

WESTERN PLANT STUDIES. IV

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Plagiobothrys Harknessii (Greene), n. comb.—*Sonnea Harknessii* Greene, Pitt. 1: 23. 1887.—Quite distinct from *P. Kingii*, its nearest relative, as GREENE has well shown (*l.c.*). The following representative collections indicate that its range is much greater than originally supposed. NEVADA: Eagle Valley, Ormsby County, June 10, 1902, C. F. Baker (1046); CALIFORNIA: Sierra County, 1875, J. G. Lemmon (794); OREGON: near Desert Well, 8 miles south of Big Springs, July 5, 1894, J. B. Leiberg (403).

Plagiobothrys foliaceus (Greene), n. comb.—*Sonnea foliaceus* Greene, Pitt. 1: 222. 1888.—This seems to be a well marked species, the dorsal depression of the nutlets being particularly unique, but it is apparently still known only from the original collection.

The maintenance of *Sonnea* Greene (*l.c.* 22) does not seem to be at all desirable. Although, as pointed out by GREENE, the character of the scar in this group is somewhat different from that of the other species of *Plagiobothrys*, the plants are habitually the same when one takes the genus into consideration in its entirety. Moreover, the scar character is not so characteristic in all the species as might be desired if they are to be removed from true *Plagiobothrys*. In this connection JONES has called attention to the fact that *P. Jonesii* (*S. Jonesii* [Gray] Greene) is an *Amsinckia* in everything but its white flowers (Contrib. West. Bot. 12: 57. 1908). The pubescence of *P. Jonesii* and the tessellated nutlets surely suggest a relationship to *A. tessellata*, but the white and short corollas that are so widely at variance with the long yellow ones of *Amsinckia* are perfectly congeneric with the SONNEA section of *Plagiobothrys*. Altogether, *Sonnea* would seem superfluous in a group of genera already merging, but which, with *Sonnea* eliminated, seem well enough marked when dealt with in their aggregates.

Cryptantha vinctens, n. sp.—Annual, 10–15 cm. high, rather sparsely pilose or hispidulous, the leaves more or less papillose;

leaves essentially oblong, 1-2 cm. long, 2-3 mm. broad: inflorescence about 1 cm. long, peduncled, terminating the main stem and its lateral branches, mostly 2-forked, close even in age: corollas minute: calyx persistent and often in fruit very finely appressed-hispid, without a lens appearing silky; sepals ovate-lanceolate, 2.5-3.5 mm. long, the midrib pronounced but not cartilaginous: nutlets 3-4, nearly 2.5 mm. long, mainly ovate, lustrous brown, or gray-spotted with brown, very smooth, acutely angled, but not margined; groove closed or slightly open near the forked and closed base.

Rocky slopes Malheur Valley, near Harper Ranch, Oregon, alt. 1100 ft., June 10, 1896, *J. B. Leiber* 2235 (type in Gray Herb.).

This specimen was distributed as *C. submollis* (Gray) Coville (*C. utahensis* [Gray] Greene), and that species is its nearest ally. However, the perfectly smooth, less sharply angled nutlets, with closed or nearly closed groove, and the larger sepals are some of the characters which forbid its being referred to *C. utahensis*. The larger calyces suggest *C. mohavensis* Greene, but in that species and in its near relative *C. oxygona* (Gray) Greene the flowers are conspicuous and the nutlets broader and acutely margined. *C. vinctens* and *C. utahensis* occupy positions analogous to those of *C. mohavensis* and *C. oxygona*, except that the two former are more distinct from each other than are the two latter. Furthermore, *C. vinctens* and *C. Bartolomaei* Greene (the only other member of the group) are (as pointed out by GREENE in regard to his species) connecting links between the smooth-fruited species in the deciduous calyx and persistent calyx groups. *C. Bartolomaei* is apparently confined to Lower California, and there it is unique in its pubescence and minute nutlets. None of the species, except *C. vinctens*, has been secured farther north than Utah or Nevada, the distribution of the group apparently centering in the desert areas of the southwest.

Oreocarya dura, n. sp.—Perennial, the single caudex densely clothed with leaf bases of many years: stems usually single, 1-1.5 dm. high, strigillose and densely hispid with widely spreading hairs: leaves oblanceolate or nearly oblong, about 3 cm. long and 5 mm. wide, not greatly reduced on the stem except in the inflorescence and there bractlike, densely shaggy with an indument of fine tangled hairs almost concealed by numerous pustulate-based spreading hirsute hairs: inflorescence a thryoid glomerule: calyx densely hispid with greenish yellow hairs, the linear divisions about 4.5 mm. long, a little longer than the corolla tube: corolla white; appendages prominent: fruit unknown.

