

CONTRIBUTIONS FROM THE GRAY HERBARIUM OF
HARVARD UNIVERSITY

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Pinos, *Baker*, 425; Boulder City, 1862, *Parry*. NEW MEXICO: Los Pinos, *Baker*, 411; between Santa Fé and Canoncito, *A. A. & E. Gertrude Heller*, 3783; between Santa Fé and Pecos, *Fendler*, 157.

25. *A. FLEXUOSUS* Dougl. in G. Don, Gen. Syst. ii. 256 (1832). *Phaca flexuosa* Hook. Fl. Bor. Am. i. 140 (1833). *Homalobus flexuosus* (Dougl.) Rydb. Bull. Torr. Club, xxxii. 666 (1906). *H. proximus* Rydb. Bull. Torr. Club, xxxii. 667 (1906)? *H. Salidae* Rydb. l. c. ? *A. proximus* (Rydb.) Woot. & Standl. Contrib. U. S. Nat. Herb. xix. 366 (1915) ?—Saskatchewan to New Mexico, Utah, and Alberta.

I have not seen authentic material of either *H. proximus* Rydb. or *H. Salidae* Rydb. but from description these segregates possess no characters that are not evident in varying degree in the large series of specimens I have seen of this common species.

26. *A. LONCHOCARPUS* Torr. Pac. R. Rep. iv. 80 (1857). *Phaca macrocarpa* Gray, Pl. Fendl. 36 (1849), not *A. macrocarpus* DC. Astrag. 143 (1802). *Homalobus macrocarpus* (Gray) Rydb. Bull. Torr. Club, xxxii. 667 (1906). *A. macer* A. Nels. Bot. Gaz. lvi. 65 (1913).—Utah and Colorado to New Mexico.—COLORADO: Paradox, Walker, 179; Durango, Crandall, 4; Pagosa Springs, *Baker*, 416; Naturita, Payson, 314. UTAH: 1874, *Parry*, 52. NEW MEXICO: Santa Fé, *A. A. & E. Gertrude Heller*, 3604; also *Fendler*, 160.

V. VARIOUS NORTH AMERICAN SPERMATOPHYTES, NEW OR TRANSFERRED.

By J. FRANCIS MACBRIDE.

✓*CLEOME LUTEA* Hook., var. *Jonesii*, var. nov., staminibus 6 didynamis, eorum 4 brevioribus 2 cm. longis sed 2 ceteris longioribus 3 cm. longis; siliqua linearifusiformi circa 4 cm. longa, medio circa 2 mm. lata vix haud torulosa, matura stipite circa 2.5 cm. longo praedita; corolla aurea.—ARIZONA. Verde Valley, July 24, 1920, *W. W. Jones*, 168 (TYPE, Gray Herb.).

In view of the considerable variation displayed in a series of specimens of *C. lutea* it seems best to regard this plant with extremely long filaments and pods as only a variety. The flowers, however, appear to be of a brighter yellow than those of the typical form. The specimen belongs to a small collection of plants, chiefly Arizonan,

made in 1920 by Mr. W. W. Jones, who revised the genus *Zexmenia*.

LOTUS TORREYI (Gray) Greene, var. *seorsus*, var. nov., plus minusve adpresse hirsutulus; caulibus gracilibus erectis vel adscendentibus; foliolis fere glabris, rare 1.5 cm. longis, 5 mm. latis, apice rotundatis, abrupte cuspidatis; pedunculis 2-4-floris; corolla circa 1 cm. longa.—CALIFORNIA: near the stream, Idlewild, San Jacinto Mts., June 28, 1919, *Mary F. Spencer*, 1280 (TYPE, Gray Herb.).

Parish, Plant World, xx. 220 (1917), referred specimens secured in the San Bernardino Mountains to *L. Torreyi* without comment. These probably are the same as Mrs. Spencer's which differ sufficiently from the typical form of the species as it occurs in the central Sierra Nevada to be accorded varietal recognition. The southern plant is less pubescent, the pubescence hirsutulous rather than villous, the smaller leaflets are much more abruptly cuspidate and the peduncles bear fewer and smaller flowers. Usually, too, the variety is less robust. If it were not for the presence of intermediate forms in which all of these characters are seen to vary the variety *seorsus* would merit specific rank.

