 Mr 1910.
HETEROSPERMUM PINNATUM Cav.
Orcutt 4313: Churubusco, Mex. 4 O 1910.
Orcutt 3680: Olivar, DF, 17 Ag 1910.
Orcutt 4155: Telles, Hgo. 21 S 1910.
HETEROTHECA INULOIDES Cass.
Orcutt 3653: Olivar, DF, 17 Ag 1910.
HETEROTOMA TENELLA Turcz.
Orcutt 4646: Alzada, Col. 4 N 1910.
HIDALGOA TERNATA Liav. & Lax.
Orcutt 3022: Sanborn, VC, 10 Mr 1910.
HIBRACHIUM ABSCESSUM Less.
Orcutt 3753: Tres Marias, Mex. 23 Ag 1910.
Orcutt 3501: Contreras, DF, 9 Ag 1910.
HYMENATHERUM NEAEI DC.
Orcutt 4126: Telles, Hgo. 21 S 1910.
"Limoncilla".
HYPOXIS DECUMBENS L.
Orcutt 4048: Teziutlan, Pue. 7 S 1910.
HYPTIS CAPITATA Jacq.
Orcutt 2877: VC, 16 F 1910.
Orcutt 4566: Colima, Col. 24 O 1910.
HYPTIS MUTABILIS (Rich.) Briq.
Var. **POLYSTACHYA** (HBK.) Briq.
Orcutt 3038: Coatzacoalcos, VC, 21 Mr 1910.
HYPTIS SPICIGERA Lam.
Orcutt 4675: Alzada, Col. 4 N 1910.
HYPTIS SUAVEOLENS Poit.
Orcutt 3084: Carmen, on FCNT, 21 Mr 1910.
Orcutt 4475 et 4485: Manzanillo, Col. 20 O 1910.
Orcutt 4515: Colima, Col. 24 O 1910.
HYPTIS STELLULATA Benth.
Orcutt 3394: Cuernavaca, Mor. 31 Ag 1910.
Orcutt 4633: Alzada, Col. 4 N 1910.
IPOMOEA CARDIOPHYLLA Gray.
Orcutt 4491:
IPOMOEA DISSECTA (Jacq.) Pursh.
Orcutt 3327: Tehuantepec, Oax. 19 Ap 1910.
IPOMOEA MURICATA Cav.
Orcutt 3610: Olivar, DF, 15 Ag 1910.
Orcutt 3667: Olivar, DF, 17 Ag 1910.
IPOMOEA PEDATINATA Mart. & Gal.
Orcutt 4167: Rio Balsas, Gro. 26 Ag 1910.
IPOMOEA PEDUNCULARIS Bertol.
Orcutt 3034: Sanborn, VC, 7 Mr 1910. (?)
IPOMOEA PIS-CAPRAE Sweet.
Orcutt 3463: Coatzacoalcos, VC, 20 Ap 1910.
IPOMOEA PURGA Hayne.
Orcutt 4003: Teziutlan, Pue. 7 S 1910.
IPOMOEA QUINQUEFOLIA L.
Orcutt 3328: Tehuantepec, Oax. 19 Ap 1910.
IPOMOEA STOLONIFERA (Cyrill) Poir.
Orcutt 3094: Coatzacoalcos, VC, 21 Mr 1910.
Orcutt 3403: VC, 28 Mr 1910.

IPOMOEA VULSA House.
Orcutt 3157: VC, 28 Mr 1910.
INDIGOFERA ANIL L.
Orcutt 3052: Sanborn, VC, 9 Mr 1910.
LYSANTHES GRATIOLOIDES Benth.
Orcutt 2998: Sanborn, VC, 11 Mr 1910.
IREGINE PANICULATA (L.) Ktze.
Orcutt 2989: Sanborn, VC, 28 F 1910.
IONIDIUM BIPARIUM HBK.
Orcutt 4224 et 4383: Rio Balsas, Gro. 26 Ag 1910.
IREGINE CANESCENS Humb. & Bonpl.
Orcutt 4289: Churubusco, DF, 4 O 1910.
IREGINE PANICULATA (L.) OK.
Orcutt 3556: Sangel, DF, 12 Ag 1910.
Orcutt 4295: Churubusco, DF, 4 O 1910.
ISOTOMA LONGIFLORA Presl.
Orcutt 4549: Colima, Col. 24 O 1910.
JAGAERIA DISCOIDEA Klatt
Orcutt 4351: Xochimilco, DF, 6 O 1910.
Orcutt 4333: Xochimilco, DF, 6 O 1910.
JAEGERIA HIETA Less.
Orcutt 4579: Colima, Col. 24 O 1910.
Orcutt 4350: Xochimilco, DF, 6 O 1910.
JACQUEMONTIA TAMNIFOLIA (L.) Griseb.
Orcutt 4528: Colima, Col. 24 O 1910.
Orcutt 4659: Alzada, Col. 4 N 1910.
KALLSTROEMIA GRANDIFLORA Torr.
Orcutt 4169: Rio Balsas, Gro. 26 Ag 1910.
Orcutt 4538: Colima, Col. 24 O 1910.
KALLSTROEMIA MAXIMA Torr.
Orcutt 4170: Rio Balsas, Gro. 26 Ag 1910.
LAGASCEA HELIANTHIFOLIA HBK.
Orcutt 4660: Alzada, Col. 4 N 1910.
LANTANA GLANDULOSISSIMA Heyek
Orcutt 3879: Cuernavaca, Mor. 31 Ag 1910.
LANTANA HORRIDA HBK.
Orcutt 2862: VC, 16 F 1910.
LANTANA STRIGOSA Greenm.
Orcutt 3580: Cuernavaca, Mor. 31 Ag 1910.
LEPECHINIA PROCUMBENS Benth.
Orcutt 4056: Teziutlan, Pue. 8 S 1910.
LEPECHINIA SPICATA Willd.
Orcutt 3839: El Parque, Mex. 31 Ag 1910.
Orcutt 3717: Ajusco, DF, 19 Ag 1910.
Orcutt 4065: Teziutlan, Pue. 8 S 1910.
LIABUM POLYANTHUM Klatt.
Orcutt 3064: Belleville, Oax. 23 F 1910.
LIPPIA NODIFLORA (L.) DC.
Orcutt 2866: VC, 16 F 1910.
LIPPIA REPTANS HBK.
Orcutt 2985: Sanborn, VC, 10 Mr 1910.
LIPPIA STROCHADIFOLIA (L.) HBK.
Orcutt 3404: VC, 13 Ap 1910.
LITHOSPERMUM SPATULATUM Mart. & Gal.
Orcutt 3502: Contreras, DF, 9 Ag 1910.
LOBELIA LAXIFLORA HBK.
Orcutt 3046: Jalapa, VC, 11 F 1910.
LOBELIA GRUINA Cav.
Orcutt 3719: Ajusco, DF, 19 Ag 1910.
LOBELIA SPLENDENS Willd.
Orcutt 4362: Xochimilco, DF, 6 O 1910.
LOBELIA COEBULEA Don.
Orcutt 3602: Olivar, DF, 15 Ag 1910.
LOBELIA MEXICANA (Lam.) Brand.
Orcutt 4258: Xochimilco, DF, 3 O 1910.
LUFFA CYLINDRICA (L.) Roem.
Orcutt 3040: Sanborn, VC, 7 Mr 1910.
LUPINUS GOEPHILUS Rose.
Orcutt 3799: Clma, Mex. 24 Ag 1910.
MALACRA CAPITATA L.