Although it is not possible to state definitely the relationship of this plant, since the fruit is not known, it is probably nearest those species characterized by muriculate not at all rugose nutlets, such as *O. Shantzii* and *O. nana*. However, its shaggy pubescence and simple perennial caudex mark it as distinct from any species of the short corolla section of the genus. The type, in the Rocky Mt. Herb., is *E. T. Johnson* 418, 1907, Central Colorado.

***Oreocarya propria*, n. sp.**—Cespitose perennial: branches of the woody caudex densely clothed with the bases of past seasons' leaves: leaves numerous, 3–6.5 cm. long, half of this length gradually narrowed from the spatulate blade portion into a petiole which abruptly widens into a fibrosely woolly base; stem leaves mostly much reduced and bractlike; pubescence very appressed, finely strigose, on the upper leaf surfaces, also sparsely hispid, the appressed hispid hairs inconspicuously pustulate at base: stems 1–2 dm. high, floriferous above the basal leaves: inflorescence spikelike, consisting of axillary racemes or clusters, the lower often reduced to a single flower in a leaf axil: calyces on distinct pedicels, strigose and densely covered with spreading yellowish bristles; divisions linear, open in fruit, 3–5 mm. long: corolla white, the tube very slightly exceeding the calyx: nutlets ovate, 3–4 mm. long, evenly roughened with very fine intersecting and sinuous ridges, so as to appear irregularly foveolate; ventral groove enlarging toward the base.

This species is most closely related to *O. nana* Eastw. It is very distinct, however, in its racemose inflorescence, with different pubescence. The old leaves are covered with argillaceous soil in which the plant grew. OREGON: Vale, Malheur County, May 14, 1896, *J. B. Leiber* 2049 (type in Gray Herb.); chalky hillsides, Malheur Valley, near Harper Ranch, June 8, 1896, *J. B. Leiber* 2223.

***Amsinckia carinata*, n. sp.**—Foliage, pubescence, calyx, corolla, etc., of *A. vernicosa* H. and A.: nutlets lustrous, smooth, very dark gray with a few darker markings, not less than 5 mm. long, not at all triquetrous, the angles obtuse (almost rounded), the back somewhat concave but distinctly carinate by reason of a raised but rounded ridge; ventral surface sharply keeled, the acute edge, including the linear scar, ending abruptly near the base where there are two distinct depressions, giving the impression of an open bifurcation.

OREGON: rocky soil, Malheur Valley, near Harper Ranch, alt. 1100 ft., June 10, 1896, *J. B. Leiber* 2234 (type in Gray Herb.). It is surprising indeed to find a representative of this alliance so far north. *A. grandiflora* Kleeb, the species which *A. carinata* so closely simulates in habit, has not been collected north of San Francisco or Monterey. The Oregon species does not seem to differ from *A. vernicosa* except in its fruit; it is only related to *A. grandiflora* in a general way; its nutlets are radically different from both. Mature nutlets of *A. vernicosa* are bright gray, speckled with black, 4-4.5 mm. long, sharply triquetrous (like monster buckwheat grains), and with no obvious scar.

Mertensia Palmeri, n. sp.—Apparently tufted on a woody root: stems ascending, 2-3 dm. high, ciliate-hirsute: leaves ciliate-hirsute below, minutely hispid above; radical leaves ovate, obtusish, 2-5 cm. long, on stout petioles somewhat shorter; stem leaves broadly ovate, 5-10 cm. long, cuneately tapering to the acute apex, the stout margined petioles very short: inflorescence appressed-strigose, paniculate, few-flowered: calyx cleft to the base; the sepals linear-lanceolate, 6-7 mm. long: corolla with broad tube only as long as the calyx, the limb with rather strongly dilated throat and nearly 1 cm. long.

The type was collected somewhere in Arizona by *E. Palmer*, 1869 (no other data). It was distributed as *M. paniculata* Don.? It is deposited in the National Herbarium, the sheet bearing the accession no. 46975, and apparently is related to *M. pratensis*, but is remarkable because of the hirsute stems.

TETRACTEA COULTERI Gray, var. *angustifolia* (Wooton and Standley), n. comb.—*Tetradlea angustifolia* Wooton and Standley, Contrib. Nat. Herb. 16:170. 1913.—Usually readily distinguished from the species by the narrowly oblong leaves. *T. Coulteri* varies in leaf shape considerably, however, and its leaves are often as strongly toothed as are those of the variety. The narrow leaved plants exhibit no other differences that are worthy of note and that may not be found in any representative series of the species.

At present known only from southern New Mexico, by *E. O. Wooton* (*l.c.*); and more recently by *A. Davidson*, of Los Angeles, who secured specimens at Summit, October 1, 1900, no. 352a, and at Duncan, September 1, 1902, no. 1078.

A new section of *Pentstemon*

In BOT. GAZ. 55:381. 1913 we published a species of *Pentstemon* (*P. rex*) in which the anther cells remain closed and saccate at the apex. As stated there, this character seems to have been noted