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STUDIES IN THE BORAGINACEAE.—VI.

A REVISION OF THE SOUTH AMERICAN BORAGINOIDEAE.

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vesting the nutlets and falling away as a bur or persistent with the nutlets falling away individually.—Del. Sem. Hort. Hamburg iv. (1833); Don. Gen. Syst. iv. 373 (1837). *Krynitzkia* F. & M. Ind. Sem. Hort. Petrop. vii. 52 (1841). *Piptocalyx* Torr. in Wats. Bot. King Exped. 240 (1871). *Oreocarya* Greene, Pittonia i. 57 (1887). *Eremocarya* Greene, Pittonia i. 58 (1887). *Greeneocharis* Gürke & Harms in E. & P. Nat. Pflanzenf., Gesamtreg. 462 (1899). *Wheelerella* Grant, Bull. So. Calif. Acad. v. 28 (1906). *Johnstonella* Brand in Fedde, Repert. xxi. 249 (1925).

One of the largest and most perplexing genera of the *Boraginaceae*. It is exclusively American. About two-thirds of the approximately 150 species occur in western United States. In South America the genus is most abundant in Chile with outlying species in Peru, Bolivia and Argentina.

As here defined, the genus includes the North American group of coarse perennials current as *Oreocarya*. My study of the South American species of *Cryptantha* has convinced me that the recognition of *Oreocarya* has been most arbitrary. That group appears to consist merely of the more or less coarse persistent members of *Cryptantha* § *Krynitzkia*. I am convinced that the characters of the sections of *Cryptantha* defined below are much more fundamental than are such "generic" characters as coarseness of habit and persistence of root which must be stressed in justifying the continued maintenance of *Oreocarya*. I do not believe that *Oreocarya* should be recognized unless the primitive, coarse, persistent species and the more evolved, slender, annual ones in the three sections of *Cryptantha* each be given generic recognition. Personally I do not approve of, and certainly will not be responsible for the segregation of 5 weak genera from the currently accepted *Cryptantha* simply to give logical justification for the maintenance of any mere habit-genus as indefinite as *Oreocarya*.

Key to Sections.

Plants not producing cleistogamic flowers; North and South America.....I. § *Krynitzkia* (spp. 1–22).

Plants producing cleistogamic flowers; South America.

Cleistogamic flowers simple, borne in the middle and upper or frequently in all the leaf-axils, occasionally replacing the chasmogamic flowers in the inflorescence proper.
II. § *Eucryptantha* (spp. 23–30).

Cleistogamic flowers highly specialized, appearing as persistent ovoid or lenticular structures (cleistogenes) borne at the base of the plant below or just above the surface of the ground.....III. § *Geocarya* (spp. 31–40).

I. Section Krynitzkia.—This is the largest and most difficult section of *Cryptantha* and is distinguished from the other two sections

of the genus by the complete lack of cleistogamic flowers. It reaches its maximum development in North America, where it is represented by about 100 species. There can be little doubt that in the section are found the most primitive members of the genus. One species, *C. albida*, occurs in both North and South America. The only other approach to this condition is the case of *C. parviflora*. This species, while evidently separable, is very closely related to the North American *C. Grayi* and *C. angustifolia*. The species assembled in the series *Barbigerae* are as a group clearly related to those North American species I have collected under that heading, cf. Contr. Gray Herb. lxxiv. 60–69 (1925). It is interesting to note that whereas the short style overwhelmingly predominates among the North American species of the section, the long style is somewhat more common among the southern members. In North America there are numerous species with smooth polished nutlets; in South America there are only four, all closely related and quite different from the northern forms. *Cryptantha gnaphalioides* is a peculiar shrubby perennial, which would be refered to the genus *Oreocarya* if it grew in North America. In other than its habit, however, it is much like *C. dichita*, *C. hispida* and *C. phaceloides*, species which in some regards are reminiscent of the Californian *C. mohavensis*.

Key to Species.