Orcutt 4479: Manzanillo, Col, 20 O 1910.
MALACRA RADIATA L.
 Orcutt 3061: Sanborn, VC, 8 Mr 1910.
MALVA ROTUNDIFOLIA L.
 Orcutt 3568: San Angel, DF, 12 Ag 1910.
MALVAVISCUS ARBOREUS Cav.
 Orcutt 2899: VC, 16 F 1910.
MALVAVISCUS SEPIUM Schlecht.
 Orcutt 2811: Jalapa, VC, 10 F 1910.
MARANTA ARUNDINACEA L.
 Orcutt 4216: Rio Balsas, Gro, 26 Ag 1910.
MARTYNI DIANDRA Glox.
 Orcutt 4435: Santa Fe, Mor, 25 Ag 1910.
MEDICAGO DENTICULATA Willd.
 Orcutt 3662: Olivar, DF, 17 Ag 1910.
MEDICAGO LUPULINA L.
 Orcutt 3491: Contreras, DF, 9 Ag 1910.
MELAMPODIUM ARVENSE Rob.
 Orcutt 3780: Cima, Mex, 24 Ag 1910.
MELAMPODIUM DIVARICATUM (Rich.) DC.
 Orcutt 3891: Cuernavaca, Mor, 31 Ag 1910.
MELAMPODIUM GRACILE Less.
 Orcutt 4365: Near Treinta, Mor, 25 Ag 1910.
 Orcutt 4411: San Vicente, Mor, 25 Ag 1910.
 Orcutt 4365: Treinta, Mor, 25 Ag 1910.
MELAMPODIUM PERFOLIATUM HBK.
 Orcutt 3548: San Angel, Valley of Mexico, 12 Ag 1910.
 Orcutt 3892: Cuernavaca, Mor, 31 Ag 1910.
MELAMPODIUM LINHARILONUM DC.
 Orcutt 4168: Rio Balsas, Gro, 26 Ag 1910.
MELAMPODIUM SERISONUM Lag.
 Orcutt 3605: Olivar, DF, 15 Ag 1910.
 Var: **EXAPPENDICULATUM** Rob.
 Orcutt 3887: Cuernavaca, Mor, 31 Ag 1910.
MELAMPODIUM NELSONII Greenm.
 Orcutt 4516: Colima, Col, 24 O 1910.
MELAMPODIUM VILLAGALE Greenm, sp. nov.
 Orcutt 4386: Rio Balsas, Gro, 26 Ag 1910.
MELANTHERA DELTOIDEA Rich.
 Orcutt 3050: Sanborn, VC, 8 Mr 1910.
MELANTHERA OXYLEPS DC.
 Orcutt 3152: Cordova, VC, 6 Ap 1910.
MELIA AZEDARACE L.
 Orcutt 3324: Tehuantepec, Oax, 19 Ap 1910.
MELILOTUS PARVIFLORA Desf.
 Orcutt 3674: Olivar, DF, 17 Ag 1910.
MELUCHIA PYRAMIDATA L.
 Orcutt 4480: Manzanillo, Col, 20 O 1910.
MIKANIA GONOCLEADA DC.
 Orcutt 3426: VC, 13 Ap 1910.
MIKANIA SCANDENS Willd.
 Orcutt 3346: Cordoba, VC, 6 Ap 1910.
MILBERIA QUINQUEFLORA L.
 Orcutt 3883: Cuernavaca, Mor, 31 Ag 1910.
MIMOSA PUDICA L.
 Orcutt 3063: Sanborn, VC, 8 Mr 1910.
MOLLUGO VERTICILLATA L.
 Orcutt 3019: Sanborn, VC, 10 Mr 1910.
MONNINA BALAPENSIS HBK.
 Orcutt 3515: Contreras, DF, 9 Ag 1910.
 Orcutt 4055: Teztlutlan, Pue, 8 S 1910.
MONTANOA PRUTESCENS (Maire) Hemsl.

