

## V.

## MISCELLANEOUS BOTANICAL CONTRIBUTIONS.

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THE following notes and characters relate mainly to Californian botany, the writer having been engaged in the preparation of the *Gamopetalæ* for Professor Brewer's Botany of California, now printing. Some of the observations are such as could not well be recorded in that work; and the characters of certain new genera and species may appropriately be introduced to the botanical world in a continuation of the "Contributions" which have from time to time been communicated to the Academy, and published in its Proceedings. My first note has reference to two plants of the Atlantic United States, which have long been confounded.

*SEDUM PUSILLUM* Michx. Glauco-pallidum, 1-3-unciale; foliis alternis teretiusculis oblongis (lin. 2-3-longis); floribus ad summitatem ramorum laxè cymosis tetrameris; pedicellis petala alba oblongo-ovata acutiuscula subæquantibus; folliculis elongato-oblongis stylo brevissimo subito apiculatis; seminibus ovali-oblongis. — On granite rocks; Flat Rock near Camden, South Carolina, Michaux; Stone Mountain, Georgia, W. M. Canby, 1869, and A. Gray, 1875. This little plant I found on Stone Mountain, in great abundance from the base to near the summit, in full blossom on the 19th of April last. Fruiting specimens were sparingly collected at the same station in May, 1869, by Mr. Canby, who, however, did not distinguish it from *Diamorpha pusilla* Nutt., which accompanies it, but is most abundant towards and upon the summit of this singular granitic mountain. I cannot learn that the true *Sedum pusillum* has been elsewhere seen, except, long ago, by Michaux. But the two are probably associated at other stations. At least they must be so at Flat Rock. For there Nuttall collected, in winter, old fruiting specimens of the plant he described in his *Genera Plantarum*, p. 110, as "*Tillæa? cymosa* (*Sedum pusillum* Michx.)," and on p. 293 as "*Diamorpha pusilla* (*Sedum pusillum*

May, 1875, Lemmon. A congener of *E. glaberrima* Torr., which also appears to have a white rather than yellow corolla. Plant 1 to 3 inches high, slender. Leaves 2 to 5 lines long and with petiole of almost equal length. Peduncle and raceme filiform; pedicels mostly shorter than the calyx; the latter in flower one line, in fruit two lines long. Very short and small style deciduous from the capsule. Seeds less than half a line long.

HARPAGONELLA, Nov. Gen. *Borraginacearum*.

Calyx inequalis obliquus, e sepalis 3 a basi solutis immutatis, 2 alte connatis in cucullum fructiferum dorso glochidiatum auctis. Corolla tubo brevissimo subrotata, lobis æstivatione imbricatis, fauce fornicibus obtusis instructa. Stamina brevia, tubo inclusa: antheræ minimæ, ovatæ. Stylus brevis: stigma subcapitatum. Ovarii segmenta subglobosa, gynobasi planiusculæ affixa, duo abortiva; ovula in fertilibus erecta, anatropa, foramine infero. Nuculæ 2, collaterales, læves, oblongæ vel subclavatæ, ab areola parva adscendentes, una nuda sæpe infertilis, altera major intra cucullum calycinum 6-7-cornutum (cornibus undique patentibus setis uncinatis armatis) arcte clausa. Semen nuculæ conforme, basifixum: cotyledones ovatæ, radícula brevi infera vel centripeta. — Herba pusilla, annua, *Pectocaryæ* facie; foliis linearibus, pedunculis sparsis brevibus extra-axillaribus post anthesin deflexis, floribus minimis, corolla alba. (Benth. & Hook. Gen. Pl. 2, p. 846, adhuc ined.)

HARPAGONELLA PALMERI. — Guadalupe Island, off Lower California, 1875, Dr. E. Palmer. A slender and sparingly branched annual, 2 to 5 inches high, cinereous-hirsute. Leaves linear, an inch or less long, and the floral gradually reduced to bracts a line or two long. Peduncles in fruit a line long, stout, and strongly recurved. Calyx in flower barely a line long, 5-parted, except between two of the sepals, which coalesce to the middle; below the sinus of the coalescent divisions is an external tufted appendage, which at length develops into the soft-spiny horns. Short style slender to the base. Gynophore not elevated. The two lobes of the ovary on the side of the flower next to the three nearly separate and unchanged sepals (which we may designate the lower side of the flower) are uniformly and early abortive; the other portion of the calyx accrescent, and soon gibbous-involute into a sort of coriaceous burr, of about 2 lines in length, armed with a few (usually 7) spiny horns, of a line or two in length, which spread in all directions, and are beset for nearly their whole length

with short and very stiff backwardly hooked bristles; the burr closing on the ventral side, and completely covering a fertile nutlet: the other nutlet is free, and is certainly sometimes fertile, but more commonly, although enlarging, it seems to fail to mature a seed. The adaptive character of this little plant, viz., the transference of the burr-like apparatus for the dissemination of the seed from pericarp to the calyx, and the investment by the latter of only one of the two ripening nutlets, is most remarkable. The habit is that of *Pectocarya*, with which it is associated upon the island; but the structure is very different.

ECHIDIOCARYA, Nov. Gen. *Borraginacearum*.

Calyx 5-partitus; segmentis linearibus, fructiferis laxis. Corolla infundibuliformis, sub fauce nuda parum constricta, lobis æstivatione imbricatis. Filamenta brevissima: antheræ oblongæ. Ovarii lobi gynobasi vix elevatae impositi: stylus brevis: stigma didymum. Nuculæ 4, latæ, ovato-pyramidatae, inermes, subrugoso-muriculatæ, dorso ventroque carinulatæ, carina ventrali apice breviter producta, areola basilari late concava in stipitem longe producta, stipitibus infra medium per paria connexis introrsum apertis gynobasin conicam claudentibus; cicatrice lata excavata post nuculas delapsas in gynobasi relictæ. Semen breve, leviter curvum: cotyledones latæ subplanæ. — Herba annua, diffusa; foliis (oblongo-linearibus) floribusque *Eritrichii* sect. *Plagiobothridi* referentibus, corolla parva alba vel cærulescente. (Char. maxima ex parte e Benth. & Hook. Gen. Pl. 2, p. 854, adhuc ined.).

ECHIDIOCARYA ARIZONICA. — Verde Mesa, Arizona, Dr. Smart.

CONVOLVULUS (CALYSTEGIA) OCCIDENTALIS. Aut glaber, aut minute pubescens, volubilis; foliis nunc ovato-triangularibus sinu profundo angustò nunc lanceolato-hastatis immo lineari-sagittatis, lobis posticis sæpe 1-2-dentatis; pedunculo elongato intra bracteas ovatas vel oblongas quandoque bifloro; corolla alba vel erubescens, limbo lato; stigmatibus fere linearibus. — Common throughout the western part of California, on and near the coast. The more luxuriant and broader-leaved forms so much resemble *C. sepium* that only the shape of the stigmas surely distinguishes them. But I have never seen *C. sepium* with a second flower, while this often has two, and rarely even three from the pair of bracts. The Californian species abundantly confirm Mr. Bentham's remark in the Flora Australica, that the characters of *Calystegia* are too artificial, and it may now be added too transitional, to warrant the adoption of the genus.