For a discussion regarding the recent delimitation of the genus *Lotus*, see Contrib. Gray Herb. liii. 14 (1918).

MENTZELIA LAEVICAULIS (Dougl.) T. & G., var. *acuminata* Nels. & Macbr., in herb. *Nuttallia acuminata* Rydb. Bull. Torr. Club, xl. 61 (1913).

In a large series of specimens I have been unable to see any constant coordination of the characters upon which Dr. Rydberg segregated, i. e., *N. acuminata*. The "pubescent, duller stem" may or may not be associated with long-acuminate upper stem-leaves with "broad almost subhastate bases." For instance, Suksdorf's no. 175 from Park County, Montana, is pubescent-stemmed but even the uppermost leaves are narrow. And surely the upper leaves of Cotton's no. 808 from the Yakima region of Washington, are quite as broad at the base and as long-acuminate as those of W. W. Jones' no. 430 from Bacchus, Utah, although the former specimen has a smooth lustrous stem while that of the latter is finely pubescent and dull.

Furthermore, all of the Californian material referred to *M. laevicaulis* by Urban and Gilg, and other authorities, is not smooth-stemmed. And indeed this Californian material does not seem distinguishable from specimens cited by Rydberg, i. e., as representing *N. acuminata*, which therefore is not "lacking in California." *M. acuminata*, therefore, appears to be merely a form with pubescent stems that approximates the range of the typical state but that

replaces it, at least largely, in Wyoming and Montana. Accordingly it may be assigned varietal rank.

Mentzelia parviflora (Dougl.), comb. nov. *Bartonia parviflora* Dougl. ex Hook. Fl. Bor. Am. i. 221 (1834). *Nuttallia parviflora* (Dougl.) Greene, Leaflets, i. 210 (1906).

Rydberg, Fl. Ry. Mt. 572 (1917), refers to this species, with a question, *M. Brandegei* Wats. The only specimen I have seen of the latter is the type from "Washington Territory" and it seems very distinct by virtue of the fewer stamens (only about 35) and the narrow almost pinnately dissected leaves. *M. parviflora* resembles *M. laevicaulis*, var. *acuminata* except that the flowers are much smaller and the leaves more remotely toothed.

In spite of the presence of the name *M. parviflora* Heller, Bull. Torr. Club, xxv. 199 (1898), I am taking up Douglas's name on the ground that Heller's species is "universally regarded as non-valid" (Art. 50, Int. Rules Bot. Nomencl.). Exception to this may be taken, however, as Wooton and Standley, Contrib. U. S. Nat. Herb. xix. 435-436 (1915) recognized it although remarking, "close to" *M. albicaulis*. However, they maintained the name under the segregate genus *Acrolasia* and no authority has given Heller's species any standing under *Mentzelia*. The name "parviflora," therefore, seems to me available for the plant of Douglas.

Opuntia compressa (Salisb.), comb. nov. *Cactus Opuntia* L., Sp. Pl. 468 (1753). *C. compressus* Salisb. Prod. 348 (1796). *O. Opuntia* (L.) Karsten, Deutsch. Fl. 888 (1882).

In accordance with Art. 55, 2 of the International Rules of Botanical Nomenclature which reads, "Specific names must also be rejected when they merely repeat the generic name" the above new combination is necessary. As the word "compressus" has not before been used as a specific cognomen in *Opuntia*, Salisbury's name is available.

✓ **Oenothera Abramsi**, nom. nov. *Sphaerostigma pallidum* Abrams, Bull. Torr. Club, xxxii. 539 (1905), not *O. pallida* Lindl. Bot. Reg. t. 1142 (1828).

Mrs. Mary F. Spencer has secured a series of specimens of this xerophilous species, which is well differentiated from other related members of the subgenus *Sphaerostigma* by the uniformly appressed pubescence and relatively small flowers.

Oenothera erythra (Davidson), comb. nov. *Sphaerostigma erythra* Davidson, Bull. South. Calif. Acad. Sci. i. 118, pl. 9 (1902).

Although I have seen no authentic material of Dr. Davidson's species, I refer to it with but little hesitation Mrs. Spencer's number

1465 from Palm Canyon, Colorado Desert, California, secured April 7, 1920.

