

BULLETIN
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§ 92. New Species of Plants, chiefly New Mexican.

By EDWARD LEE GREENE.

ASTRAGALUS GILENSIS.—*Argophylli*; perennial; subcaulescent, white-silky with a fine, closely-appressed pubescence; peduncles numerous, slender, scape-like, bearing a short, dense, subcapitate raceme; corolla 3 lines long, pale blue; pod 3 lines long, coriaceous, silky-pubescent, ovate, not obcompressed nor either suture at all impressed.

On a high summit at the mouth of the canyon of the Gila River, in New Mexico. April, 1881.

Plant with the habit of *A. Missouriensis*, but very much smaller every way, and very distinct by characters of flower and fruit.

ASTRAGALUS MOGOLLONICUS.—*Mollissimi*; perennial, nearly stemless, densely clothed with yellowish, woolly pubescence; peduncles short, scape-like; racemes dense, subcapitate; flowers large, greenish-yellow and purple; pod 4 lines long, nearly cylindrical, completely 2-celled, hardly at all incurved, very densely white-woolly.

Bleak, grassy summits of the middle elevations of the Mogollon Mountains in New Mexico, flowering in April, 1881.

As compared with its nearest ally, *A. Bigelovii*, the plant is a dwarf, being barely a span high. Its still smaller pods are much more densely woolly, and nearly straight in maturity, in which latter character, however, the species is at variance with the rest of the *Mollissimi*.

POTENTILLA SUBVISCOSA.—Ascending, a span to nearly a foot high, clothed sparingly with straight, villous hairs, and with a denser coat of short, viscid-glandular ones; leaves digitate; leaflets 5, cuneate-oblong, $\frac{1}{2}$ —1 inch long, the margin with close, oblong, not very deep lobes; cyme very loose; pedicels slender, an inch long, deflexed after flowering; petals yellow, 4–5 lines long, nearly twice the length of the calyx-lobes, and narrow; carpels about 12.

On a dry southward slope of the Mogollon Mountains, flowering in April, 1881.

A well-marked species, peculiar in having two so distinct kinds of pubescence as to make it both soft and clammy to the touch. The narrowness of the petals is also quite remarkable, some of them appearing almost oblanceolate.

MEGARRHIZA GILENSIS.—Leaves deep green on both sides, not at all glaucous, somewhat scabrous above, smooth beneath, orbicular-cordate, the sinus mostly closed, 5–7-lobed almost to the base, the divisions not broader above, entire, or with a single pair of large teeth a little above the middle, each lobe and tooth tapering to an acute, or a slender point; fertile flowers with rudiments of stamens; fruiting pedicels slender, an inch or two long; fruit an inch in diameter, globose, with a rounded base and sharply beaked or pointed apex, clothed usually very densely with soft spines, some of which

are straight, others hooked, 4-celled, 4-seeded; seeds somewhat flattened, broadly ovate or more or less irregularly orbicular, attached to the outer side of the cell near the base.

Growing in deep sand on the banks of the Upper Gila River and its tributaries, climbing high over willows, flowering in February and March.

Specimens collected several years since, at Willow Springs, Arizona, by Dr. Palmer, are, by Mr. Watson, identified with this. Mr. H. H. Rusby obtained the same in flower only in a canyon of the San Francisco River in the same Territory, a few miles above the confluence of that stream with the Gila; but the material whence this description is drawn, was obtained by the writer in March and April of this year, at a locality still further east, namely, the canyon of the Upper Gila in Grant County, New Mexico, within fifteen miles of the dividing ridge between the Pacific and Atlantic slopes of the continent. The species is most nearly related to *M. muricata*, Watson; but that has its leaves strongly glaucous beneath, with lobes widening above and showing a continuously-toothed margin, fertile flowers without abortive stamens, and with fruit which is nearly or quite smooth. Its globose, marginless seeds are also peculiar. Mature seeds of *M. Gilensis* have not, indeed, been seen, but in the fruits collected in April they were full grown and partially hardened, showing the flattened, irregularly-orbicular outline of those of *N. Marah*, Watson, between which and *M. muricata* this new species will have to be placed.