Orcutt 4377: El Parque, Mor, 3 S 1910.
MONTANOA TOMENTOSA Llav. & Lex.
 Orcutt 3896: Pachuca, Hgo, 5 S 1910.
 4256: Xochimilco, DF, 3 O 1910.
MORINGA OLEIFERA Lam.
 Orcutt 3456: Rincon Antonio, Oax, 21 Ap 1910.
MUNTINGIA CALABURA L.
 Orcutt 3072: Sanborn, VC, 28 F 1910.
NAMA DICHOTOMUM Ruiz. & Pav.
 Var: **ANGUSTIFOLIUM** Gray.
 Orcutt 3936: Acajete, Pue, 6 S 1910.
 Orcutt 4134: Telles, Hgo, 21 S 1910.
 Orcutt 4337: Xochimilco, DF, 6 O 1910.
OCIMUM MICRANTHUM Willd.
 Orcutt 3085: Carmen, on FCNT, 21 Mr 1910.
ONOSMODIUM STRIGOSUM Don.
 Orcutt 3520: Contreras, DF, 9 Ag 1910.
OXALIS BERLANDIERI Torr.
 Orcutt 4467: Manzanillo, Col, 20 O 1910.
 Orcutt 3142: Cordova, VC, 6 Ap 1910.
OXALIS DIVERGENS Benth.
 Orcutt 3668: Olivar, DF, 17 Ag 1910.
OXALIS STRICTA L.
 Orcutt 3025: Sanborn, VC, 12 Mr 1910.
 Orcutt 3141: Cordova, VC, 6 Ap 1910.
 Orcutt 3809: Parres, Mex, 30 Ag 1910.
OXALIS TETRAPHYLLA Cav.
 Orcutt 4091: El Parque, Mor, 3 S 1910.
PACHYRHIZUS ANGULATUS Rich.
 Orcutt 4182: Rio Balsas, Gro, 2 O Ag 1910.
 Orcutt 4227: Rio Balsas, Gro, 26 Ag 1910.
PARIETARIA DEBILIS Forst.
 Orcutt 3620: Tlalpam, DF, 16 Ag 1910.
PASTINENIUM HYSTEROPOREUS L.
 Orcutt 4506: Colima, Col, 24 O 1910.
 Orcutt 3562: San Angel, DF, 12 Ag 1910.
 Orcutt 3082: Sanborn, VC, 28 F 1910.
 Orcutt 4102: Mexico, DF, 20 S 1910.
PECTIS PROSTRATA Cav.
 Orcutt 4201: Rio Balsas, Gro, 26 Ag 1910.
 Orcutt 4312: Churubusco, DF, 4 O 1910.
 Orcutt 4601: Colima, Col, 24 O 1910.
 Orcutt 4492: Manzanillo, Col, 20 O 1910.
PENTSTEMON BARBATUS (Cav.) Nutt.
 Orcutt 3650: Olivar, DF, 17 Ag 1910.
PENTSTEMON CAMPANULATUS Willd.
 Orcutt 3499: Contreras, DF, 9 Ag 1910.
 Orcutt 3942: Acajete, Pue, 6 S 1910.
PEDICULARIS MEXICANA Zucc.
 Orcutt 3745: Tres Marias, Mex, 23 Ag 1910.
PERTUSARIA VERRUCOSA Mont.
 Orcutt 4723: Tehuantepec, Oax, on bark.
PEPEROMIA HISPIDULA A. Dietr.
 Var: **MINOR** C. DC.
 Orcutt 3964: Teztlutlan, Pue, 6 S 1910.
PETRAEA ARBOREA HBK.
 Orcutt 3042: Sanborn, VC, 5 My 1910.
PETIVERIA ALLIACEA L.
 Orcutt 4530: Colima, Col, 24 O 1910.
PFAFFIA HOOKERIANA .. (Hems) Greenm.
 Orcutt 2984: Sanborn, VC, 11 Mr 1910.
PHACELIA PIMPINELLOIDES (Spreng.) Gray.
 Orcutt 3701: Ajusco, DF, 19 Ag 1910.
PHANOSPHEON PRUCCARIAN-FOLIUM (DC) Clarke.
 Orcutt 2924: Belleville, Oax, 23 F 1910.
PLANTAGO HIBTOLA HBK.