Nutlets perfectly smooth and shiny, large, 2.8–3.3 mm. long. Chile.
- Plant perennial, shrubby at base. *Gnaphalioides*....1. *C. gnaphalioides.*
- Plant an annual herb. *Phaceloides.*
  - Corolla 7–10 mm. broad; leaves 7–13 mm. broad.....2. *C. dichita.*
  - Corolla 4–7 mm. broad; leaves 2–3 mm. broad.
    - Nutlets 2.....3. *C. hispida.*
    - Nutlets 4.....4. *C. phaceloides.*

Nutlets more or less roughened and dull.
- Nutlets thick with deep plane sides, not crowded, only impinging on one another close to the gynobase and hence separated by open re-entrant sinuses, anterior face occupied by a large triangular (apparently) excavated areola; gynobase narrowly pyramidal; northern Argentina. *Albidae*.....5. *C. albida.*
- Nutlets strongly compressed with angulate or rounded edges, crowded and closely juxtaposed, not separated by open broad sinuses, anterior face with a very small shallow areola; gynobase subulate.
  - Edges of nutlets sharp, with a definite thin margin; abaxial nutlet more or less emphasized, usually largest and most persistent. *Angustifoliae.*
    - Nutlet homomorphous, 1–1.5 mm. long; spikes bracted throughout; Argentina.....6. *C. diplotricha.*
    - Nutlets heteromorphous, 0.6–1 mm. long; spikes bractless or bracted at base only; Chile and Peru..7. *C. parviflora.*

Edges of nutlets merely angled or rounded, not sharp, mostly marginless but more or less thickly margined in a few species; axial nutlet more or less emphasized, usually the largest or most persistent. *Barbigerae.*
Corolla evident or conspicuous, 2–7 mm. broad.
Spikes bractless; Chilean.
Plant persistent, a perennial or long-lived annual; stems becoming prostrate or trailing.
Plant loosely branched, forming a loose broad open mat, pubescence canescent; corolla 5–6 mm. broad.....8. *C. subamplexicaulis.*
Plant densely branched, forming a dense cushion, pubescence silvery; corolla 2–4 mm. broad.9. *C. argentea.*
Plant a short-lived annual; branches short, erect or ascending.
Nutlets homomorphous, obscurely roughened 10. *C. chaetocalyx.*
Nutlets heteromorphous, definitely tuberculate or papillate.....11. *C. filiformis.*
Spikes bracted.
Corolla 2–4 mm. broad; nutlets homomorphous or heteromorphous, 1.3–1.8 mm. long.
Style much surpassing the 4 nutlets; Peru....12. *C. granulosa.*
Style shortly surpassing the 2–4 nutlets; Chile. 13. *C. taltalensis.*
Corolla 5–6 mm. broad; nutlets homomorphous, ca. 2 mm. long; Chile.....14. *C. Romani.*
Corolla inconspicuous or minute, 0.5–1.5(–2) mm. broad.
Spikes bracted; style noticeably surpassing the nutlets.
Fruiting calyx 3–4 mm. long, with narrow erect or slightly spreading lobe-tips; Chile and southern Peru.....15. *C. filaginea.*
Fruiting calyx 5–6 mm. long, with broad decidedly spreading lobe-tips; Peru.....16. *C. limensis.*
Spikes bractless; style equalling the nutlet or just surpassing them.
Nutlets obscurely tuberculate or almost smooth.
Fruiting calyx 8–11 mm. long; nutlets lanceolate, 2.8–3.2 mm. long; plant coarse shaggy-hirsute; Andes of northern Chile.....17. *C. calycina.*
Fruiting calyx 2–3 mm. long; nutlets lance-ovate, ca. 2 mm. long; plant finely strigose or appressed short-hispid; Patagonia.....18. *C. patagonica.*
Nutlets definitely tuberculate or wrinkled.
Back of nutlets tuberculate, coarsely if at all transversely grooved.
Fruiting calyx 2.5–3 mm. long, lobes lance-linear or narrowly lanceolate; Peru.....19. *C. peruviana.*
Fruiting calyx 3–4 mm. long, lobes linear or lance-linear; Chile and Argentina....20. *C. globulifera.*
Back of nutlets with transverse lineate grooves.
Spikes very tawny; fruiting calyx 3–4 mm. long; plant stiff; Chile and Argentina....21. *C. diffusa.*
Spikes green; fruiting calyx 2–2.5 mm. long; plant weak; Bolivia.....22. *C. debilis.*