COELOPLEURUM LUCIDUM (L.) Fernald, Rhodora, xxi. 146 (1919).
C. Gmelini (DC.) Ledeb. Fl. Ross. ii. 361 (1844). *C. maritimum* Coulter & Rose, Bot. Gaz. xiii. 145 (1888). *C. longipes* Coulter & Rose, Contrib. U. S. Nat. Herb. vii. 142 (1900).

The attempt to determine an excellent specimen of *Coelopleurum* collected at Harbor, Curry County, Oregon, July 10, 1919, by Prof. Morton E. Peck has brought to light the fact that the genus is monotypic instead of consisting "of 4 or 5 species belonging to the northern coasts of North America and adjacent Asia," as stated by Coulter and Rose, l. c. 141.

Study of the large amount of material in the Gray Herbarium and in the herbarium of the New England Botanical Club shows conclusively that the character "fruit with equal ribs," used by Coulter and Rose to distinguish the plant of the northeastern coast from that of the northwestern, breaks down completely. Specimens from both coasts have fruits with the lateral ribs distinctly broader than the others; and also every gradation from ribs very unequal to ribs equal in size may be observed. Coulter and Rose recognize three species on the western coast, distinguishing them from each other by the size of the fruit and the "obtuse" and "acute or acuminate" leaflets. Clearly if these are valid characters there are several species on the eastern coast as well. For there the same variation in the size of the fruits and the degree to which the leaflets are acute is evident in a large series of specimens.

Prof. Fernald has called my attention to the fact that there is no reason to expect, from a standpoint of range, the western and eastern plants to differ. The range is, in fact, analogous to that of many plants, notably *Elymus arenarius*, var. *villosus*, *Lathyrus maritimus*, *Mertensia maritimus*, *Carex maritimus*, *C. norvegica*, *Poa eminens*, *Senecio pseudo-arnica*, and others. It is interesting to add this showy umbelliferous species to the list.

Gomphocarpus Torreyi, nom. nov. *Gomphocarpus tomentosus* (Torr.) Gray, Bot. Calif. i. 477 (1876), not *G. tomentosus* Buch. Trav. i. 543 (1822).

GOMPHOCARPUS TORREYI Macbr., var. **Xanti** (Gray), comb. nov.
Gomphocarpus tomentosus (Torr.) Gray, var. *Xanti* Gray, Bot. Calif. i. 477 (1876).

It seems strange that no one has observed that the name *tomentosus* was used for an African species (which is valid) long before

this not uncommon *Gomphocarpus* of southern California was discovered. My attention has been called to this in determining some excellent specimens of the species secured by Mrs. Mary F. Spencer at Mesa Grande, San Diego County, in May, 1919.

PHACELIA VIScidA (Benth.) Torr., forma *albiflora* (Nutt.), comb. nov. *Eutoca albiflora* Nutt., Journ. Acad. Nat. Sci. Phil. Ser. 1. ii. 158 (1848). *P. viscosa* (Benth) Torr., var. *albiflora* (Nutt.) Gray, Syn. Fl. ii. 1. 163 (1878.).

My attention has been called to this species by a specimen in a set of California plants received from Mr. W. N. Suksdorf. As it differs from the typical state of the species, with which it may sometimes grow, only in the white corollas, formal rather than varietal designation seems to be more fitting.

✓ *ALLOCARYA STIPITATA* Greene, var. *micrantha* (Piper), comb. nov. *A. stipitata* Greene, subsp. *micrantha* Piper, Contrib. U. S. Nat. Herb. xxii. 94 (1920).

I have discussed the distinctness of the categories variety and subspecies in Contrib. Gray Herb. lix. 1 (1919). Since the plant treated by Piper as a subspecies of *A. stipitata* differs only in the smaller corolla it seems to me not more than a variety.

Piper's revision of *Allocarya* is one of the finest consummated in this family. He may be said to have discovered the specific characters, since, even though to some extent recognized, they have never before been consistently described for each species. Certainly these characters, minute as they are and mostly of the fruit, are remarkably constant, in this respect suggesting those of *Cryptantha* and *Oreocarya*. Thus is added a third genus in this family, as it occurs in western North America, the species of which are often scarcely, if at all, distinguishable by vegetative characters.

Mr. Willard N. Clute, editor of a magazine, "The American Botanist," comments in the May issue, 1920 (page 65) on Piper's revision. Mention is made of this in order that some toiling taxonomist may find delightful relaxation in reading Mr. Clute's paragraph.