Orcutt 3707: Ajusco, DF, 19 Ag 1910.
PLANTAGO MEXICANA Link.
 Orcutt 3671: Olivvar, DF, 17 Ag 1910.
PHYSALIS FONTENAE Poir.
 Orcutt 3531: Contreras, DF, 9 Ag 1910.
PHYSALIS GRACILIS Miers.
 Orcutt 3021: Sanborn, VC, 11 Mr 1910.
PHYSALIS PELLAEDEFRICA Lam.
 Orcutt 2867: Vera Cruz, VC, 16 F 1910.
PHYSALIS PUBESCENS Fernald.
 Orcutt 3938: Cuernavaca, Mor, 31 Ag 1910.
PHYSALIS SUBINTEGRA Fernald.
 Orcutt 3757: Tres Marias, Mex, 23 Ag 1910.
PICRIS ECHINOIDES L.
 Orcutt 4233: Churubusco, DF, 4 O 1910.
PIRAMIA ANTIDESMA Sw.
 Orcutt 2857: Jalapa, VC, 11 F 1910.
PILEA PUBESCENS Liebm.
 Var: **FUSCATA** Wedd.
 Orcutt 4588: Colima, Col, 24 O 1910.
PILEA MICROPHYLLA Liebm.
 Orcutt 3352: Cordoba, VC, 7 Ap 1910.
PINAROPAPPUS ROSEUS Less.
 Orcutt 3609: Olivvar, DF, 15 Ag 1910.
PIQUERIA PILOSA HBK.
 Orcutt 3770: Cima, Mex, 24 Ag 1910.
PIQUERIA TRINERVA Cav.
 Orcutt 3665: Olivvar, DF, 17 Ag 1910.
 Orcutt 4116: Telles, Hgo, 21 S 1910.
 Orcutt 3478: Contreras, DF, 9 Ag 1910.
PISTEA STRATIOTES L.
 Orcutt 3166: Coatzacoalcos, VC 21 Mr 1910.
PLUCHEA ODORATA (L.) Cass.
 Orcutt 3160: VC, 28 Mr 1910.
PLUMBAGO SCANDENS L.
 Orcutt 4535: Colima, Col, 24 O 1910.
POLEMONIUM MEXICANUM Cerv.
 Orcutt 4235: Cima, Mex, 24 Ag 1910.
POLYGONUM ACME HBK.
 Orcutt 4014: Teziutlan, Pue, 7 S 1910.
POLYGALA AMERICANA Mill.
 Orcutt 4204: Rio Balsas, Gro, 26 Ag 1910.
POLYGALA PANICULATA L.
 Orcutt 3029: Sanborn, VC, 10 Mr 1910.
POLYGONUM PERSICARIOIDES HBK.
 Orcutt 4559: Colima, Col, 24 O 1910.
PONTERERIA CORDATA L.
 Orcutt 2674: VC, 16 F 1910.
PRIVA ECHINATA Juss.
 Orcutt 2999: Sanborn, VC, 12 Mr 1910.
PRIVA HISPIDA Juss.
 Orcutt 3628: Tlalpam, DF, 16 Ag 1910.
FROELICHA INTERRUPTA (L.) Moq.
 Orcutt 4557 et 4576: Colima, Col, 24 O 1910.
PSIDIUM GUAJAVA L.
 Orcutt 3166: Chivela, Oax, 16 Ap 1910.
QUAMOCLIT COCCINEA (L.) Moench.
 Orcutt 4306: Churubusco, DF, 4 O 1910.
REBUNIUM HYPOCARPIUM Hemsl.
 Orcutt 4021: Teziutlan, Pue, 7 S 1910.
RESEDA LUTEOLA L.
 Orcutt 3597: Olivvar, DF, 15 Ag 1910.
RICKARDIA SCABRA L.
 Orcutt 2893: VC, 16 F 1910.
RIVINA HUMILIS L.
 Orcutt 4622: Colima, Col, 24 O 1910.
 Orcutt 3175: Sanborn, VC, 31 Mr 1910.
RYNCHOSIA MENISPERMOIDES DC.
 Orcutt 3104: Coatzacoalcos, VC, 21 Mr 1910.
RUMEX CRISPUS L.

Orcutt 3321: El Parque, Mor, 31 Ag 1910.
RUMEX MARTINUS L.
 Orcutt 4073: Mexico City, DF, 16 S 1910.
RUMEX MEXICANUS Meisn.
 Orcutt 3801: Parres, Mex, 30 Ag 1910.
RUELLIA FRINGLERI Fernald.
 Orcutt 4209: Rio Balsas, Gro, 26 Ag 1910.
RUELLIA MULTIFLORA Sims.
 Orcutt 3139: Cordova, VC, 6 Ap 1910.
SABAHIA ANOMALA Greenm.
 Orcutt 3812: Parres, Mex, 30 Ag 1910.
SABAHIA URTICAFOLIA (HBK) DC.
 Orcutt 3553 a: San Angel, DF, 12 Ag 1910.
SABAHIA HUMILIS Cav.
 Orcutt 4336: Sanborn, VC, 24 F 1910.
SALIX BONPLANDIANA HBK.
 Orcutt 4070: Mexico, DF, 16 S 1910.
SALIX TAXIFOLIA HBK.
 Orcutt 4558: Colima, Col, 24 O 1910.
SALVINA NATANS (L.) All.
 Orcutt 3098: Coatzacoalcos, VC, 21 Mr 1910.
SALVIA AMARISSIMA Ort.
 Orcutt 4274: Churubusco, DF, 4 O 1910.
 Orcutt 3926: Pachuca, Hgo, 5 S 1910.
 Orcutt 3479: Contreras, DF, 9 Ag 1910.
SALVIA CORDOBENSIS Briq.
 Orcutt 3136: Cordova, VC, 6 Ap 1910.
SALVIA ELEGANS Vahl.
 Orcutt 3955: Teziutlan, Pue, 6 S 1910.
SALVIA ELONGATA HBK.
 Orcutt 3751: Tres Marias, Mex, 23 Ag 1910.
SALVIA HIRSUTA Jacq.
 Orcutt 3573: Olivvar, DF, 15 Ag 1910.
SALVIA LANCEOLATA Brouss.
 Orcutt 3897: Pachuca, Hgo, 5 S 1910.
SALVIA MEXICANA L.
 Var: **MINOR** Benth.
 Orcutt 3832: El Parque, Mor, 31 Ag 1910.
 Orcutt 4321: Churubusco, DF, 4 O 1910.
SALVIA OBSCURA Benth.
 Orcutt 2901: VC, 16 F 1910.
SALVIA POLYSTACHYA Ort.
 Var: **PHILIPPENSIS** Fernald.
 Orcutt 4254: Xochimilco, DF, 3 O 1910.
SALVIA PRUNELLOIDES HBK.
 Orcutt 3718: Ajusco, DF, 19 Ag 1910.
SALVIA SESSEI Benth.
 Orcutt 3868: Alarcon, Mor, 31 Ag 1910.
SALVIA TILIAEFOLIA Vahl.
 Orcutt 4250: Xochimilco, DF, 3 O 1910.
 Orcutt 4120: Telles, Hgo, 21 S 1910.
 Orcutt 3873: Cuernavaca, Mor, 31 Ag 1910.
SAMBUCUS MEXICANA Presl.
 Orcutt 3998: Teziutlan, Pue, 7 S 1910.
SANVITALIA PROCUMBENS Lam.
 Orcutt 3580: Olivvar, DF, 15 Ag 1910.
SARACHA JALTONATA Schlecht.
 Orcutt 3512: Contreras, DF, 9 Ag 1910.
SARACHA UMBELLATA (Roth) Don.
 Orcutt 3807: Uarres, Mex, 30 Ag 1910.
SENECIO SALIGNUS DC.
 Orcutt 4095: El Parque, Mor, 3 S 1910.
SENECIO SANGUISORBAE DC.
 Orcutt 3767: Cima, Mex, 24 Ag 1910.
SCHKURRIA ABBOTANOIDES Roth.
 Orcutt 3683: Olivvar, DF, 17 Ag 1910.
SCHKURRIA HOPKIEKIA Gray.
 Orcutt 4625: Alzada, Col, 4 N 1910.
 Orcutt 3888: Cuernavaca, Mor, 31 Ag