1. **Cryptantha gnaphalioides** (A. DC.) Reiche. Perennial, 2–4 dm. tall, becoming much branched and shrubby, commonly decidedly

midrib prominent and hirsute, margin appressed villous-hispid; corolla inconspicuous, white, ca. 1.5 mm. broad; fruit 4-ovulate; nutlets 4, homomorphous with the axial one most persistent, lance-ovate, ca. 2 mm. long, ca. 0.8 mm. broad, smooth or more often obscurely tuberculate particularly above the middle, apex acute, base truncate, sides angled, back usually convex below the middle and flat above; groove closed or very narrow, usually with a small areola at the fork; gynobase subulate, $\frac{2}{3}$–$\frac{4}{5}$ height of nutlets; style equalling or shortly surpassing the nutlets.—Contr. Gray Herb. lxviii. 54 (1923). *Amsinckia patagonica* Speg. Anal. Soc. Cient. Argentina liii. 137 (1902).

ARGENTINA. Santa Cruz: very arid desert between Rio Santa Cruz and Rio Gallego, Feb. 26, 1882, *Spegazzini* (G); arid plains along Rio Santa Cruz, Feb. 7, 1882, *Spegazzini* (G, part of type); desert along Rio Chico, Feb. 21, 1882, *Spegazzini* (G); Patagonia, lat. 50°–53°, 1882, *Moreno & Tonini* (NY).

This species, which sets the southern limit of the genus at about lat. 52° S., is probaly most related to the very distinct *C. calycina* of the desert Andes of northern Chile. It has been much misunderstood and has passed under many names. The collection by Moreno & Tonini, above cited, is that reported as *Cynoglossospermum humile* by Kuntze, Rev. Gen. iii. pt. 2, 204 (1898). Spegazzini, Pl. Patag. Aust. 551–552 (1897), and Macloskie, Fl. Patag. 678–679 (1905), treated it as *E. diffusum* and *E. parvulum*.

19. **C. peruviana** Johnston. Annual, slender, 1–2 dm. tall; stem simple or with several long ascending branches, finely short-hispid and frequently appressedly so; leaves narrowly linear, 1–3(–6) cm. long, 1–2 mm. broad, numerous, finely hispid, inconspicuously pustulate, little reduced up the stem; spikes solitary or geminate, 1–5 cm. long, bractless, glomerate then elongating; fruiting calyx ovate, 2.5–3 mm. long, subsessile; mature calyx-lobes lance-linear or narrowly lanceolate, erect, appressed hispid-villous, somewhat hirsute along the weakly prominent midrib; corolla white, inconspicuous, subtubular with a very narrow limb 0.8–1.4 mm. broad; fruit 4-ovulate; nutlets 4 or rarely fewer, homomorphous with the axial one subpersistent and always developing, 1.5–1.8 mm. long, lance-ovate, very coarsely muricate or muricate-rugose, finely granulate, pale, apex acute, edges acute, back convex, groove closed or gradually dilated towards the base; gynobase about $\frac{3}{5}$ length of nutlets; style just surpassing the nutlets.—Contr. Gray Herb. lxxiii. 74 (1924). *C. Weberbaueri* Brand in Fedde, Repert. xx. 318 (1924). *C. cajabambensis* Brand, l. c. 319.

PERU. Ancash: Hacienda Cajabamba between Samanco and Caraz, *Weberbauer 3041* (G, frag. of type of *C. cajabambensis*); rocky places, Ocros,

3200–3400 m. alt., *Weberbauer 2658* (G, frag. of TYPE of *C. Weberbaueri*). LIMA: loose rocks on dry slope above river, Rio Blanco, 3600 m. alt., *Macbride & Featherstone 674* (FM, TYPE of *C. peruviana;* G, ISOTYPE). AREQUIPA: gravelly soil along stream-courses, Arequipa near base of El Misti, 3000–3200 m. alt., *Pennell 13235* (G, FM); ravines and hillsides on southern slopes of El Chachani north of Arequipa, 3350 m. alt., *Hinkley 77* (G, US). MOQUEGUA: open mixed formation, Torata, 2200–2300 m. alt., *Weberbauer 7398* (G, FM).

A Peruvian plant which is very closely related to *C. globulifera* and perhaps is only a phase of it differing in its northern range, slender habit and slightly smaller flower-parts. It sets the northern limit for the distribution of *Cryptantha* in South America, in the Department of Ancash occurring north almost to lat. 9° S.