SOLANUM XANTI Gray, var. *Spencerae*, var. nov., habitu ignotum. ramulis superioribus viridibus, ut videtur glabris, non patentibus; corollis albis, solum 1.5 cm. latis.—CALIFORNIA: Torrey Pines, near San Diego, March 28, 1919, *Mary F. Spencer* (TYPE, Gray Herb.).

Mrs. Spencer's label records the flowers of this interesting variant as "snow white." The aspect of the specimens is similar to that of the var. *glabrescens* Parish but the corollas are much smaller (and white);

and if one may judge from the way in which the upper branches are borne the habit of the plant is much more compact than is the case with the variety *glabrescens*.

✓ *CASTILLEJA DOUGLASII* Benth., var. **contentiosa**, var. nov., foliis numerosis cinereo-viridibus scabrido-pubescentibus nunc integris nunc trifidis; calyce 19–21 mm. longo antice et postice subaequaliter lobis apice dentatis obtusis; corolla 20–24 mm. longa, tubo circa 1 cm. longo, galea calycem paululum superanti; labii lobis circa .75 mm. longis.—CALIFORNIA: hill near Lompoc, June 11, 1913, *Suksdorf*, 94 (TYPE, Gray Herb.); Gaviota, May 1, 1908, *Eastwood*, 57; country adjacent to Santa Barbara, May 16, 1908, *Eastwood*, 136.

The obvious difference between this variety, apparently restricted to Santa Barbara County, and the typical form of the species is the very seahrous pubescence which is sufficiently dense to give an ashy hue to the foliage. Also, in the specimens examined, the corolla, in proportion to the calyx, is shorter than in true *C. Douglasii*, but this character belongs likewise to *C. Wrightii* Elmer, Bot. Gaz. xli. 322 (1906) which appears to be another variety, not as distinct, however, as var. *contentiosa*. Indeed the disposition of the latter is perplexing but its relationship is surely here. Now, at least, *C. Douglasii* seems to be the proper name for the rather common Indian Paint Brush of western California. Jepson's treatment of it in Fl. W. Middle Cal. 402 (1901) as merely a variety of *C. parviflora* Bong., of Alaska, well-defined by Fernald, Erythea, vi. 41, 43 (1898), is radical. Rather must it be compared with the variable *C. angustifolia* (Nutt.) G. Don typically of the Rocky Mountains and the northwestern United States.

SOLIDAGO RIGIDA L., var. *HUMILIS* Porter, Syn. Fl. Colo. (Dept. Int. Misc. Publ. 4) 63 (1874). *Oligoneuron canescens* Rydb. Bull. Torr. Club, xxxi. 652 (1904).

My attention has been called to this well-marked species by the receipt of an excellent specimen from Mr. I. W. Clokey. The label accompanying the material reads: "3901 *Oligoneuron canescens* Rydb. Dry soil, Jefferson Co., Colorado."

Dr. Rydberg, l. c., in segregating the Rocky Mountain plant from typical *S. rigida*, distributed from the Atlantic states to the Great Plains, mentioned one difference only that obviously was not one of degree, viz., the presence of a few hairs at the summit of the achene. The achenes of the eastern state of the species are, indeed, uniformly glabrous throughout, but some western material, notably, Aven Nelson's no. 8638 from Platte Canyon, Wyoming, has glabrous achenes although the foliage is densely pubescent, the plant in this

respect according with *O. canescens*. Furthermore, it becomes evident, upon examination of many specimens, that the amount of pubescence at the summit of the achenes varies. Accordingly the western form of *S. rigida* appears at most to be a variety, distinguishable, but with no constant character. The smooth achenes of some specimens probably accounts for the suppression by Nelson, Coulter & Nelson, New Man. Ry. Mt. Bot. 507 (1909) of Porter's varietal name, a course certainly less open to censure than Rydberg's treatment which may be said to be fantastic in that even the convenient and logical expression of the group relationship is lost by the maintenance of *Oligoneuron* Small, Fl. S. E. U. S. 1188 (1903).

✓ **Lepachys columnifera** (Nutt.), comb. nov. *Rudbeckia columnifera* Nutt. Fraser's Cat. no. 75 (1813). *R. columnaris* Pursh, Fl. Am. Sept. 575 (1814), or Sims, Bot. Mag. t. 1601 (1814). *L. columnaris* (Pursh) T. & G. Fl. N. Am. ii. 315 (1842). *Ratibida columnifera* (Nutt.) Woot. & Standl. Contrib. U. S. Nat. Herb. xix. 706 (1915).