1910.
SOKKURBIA VIRGATA DC.
 Orcutt 4072: Mexico City, DF, 16 S 1910.
 Orcutt 3921: Pachuca, Hgo, 6 S 1910.
SOLEBOCARPUS MULTIFIDUS Green-
 man, sp. nov.
 Orcutt 4177: Rio Balsas, Gro, 26 Ag
 1910.
SOLEBOCARPUS ORCUTII Green-
 man, sp. nov.
 Orcutt 4589: Colima, Col, 24 O 1910.
SOLEBOCARPUS UNISERIALIS
 (Hook.) Benth. & Hook. f.
 Var. (?) **EPAPFOSA** Greenm. var. nov.
 Orcutt 4208: Rio Balsas, Gro, 26 Ag
 1910.
SCOPARIA DULCES L.
 Orcutt 4526: Colima, Col, 24 O 1910.
 Orcutt 3012: Sanborn, VC, 12 Mr 1910.
SCUTELLARIA CAERULEA Moc. &
 Sesse.
 Orcutt 4375: El Parque, Mor, 3 S 1910.
 Orcutt 3500: Contreras, DF, 9 Ag 1910.
SISTHOBIA FIOBINCHENSIS HBK.
 Orcutt 3774: Cima, Mex, 24 Ag 1910.
 Orcutt 3968: Teztlutlan, Pue, 6 S 1910.
SICYOS DEPPEI Don.
 Orcutt 3943: Acajete, Pue, 6 S 1910.
SISTYRINCHIUM ANGUSTIFOLIUM
 Mill.
 Orcutt 3712: Ajusco, DF, 19 Ag 1910.
SISTYRINCHIUM MICRANTHEUM Cav.
 Orcutt 2844: Jalapa, VC, 11 F 1910.
SMILAX BONA-NOX L.
 Orcutt 2817: Jalapa, VC, 10 F 1910.
SMILAX sp.
 Orcutt 3118: Tezonapa, VC, 5 Ap 1910.
SOLANUM BULBO-CASTANUM Dunal.
 Orcutt 3833: El Parque, Mor, 31 Ag
 1910.
SOLANUM CERVANTESII Lag.
 Orcutt 4186: Telles, Tgo, 21 S 1910.
SOLANUM DEFLEXUM Greenm.
 Orcutt 4389: Rio Balsas, Gro, 26 Ag
 1910.
 Orcutt 4210: Rio Balsas, Gro, 26 Ag
 1910.
SOLANUM DIVERSIFOLIUM Schlecht.
 Orcutt 2897: Vera Cruz, VC, 16 F 1910.
SOLANUM ELAEGINIFOLIUM Cav.
 Orcutt 3158: VC, 28 Mr 1910.
SOLANUM FONTANESIANUM Dunal.
SOLANUM GRAYI Rose.
 Orcutt, 4509: Colima, Col, 24 O 1910.
SOLANUM MAMMOSEUM L.
 Orcutt 3365: Omeales, VC, 7 Ap 1910.
SOLANUM NIGRUM L.
 Orcutt 2907: VC, 16 F 1910.
SOLANUM OCCRACNO-FERRUGIN-
EUM (Dun) Fernald.
 Orcutt 3820: El Parque, Mor, 31 Ag
 1910.
SOLANUM SISYMBRIIFOLIUM Lam.
 Orcutt 4187: Rio Balsas, Gro, 26 Ag 1910.
SOLIDAGO PANICULATA DC.
 Orcutt 4364: Xochimilco, DF, 6 O 1910.
 Orcutt 4281: Churubusco, DF, 4 O 1910.
SONCHUS OLEACEUS L.
 Orcutt 4077: Mexico, DF, 18 S 1910.
SPIGELEA HUMBOLDTIANA Cham. &
 Schlecht.
 Orcutt 3176: et 3177. Sanborn, VC, Mr
 1910.
SPILANTHES AMERICANA (Nutt.)
 Hiern.
 Orcutt 3340: Cordova, VC, 6 Ap 1910.