20. **C. globulifera** (Clos) Reiche. Annual, 1–3(–4) dm. tall; stems few or solitary, usually loosely branched, hispidulous; leaves linear, 1–4 cm. long, 1–2 mm. broad, obtusish, short appressed-hispid, little reduced up the stem; spikes solitary or geminate, bractless, 1–6(–10) cm. long, becoming loosely flowered in age; fruiting calyx ovate-oblong, 3–4 mm. long, ascending, base rounded and very shortly pedicellate; mature calyx-lobes linear or lance-linear, connivent above with the tips somewhat spreading, margins villous, hirsute along the prominent midrib, the hairs all clean and white or only slightly tawny; corolla inconspicuous, white, subtubular, ca. 1 mm. broad; fruit 4-ovulate; nutlets 1–4, homomorphous, ovate-oblong, 1.5–2 mm. long, finely granulate, pale, weakly but densely tuberculate with the tuberculations in more or less broken transverse rows, apex acute, back convex, edges acute below middle and rounded above, groove narrowed or closed but usually with an open fork; gynobase $\frac{3}{4}$–$\frac{4}{5}$ height of nutlets; style just surpassing or a little surpassed by the nutlets. —Anal. Univ. Chile cxxi. 827 (1908) and Fl. Chile v. 232 (1910). *Eritrichium globuliferum* Clos in Gay, Fl. Chile iv. 464 (1849). *E. glareosum* Ph. Linnaea xxxiii. 189 (1864). *C. glareosa* Greene, Pittonia i. 111 (1887); Reiche, l. c. 820 and l. c. 225. *E. carrizalense* Ph. Anal. Univ. Chile xc. 526 (1895). *C. carrizalensis* Reiche, l. c. 819 and l. c. 224. *E. floribundum* Ph. Anal. Univ. Chile xc. 532 (1895). *C. floribunda* Reiche, l. c. 825 and l. c. 230. *E. parvulum* Ph. Anal. Univ. Chile xc. 535 (1895). *E. oliganthum* Ph. Anal. Univ. Chile xc. 535 (1895). *C. oligantha* Reiche, l. c. 819 and l. c. 224. *E. sphaerophorum* Ph. Anal. Univ. Chile xc. 539 (1895). *E. longisetum* Ph. Linnaea xxxiii. 189 (1864) in part; only as to plant from San Felipe which became type of *E. floribundum*, cf. Anal. Univ. Chile xc. 538 (1895).

ARGENTINA. CHABUT: gravelly places along Rio Carren-leofú, March 5, 1900, *Spegazzini* (G). RIO NEGRO: vicinity of General Roca, 250–360 m.

alt., *Fischer 131* (G, US, FM). MENDOZA: vicinity of Mendoza, Nov. 1913, *Hauman 260* (G).

CHILE. SANTIAGO: Las Arañas, Sept. 1861, *no collector given* (MS). ACONCAGUA: San Felipe, Sept. 1861, *Philippi* (MS, TYPE of *E. floribundum;* G, photo.); bed of Rio Aconcagua near San Felipe, Sept. 1860, *Philippi* (MS, TYPE of *E. glareosum;* G, photo.); San Felipe, Aug. 20, 1921, *Claude-Joseph 1408* (US); Rio Blanco, Aug. 25, 1921, *Claude-Joseph 1346* (US). COQUIMBO: common on coastal dunes, La Serena, Sept. 1836, *Gay 47* (G, frag. and photo. of TYPE of *E. globuliferum*); gravelly talus, Los Llanos, Estero de Guanta, ca. 1400 m. alt., *Johnston 6246* and *6247* (G); Paihuano, Sept. 1878, *no collector given* (MS). ATACAMA: Bandurrias, *Geisse* (MS); Desert of Atacama [? Bandurrias], *Geisse 58a* (NY); Chañarcillo, Sept. 1885, *no collector given* (MS; G, photo.); Yerba Buena, 1885, *Godoi de Collao* (MS, TYPE of *E. carrizalense;* G, photo.); Caldera, Sept. 1885, *no collector given* (MS, TYPE of *E. parvulum;* G, photo.); Caldera, Sept. 1879, *no collector given* (MS, TYPE of *E. sphaerophorum;* G, photo.); between Caldera and Copiapó?, *no collector given* (MS, TYPE of *E. oliganthum;* G. photo.); Piedra colgada, Sept. 1885, *no collector given* (MS; G, photo.); Vizcachitas, Oct. 14, 1914, *Rose 19336* (US, NY).