The diagnosis of *R. columnifera* is meager but since the identity of the plant is not open to question, the specific name is to be taken up. In accordance with Art. 38 of the International Rules of Botanical Nomenclature, *Lepachys* Raf. Journ. Phys. lxxxix. 100 (1819), although a later name than *Ratibida* Raf. Am. Monthly Mag. ii. 268 (1818), is retained since the latter was published "without diagnosis or reference to a former description under another name" and therefore "is not valid."

✓ **Stephanomeria Wheeleri** (Gray) Nels. & Macbr., in herb. *Chaetadelpha Wheeleri* Gray, ex Wats. Am. Nat. vii. 301 (1873). Proc. Am. Acad. ix. 218 (1874).

When Dr. Gray, i. e., proposed his segregate genus *Chaetadelpha* he did so from the view point that "There are so few characters to hold to in the *Cichoriaceae* that we cannot let go those founded on the nature of the pappus. It seems necessary, however undesirable, to admit a third genus of the sort, founded on a single species." The other two genera referred to are *Stephanomeria* and *Lygodesmia*, then, as now, distinguished essentially by the more or less plumose pappus of the former and the eplumose pappus of the latter.

But now that *Stephanomeria* is better known, particularly the variation of *S. exigua*, *Chaetadelpha Wheeleri* is seen to be a species of *Stephanomeria* for its single character, regarded by Dr. Gray as salient, viz. the presence of several bristles toward the base of the pappus, is merely an extreme modification of certain forms of *S.*

exigua in which the pappus-bristles are setulose. *S. Wheeleri* may well constitute yet another section of its genus but its affinity is now so obviously with *Stephanomeria* that its maintenance as a genus for the purpose of holding on to the character that distinguishes this group from *Lygodesmia* is no longer necessary. Apparently Dr. Hall reached this conclusion in 1907 for in describing *Chaetadelpha* in Univ. Calif. Pub. Bot. iii. 260 he wrote: "Similar to *Stephanomeria* with which it is probably congeneric."

VI. RECORDS PRELIMINARY TO A GENERAL TREATMENT OF THE EUPATORIEAE,—II.

By B. L. ROBINSON.

IN the course of recent studies of the Eupatorium Tribe of the *Compositae* the following diagnoses and notes have been prepared for published record.

Eupatorium (§Subimbricata) angulifolium, spec. nov., subglabrum gracile; caule subcompresso glaberrimo; internodiis aliis brevibus 6–10 mm. longis aliis multo longioribus; foliis oppositis petiolatis suborbicularibus ca. 11-angulatis vel breviter lobatis margine argute cuspidato-dentatis basi sinu clauso cordatis tenuissime membranaceis utrinque viridibus glaberrimis subtus paullo pallidioribus ca. 1 dm. diametro penniveniis levissime reticulato-venulosis; angulis acutiusculis ca. 1 cm. altis; dentibus marginis incisis 2–3 mm. altis, 3–5 mm. latis; sinu basilari usque ad 1.5 cm. alto; petiolis 2.4–4.5 cm. longis obsolete puberulis; eis ejusdem jugi basi anguste connexis; corymbis terminalibus compositis; ramis inflorescentiae gracilibus adscendentibus subnudis; bracteis oblanceolatis vix 5 mm. longis; corymbis partialibus 3–6 cm. diametro 6–8-capitulatis; pedicellis subfiliformibus glaberrimis 6–30 mm. longis; capitulis ca. 1–1.2 cm. diametro ca. 75–100-floris; involueri campanulati squamis ca. 50 lanceolatis 3–4-seriatim laxe imbricatis fusco-brunneis striatis acutiusculis minute ciliolatis, maximis ca. 6 mm. longis et 1.3 mm. latis; corollis anguste tubulosis glabris ut videtur albis vel pallidis; tubo proprio ca. 1 mm. longo basim versus dilatato sursum in fauces cylindricas 3 mm. longas vix ampliato; dentibus limbi deltoideis ca. 0.3 mm. longis; achaeniis pallide brunneis 2.5 mm. longis ad angulos sursum scabratibus; pappi setis paucis albis tenuissimis caducis corol-