SPILANTHES OXYMIFOLIA (Lam.)
 Moore.
 Orcutt 4573: Colima, Col, 24 O 1910.
SPILANTHES CINNABARINA Hems.
 Orcutt 4286: Churubusco, DF, 4 O 1910.
STACHYS AGRARIA Cham. & Schlecht.
 Orcutt 3715: Ajusco, DF, 19 Ag 1910.
STACHYS COCCINEA Jacq.
 Orcutt 4589: Colima, Col, 24 O 1910.
 Orcutt 3506: Contreras, DF, 9 Ag 1910.
 Orcutt 3755: Tres Marias, Mex, 23 Ag
 1910.
STACHYS REPENS Mart. & Gal.
 Orcutt 3815: Parres, Mex, 30 Ag 1910.
STACHYTARFETA JAMAICENSIS
 vahl.
 Orcutt 3179: VC, 28 Mr 1910.
STEVIA ELATIO HBK.
 Orcutt 3527: Contreras, Valley of Mex-
 ico, 9 Ag 1910.
STEVIA MICRANTHA Lag.
 Orcutt 4293: Churubusco, DF, 4 O 1910.
STEVIA NEPETAIFOLIA HBK.
 Orcutt 3659: Olivar, DF, 17 Ag 1910.
STEVIA PANICULATA Lag. (?)
 Orcutt 4257: Xochimilco, DF, 3 O 1910.
STEVIA SALICIFOLIA Cav.
 Orcutt 3924: Pachuca, Hgo, 5 S 1910.
 Orcutt 4339: Xochimilco, DF, 6 O 1910.
STEVIA SERRATA Cav., var. **ARGUTA**
 Rob.
 Orcutt 3676: Olivar, DF, 17 Ag 1910.
STIGMAPHYLLOM LINDENIANUM A.
 Juss.
 Orcutt 3131: Tezonapa, VC, 5 Ap 1910.
SUEDA DEPRESSA (Pursh) Wat.
 Orcutt 4103: Mexico, DF, 20 S 1910.
SYNEDELLA NODIFLOEA Gaertn.
 Orcutt 3129: Tezonapa, VC, 5 Ap 1910.
TAGETES FILIFOLIA Lag.
 Orcutt 4348: Xochimilco, DF, 6 O 1910.
 Orcutt 4361: Xochimilco, DF, 6 O 1910.
 Orcutt 4656: Alzada, Col, 4 N 1910.
TAGETES CORONOPOLIA Willd.
 Orcutt 4359: Xochimilco, DF, 6 O 1910.
TAGETES MICRANTHA Cav.
 Orcutt 3596: Olivar, DF, 15 Ag 1910.
TAGETES LUCIDA Cav.
 Orcutt 4630: Alzada, Col, 4 N 1910.
TAGETES FATULA L.
 Orcutt 4654: Colima, Col, 24 O 1910.
TAGETES SUBULATA Llav. & Lex.
 Orcutt 4650: Alzada, Col, 4 N 1910.
TAGETES TENUIFOLIA Cav.
 Orcutt 3901: Pachuca, Hgo, 5 S 1910.
TARAXACUM OFFICINALE Weber.
 Orcutt 3808: Parres, Mex, 30 Ag 1910.
TINANTIA FUGAX Scheidw.
 Orcutt 4006: Teztlutlan, Pue, 7 S 1910.
 Orcutt 4166: Rio Balsas, Gro, 26 Ag
 1910.
 Orcutt 4290: Churubusco, DF, 4 O 1910.
TECOMA STANS Juss.
 Orcutt 4202: Rio Balsas, Gro, 26 Ag
 1910.
TEUCRIUM INFLATUM Sw.
 Orcutt 3146: Cordova, VC, 6 Ap 1910.
THEUNBERGIA ALATA Bojer.
 Orcutt 3135: Cordova, VC, 6 Ap 1910.
TITHONIA DIVERSIFOLIA Gray.
 Orcutt 3427: VC, 13 Ap 1910 (culti-
 vated).
TITHONIA TUBAEFORMIS Cass.
 Orcutt 4104: Mexico, DF, 20 S 1910.
TRADESCANTIA COMMELINOIDES
 Roem. & Schult.