A somewhat variable but a natural and readily recognized species. It is not improbable that with the accumulation of study-material the species as here defined may be broken up into several minor species of restricted distribution. The material from Coquimbo is more tawny, coarser and more spreading than other forms. As here interpreted the species is notable since it is the only member of its genus generally ranging at low altitudes which occurs both in Argentina and Chile. Possibly the axial nutlet is slightly emphasized. However, in a number of cases, I found it aborted and the abaxial one developing.

21. **C. diffusa** (Ph.), comb. nov. Annual, 8–20 cm. tall; stems commonly several to many, ascending, strictly branched, hispid; leaves linear or lance-linear, 1–3.5 cm. long, 1–2.5 mm. broad, obtuse, numerous, weakly reduced up the stem, finely appressed-hispid, very obscurely if at all pustulate; spikes solitary or geminate, bractless, 1–5(–8) cm. long, glomerate but in age becoming rather loosely flowered, tawny; fruiting calyx ovate or oblong-ovate, 3–4 mm. long, ascending, base rounded and very shortly pedicellate; mature calyx-lobes lanceolate to linear-lanceolate, connivent above, at times with tips spreading, margins villous, the prominent midrib hirsute, the hairs usually very conspicuously tawny; corolla inconspicuous, subtubular, white, ca. 1 mm. broad; fruit 4-ovulate; nutlets 1–4, homomorphous, ovate-oblong, 1.5–2.2 mm. long, pale, finely granulate, obscurely tuberculate, marked by 6–12 more or less sinuous deep lineate transverse grooves and hence broadly wrinkled, apex acute, back flattish or obscurely obtuse or convex, edges angled, groove narrow or closed; gynobase $\frac{3}{4}$–$\frac{4}{5}$ height of nutlets; style just surpassed by or just surpassing the nutlets.—*Eritrichum diffusum* Ph.

Linnaea xxxiii. 191 (1864) and Anal. Univ. Chile xc. 523 (1895). *E. difusum* Ph. in Villanueva, Anal. Univ. Chile liii. 444 (1878), nomen. *E. micranthum* Ph. Fl. Atac. 38 (1860) and Viage Des. Atac. 80 and 212 (1860); not *E. micranthum* Torr. (1854) nor *C. micrantha* Johnston (1925). *E. Borchersii* Ph. Anal. Univ. Chile xc. 531 (1895). *C. Borchersii* Hauman, Anal. Soc. Cient. Argentina lxxxvi. 302 (1918). *E. globuliferum*, var. Ph. Anal. Univ. Chile xc. 524 (1895). (?) *C. famatinae* Brand in Fedde, Repert. xx. 318 (1924).

ARGENTINA. MENDOZA: Baños del Inca, Jan. 15, 1886, *Borchers* (MS, TYPE of *E. Borchersii;* G, photo.); Rio Tupungato, 2300 m. alt., *Hauman 271* (G); Mendoza, Jan.–Feb., *Goldsack* (MS).

CHILE. COQUIMBO: Cordilleras de Illapel, 2500 m. alt., Jan. 1906, *Reiche* (MS); in andiis Hurtado, Feb. 1837, *Gay 1622* (MS, badly diseased); "Huanta, Baños del Toro, etc.," 1860–61, *Volckmann* (MS, TYPE of *E. diffusum*; G, photo.); Doña Ana, *Peralto* (MS); Baños del Toro, 3500 m. alt., *Werdermann 220* (G, FM); Cordilleras de Coquimbo, Jan. 1904, *Reiche* (MS). ATACAMA: rocky burnt-over place, Rio Sancarron below Rucas, 3200 m. alt., *Johnston 6224* (G); loose earth in quebrada, Laguna Grande, 3450 m. alt., *Johnston 5924* (G); Quebrada de Serna, 1885, *San Roman* (MS); gravelly slope below Portezuelo Tolar, Sierra San Miguel, 3800 m. alt., *Johnston 4949* (G); stony benches, Quebrada Tolar, Sierra San Miguel, 3500 m. alt., *Johnston 4951* (G); upper part of Quebrada San Miguel, 2500–2800 m. alt., *Johnston 4932* and *4933* (G); near Los Marayes, Sierra San Miguel, 1100–1500 m. alt., *Johnston 4918* and *6282* (G); rocky draw, Potrerillos, 2800 m. alt., *Johnston 4728* (G); abandoned field, Los Alamos, Quebrada de Potrerillos, 2400 m. alt., *Johnston 3697* (G); Agua de Acerillo, Oct. 1877, *Villanueva* (MS). ANTOFAGASTA: Sandon, 2700 m. alt., Feb. 1854, *Philippi* (MS, TYPE of *E. micranthum;* G, photo).