SENECIO CARDAMINE.—Completely glabrous; radical leaves on slender petioles, cordate-orbicular or -ovate, the margin sinuate-denticulate, the under surface purple, the upper dark green and marked with conspicuous, whitish or purple veins, those of the stem remote and inconspicuous, from lyrate-pinnatifid to triangular-lanceolate, all with a broad clasping base; stems a span to a foot high; heads of middle size, solitary or 3-5 corymbosely arranged; involucre 3 lines long, scarcely calyculate; rays about 8, rather pale yellow.

On cold northward slopes of the higher Mogollon Mountains. April, 1881.

In the dried specimen the color of the rays has become almost gold-yellow, and the plant seems closely to resemble certain common states of *S. aureus*, L., a species which also abounds in the Mogollon Mountains, running into many variations. From all these, however, the living plant here characterized differs so strikingly in aspect that when I first saw it, showing the leaves only, I judged it to be some species of *Cardamine*, and was greatly surprised when, in flowering, it manifested itself a *Senecio*. The dark-colored, beautifully-veined leaves lie flat upon the ground, and have strongly the appearance of those of *Cardamine purpurea*, Torr. & Gray.

SENECIO HOWELLII.—Less than a foot high, all the younger parts white with a dense close wool, much of which disappears with age; leaves rather long-petioled, the lowest ovate to oblong with margins sinuate-toothed, the upper oblong-lanceolate in outline, and irregularly-pinnatifid; heads few, large, in a terminal corymb; involucre 5 lines long, naked at base, scales broad and rather obtuse; rays 8-

ro, oblong-linear, yellow; style-branches with a short sparse fringe around the base of the nearly truncate tip, which bears a stout, apparently deciduous, central bristle.

Collected on the upper Columbia River in Oregon, June, 1881, by T. J. Howell.

A most interesting ally of the rare *S. Greenei*, Gray. The remarkable central bristle of the style-tips is not found save in the young flowers, whence I infer it to be deciduous.

POLYGONUM (AVICULARIA) PARRYI.—Annual, 2–3 inches high, diffusely branched, stems smooth and sharply angled; leaves $\frac{1}{2}$ –1 inch long, linear, acute, 1-nerved; bracts similar to the leaves; sheaths broad and rather large, parted half way down into a fringe of setiform, crisped lobes; flowers sessile, a line or less long; akenes chestnut-brown, very smooth and shining.

Yosemite Valley, California, June, 1881. Collected by Dr. C. C. Parry.

Near to *P. imbricatum*, Nutt, which it closely resembles; and, since the locality has been gleaned by nearly all the botanists who have collected in the State, it will not be strange if the species has been collected by others and referred to *P. imbricatum*. It is only under a lens that the excellent characters, found in the stipules and akenes, become apparent. Mr. Watson, however, assures me that nothing like this has before been received at Cambridge.

Berkeley, Cal., July, 1881.

§ 93. New or Little-Known Ferns of the United States. No. 10.

By D. C. EATON.

31. ASPIDIUM TRIFOLIATUM, Swartz.—This is another of Mr. A. H. Curtiss's interesting discoveries in Florida. He found it on a rocky hummock in Hernando County, in the middle of April last, and secured a sufficient stock for distribution in his Fascicle II of Florida Ferns. This species belongs to a different section of the genus from any other of our North American species of *Aspidium*. The section is named *Euaspidium* in *Synopsis Filicum*, and is characterized by the ferns composing it (only 7 or 8 in all) having ample foliaceous fronds or pinnae, with copiously-reticulated veinlets and the orbicular indusium of § *Polystichum*. Mr. Baker's diagnostic character of the species reads thus: "Stalks tufted, 1 foot or more long, brownish, scaly only at the base; fronds 12–18 inches long, 6–12 inches broad, with a large ovate-acuminate terminal pinna narrowed or forked at the base, and one or two lateral ones on each side, the lower mostly forked; texture papyraceo-herbaceous; primary veins distinct to the edge; areolae fine, copious, with free included veinlets; sori in rows near the main veins; involucre one line broad, orbicular, peltate." The range is from Florida, Mexico and Cuba throughout South America to Brazil and Peru. It is a common fern in those countries, and presents some diversities in the shape or cutting of the pinnae. The smaller specimens are three-lobed or trifoliate, whence the specific name, originally bestowed by Petiver and Linnaeus. Plumier called it "*Hemionitis maxima trifolia*," and gave a good account of it, and an acceptable figure in his classic work on American Ferns.