Orcutt 4382: El Parque, Mor, 3 S 1910.
TRADESCANTIA GRASSIFOLIA Cav.
 Orcutt 3579: Olivar, DF, 15 Ag 1910.
TRADESCANTIA MACROPHYLLA
 Greenm.
 Orcutt 4186: Rio Balsas, Gro, 26 Ag 1910.
TRADESCANTIA FULGIBELLA HBK.
 Orcutt 3497: Contreras, DF, 9 Ag 1910.
TRIBULUS GUSTOIDES L.
 Orcutt 3394: VC, 28 Mr 1910.
 Orcutt 4409: near Treinta, Mor, 25 Ag 1910.
TRIDAX CORONOPOLIA (HBK.) Hemsl.
 Orcutt 3586: Olivar, DF, 15 Ag 1910.
 Orcutt 3663: Olivar, DF, 17 Ag 1910.
 Orcutt 3875: Cuernavaca, Mor, 31 Ag 1910.
 Orcutt 4366: Hermosa, Mor, 25 Ag 1910.
 Orcutt 4408: near Treinta, Mor, 25 Ag 1910.
TRIDAX PLATYPHYLLA Rob.
 Orcutt 4181: Rio Balsas, Gro, 26 Ag 1910.
TRIDAX PROCUMBENS L.
 Orcutt 4800: Colima, Col, 24 O 1910.
 Orcutt 4711: Tuxpan canyon, Col, 3 N 1910.
TRIKODON ANGULATUM Benth.
 Orcutt 3366: Omealca, VC, 7 Ap 1910.
TRIKIS FRUTICOSUS P. Browne.
 Orcutt 2863a: VC, 16 F 1910. Shrub 6 ft. hl.
TRIKIS PROCUMBENS L.
 Orcutt 3033: Sanborn, VC, 7 Mr 1910.
TRIKIS PTEROCAULIS Rob. & Greenm.
 Orcutt 4464: Manzanillo, Col, 20 O 1910.
TOURNEFORTIA HIRSUTISSIMA L.
 Orcutt 3116: Texonapa, VC, 5 Ap 1910.
URTICA DIOICA L.
 Var: **ANGUSTIFOLIA** Wedd.
 Orcutt 4124: Telles, Hgo, 21 S 1910.
URTICA OLMADRYOIDES Pursh.
 Orcutt 4328: Churubusco, DF, 4 O 1910.
URTICA SUBINCISA Benth.
 Orcutt 4329: Xochimilco, DF, 6 O 1910.
URAGOOGA TOMENTOSA (Aubl.) Schum.
 Orcutt 2927: Belleville, Oax, 23 F 1910.
VERBENA CILIATA Bth.
 Orcutt 3551: Sangel, DF, 12 Ag 1910.
 Orcutt 4146 (in part): Telles, Hgo, 21 S 1910 (in part sp indet).
VERBENA HERBERBERGIANA Schauer
 Orcutt 3750: Tres Marias, Mor, 23 Ag 1910.
VIOLA FLAGELLIFORMIS Hems.
 Orcutt 3756: Tres Marias, Mex, 23 Ag 1910.
VERBENA POLYSTACHYA HBK.
 Orcutt 3950: Huixtzilipam, Pue, 6 S 1910.
 Orcutt 3488: Contreras, DF, 9 Ag 1910.
VERBENA RHINANTHIFOLIA Mart & Gal.
 Orcutt 3598: Olivar, DF, 15 Ag 1910.
VERBENA PINNATIFIDA Cav.
 Orcutt 3041: Sanborn, VC, 4 Mr 1910.
VERBENA TETRAPTERA Gray.
 Orcutt 4416: El Parque, Mor, 3 S 1910.
 Orcutt 4418: El Parque, Mor, 3 S 1910.
VERBENA VIRGATA Cav.
 Orcutt 4355: Xochimilco, DF, 6 O 1910.
VERNONIA ASCORBORNIANA Schauer.

Orcutt 3417: Sanborn, VC, 10 Mr 1910;
 3430: Hermosa, VC, 25 Mr 1910. 3230:
 Rincon Antonio, Oax, 21 Ap 1910.
VERNONIA SCORIEDRANA Less.
 Orcutt 3027: Sanborn, VC, 10 Mr 1910.
VERONICA BERBERINA L.
 Orcutt 3140: Cordova, VC, 6 Ap 1910.
VIGUIERA MELANTHOIDES HBK.
 Orcutt 4326: Churubusco, DF, 4 O 1910.
VIGUIERA TRIBULI Gray.
 Orcutt 4631: Alzada, Col, 4 N 1910.
VIOLA FLAGELLIFORMIS Hemsl.
 Orcutt 3756: Tres Marias, Mex, 23 Ag 1910.
WALTHERIA AMERICANA L.
 Orcutt 4489: Manzanillo, Col, 20 O 1910.
 Orcutt 3051: Sanborn, VC, 8 Mr 1910.
WIGANDIA CARACASANA HBK.
 Orcutt 4299: Churubusco, Mex, 4 O 1910.
XANTHOCEPHALUM ORTANBOIDES Willd.
 Orcutt 4112: Mexico, DF, 20 S 1910.
**XANTHOCEPHALUM LINRARIPOL-
 IUM** (DC.) Greenm.
 Orcutt 3784: Cima, Mex, 24 Ag 1910.
XALUZHANIA GLOIOSA Schz. Bip.
 Orcutt 4139: Telles, Hgo, 21 S 1910.
XALUZHANIA TRILOBA Pers.
 Orcutt 3902: Pachuca, Hgo, 5 S 1910.
 4131: Telles, Hgo, 21 S 1910.
XIXIMENIA GIESBRECHTII Gray.
 Orcutt 4679: Alzada, Col, 4 N 1910.
XIXIMENIA MELANTHOIDES (DC.) Gray.
 Orcutt 4667: Alzada, Col, 4 N 1910.
XINNIA MULTIFLORA L.
 Orcutt 3623: Tlalpam, DF, 16 Ag 1910.
 Orcutt 4200: Rio Balsas, Gro, 26 Ag 1910.
XINNIA PALMERI Gray.
 Orcutt 4498: Manzanillo, Col, 20 O 1910.
XINNIA PAUCIFLORA L.
 Orcutt 3881: Cuernavaca, Mor, 31 Ag 1910.
XORNIA DIPHYLLA (L.) Pers.
 Orcutt 3518: Contreras, DF, 9 Ag 1910.
 Orcutt 4548: Colima, Col, 24 O 1910.