Clearly related to *C. globulifera* but differing in its lineately transverse-grooved nutlets, usually conspicuously tawny spikes and high montane distribution. Though there is some intergradation between the two species it is rare. Commonly they are distinguished at a mere glance. In *C. diffusa* no particular nutlet seems to be emphasized nor always developing.

22. **C. debilis** (Ph.) Reiche. A weak slender annual, 1–1.5 dm. tall, with a few very loose well developed branches, sparsely hispidulous; leaves linear or oblanceolate, spreading, distant, 2–3 cm. long, 2–4 mm. broad, quite herbaceous, sparsely hispidulous, obtuse, upper ones scarcely if at all reduced; spikes geminate or solitary, spreading, 2–3 cm. long, bractless, becoming very loosely flowered; fruiting calyx broadly ovate, 2–2.5 mm. long, 1.5–2 mm. broad, base broad and very shortly pedicellate; mature calyx-lobes lanceolate, herbaceous, sparsely appressed-villous, weakly hirsute along the non-prominent midrib; corolla inconspicuous, white, subtubular, ca. 1 mm. broad, fruit 4-ovulate; nutlets 4, homomorphous, ovate-oblong, 1.5–1.8 mm. long, pale, very finely granulate, tuberculate or becoming

papillate towards apex, marked by 6–12 deep more or less sinuous lineate grooves and hence broadly transverse-wrinkled, apex acute, back convex, edges acute, groove closed or narrow; gynobase reaching to about $\frac{4}{5}$ height of nutlets; style just surpassed by nutlets.—Anal. Univ. Chile cxxi. 830 (1908) and Fl. Chile v. 235 (1910). *Eritrichium debile* Ph. Cat. Pl. Itin. Tarapaca 57 (1891).

BOLIVIA. Potosi: Paroma, ca. 3800 m. alt., Feb. 25, 1885, *F. Philippi* (MS, TYPE; G, photo.); Chiguana, 3700 m. alt., March 22, 1921, *Asplund 5898* (US).

Obviously a close relative of *C. diffusa* and perhaps only an extreme form of it. The two collections cited agree uncommonly well in gross aspect and technical characters. They come from about 450 km. north of the northernmost known station of *C. diffusa* and differ from that species in the weak widely branched habit and smaller broader non-tawny fruiting calyces. No particular nutlet seems to be emphasized in this species.

II. Section Eucryptantha.—This section seems to be a very natural one. It is apparently derived from the section *Krynitzkia* and in turn seems to have given rise to the section *Geocarya*. With the exception of *C. glomerulifera* and *C. capituliflora*, two high Andean species that extend into western Argentina, it is restricted to Chile. It is characterized by the presence of very numerous simple cleistogamic flowers. These are specialized only in having closed corollas. At maturity the fruiting calyx is quite similar to that characteristic of the chasmogamic flowers of the particular species. Frequently these cleistogamic flowers are slightly smaller than the chasmogamic ones. They appear to be invariably biovulate whereas the chasmogamic flowers, commonly biovulate, are sporadically 4-ovulate. They are always developed in the leaf-axils along the middle and upper parts of the stem, and frequently also down to the lowermost pair of leaves and even into the spikes where they sometimes develop to the exclusion of all chasmogamic flowers. In the leaf-axils, while occasionally solitary, they commonly form small few-flowered glomerules. Occasionally these glomerules elongate but then are readily distinguished from the true spikes by their laxness and abundant bracting. The chief classificatory difficulty in this section is associated with the species, *C. glomerata*. Here the relative abundance of the cleistogamic and chasmogamic flowers varies enormously and makes profound changes in the general aspect.

Key to Species.

Plant definitely perennial.
  Fruiting calyx small, 2–2.5 mm. long; nutlets ca. 2 mm. long.
    Glomeruliferae. . . . . 23. *C. glomerulifera*.