MEXICAN FUNGI.
 Collected by Charles Russell Orcutt. 1910.
 Determination by William A. Murrill.
AGARICUS FLABELLATUS B & C.
 Orcutt 4644: Alzada, Col, 4 N 1910.
AURICULARIA AURICULA (L.) Underw.
 Orcutt 4897: Sanborn, VC.
AURICULARIA MESSENERICA
 Orcutt 4896: Rio Verde, Oax.
COLTRICIA PERENNIS Murrill.
 Orcutt 4730: Cima, Mex.
CORILOPSIS RIGIDA
 Orcutt 4899: Sanborn, VC, Mr 1910.
FOMES SAGRAEANUS (Mont) Murrill.
 Orcutt 4732: Tehuantepec, Oax.
GHAETER HYGROMETRICUS Fr.
 Orcutt 4731: Tehuantepec, Oax.
GLOEOPHYLLUM STRIATUM (Sw) Murrill.
 Orcutt 4225: Rio Balsas, Gro, 26 Ag 1910.
LENTINUS ORINATUS (L.) Fr.
 Orcutt 4213 et 4214: Rio Balsas, Gro, 26 Ag 1910.
LENTINUS VELUTINUS
 Orcutt 4896: Sanborn, VC, Mr 1910.

LYCOGALA EPIDENDRUM
 Orcutt 4734: Tehuantepec, Oax.
POGONOMYCES HYDROIDES
 Orcutt 4898: Sanborn, Vc, Mr 1910.
PYNOPSIS SANGUINEUS (L) Mur-
 Orcutt 4226: Rio Balsas, Gro, 26 Ag 1910.
 rill.
 Orcutt 2967: Sanborn, VC, Mr 1910.
PYROPOLYPORUS YUCATANENSIS
 Murrill.
 Orcutt 4733. Tehuantepec, Oax.
HEXAGONA TENUIS Hk.
 Orcutt 4641: Alzada, Col, 4 N 1910.
SCHIZOPHYLLUM ALBUM (Sw)
 Schroet.
 Orcutt 4227: Rio Balsas, Gro, 26 Ag 1910.
STEREUM PAPHINUM
 Orcutt 4894: Sanborn, VC, Mr 1910.
TRAVETES HYDROIDES Fr.
 Orcutt 4642: Alzada, Col, 4 N 1910.

Abbreviations and Signs.

See also American Plants 1:372.

Ags=Aguaascalientes.
 alt-ernate, one after another.
 ann-ual, flowering and fruiting in
 the first year or season and then dy-
 ing.
 anth-anthropology, anthropological.
 aes-Agricultural experiment station
 agr-agrostology (Division of)
 Am-America, American.
 an-annual.
 axy=axillary, occurring in an axil.
 B=Bulletin.
Bibliographical words:—ac-ademy;
 an-nals; biol-ogy; bot-any; dec-
 scription; enc-yclopaedia; fi-ora;
 gard-en; gaz-ette; gen-era; hort-
 iculture; mag-azine; mon-ograph;
 mus-eum; nat-ional; nat-ural; pl-
 antae; pr-occeedings; qr-quarterly;
 rev-iew; sci-ence; ser-ies; sp-ecies;
 syn-opsis; t-abula (picture, plate);
 tr-ansactions.

bien-nial, requiring two years to at-
 tain maturity, then dying.

Cam=Campeche.
 cap=capsula.
 Chis=Chiapas.
 Chih=Chihuahua.
 cir-cular.
 CNH, contributions from the U. S.
 National Herbarium.
 Coah=Coahuila.
 Col=Colima.
 com=common, commonly, usually.
 Co: County.
 Da: Alvah A. Davidson, Plants of L A
 Co.
 D-A—U. S. Department of Agriculture.
 d=described or description.
 DF=Distrito Federal (Federal District).
 Dgo=Durango.
 diam-eter.
 f—Figure.
 FCM—Field Columbian Museum.
 fdr=first published & reprinted.

glab=Glabrous, smooth, not hairy.
 glau=glaucous, covered with a bloom.
 Gro=Guerrero.
 Gto=Guanajuato.
 Hgo=Hidalgo.
 hi=high.
 Jal=Jalisco.
 lg=long.
 mem=membranaceous, thin and soft,
 like a membrane.
 Micho=Michoacan.
 Mor=Morelos.
 nar=narrow.
 NL=Nuevo Leon.
 num=numerous.
 O, none or wanting.

Oax=Oaxaca.
 opp-osite, on opposite sides of the
 stem, in pairs.
 pap=pappus, the bristles, scales, etc., at
 the apex of the akenes in the Compos-
 itae.

per-ennial, living year after year.

pr-preceedings.
 Pue=Puebla.
 QR.=Quintaano Roo.
 Quintln: San Quintin bay, Baja.
 R=Report.
 so=society.
 seg=segment, a subdivision or lobe.
 sh=short.
 Sin=Sinaloa.
 SLP=San Luis Potosi.
 sm=small.
 Son=Sonora.
 spi = spines
 sr=Series.

Tab=Tabasco.
 Tam=Tamaulipas.
 Tep=Tepec. (Territory).
 Tlax=Tlaxcala.
 U=university.
 VC=Vera Cruz.
 W=West American Scientist.
 Yuc=Yucatan.
 Zac=Zacatecas.
 Zo=Zoology, zoological.
 °=feet. " =inches. ' =lines.



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