

long or more: flowers yellow, 4 lines long: pod compressed-globose (replum circular), 2 to 4 lines long, sessile upon a more or less flexuous pedicel 4 to 8 lines long: style very slender, about 2 lines long. — Near Yreka, California, E. L. Greene, 1876; Multnomah County, Oregon, T. J. Howell; White Bluffs of the Columbia, Washington Territory, T. S. Brandege. The allied *V. montana* of the Rocky Mountains has the looser and less silvery pubescence evidently stellate, and oblong or oblong-ovate acute capsules.

**DRABA (CHRYSODRABA) HOWELLII.** Perennial with a branching caespitose base, the scape-like flowering stems about three inches high, sparingly stellate throughout: leaves rosulate, broadly spatulate, rarely obtusely toothed, 3 to 5 lines long: racemes loose, the large bright yellow flowers on slender ascending pedicels 3 to 5 lines long; sepals yellowish,  $1\frac{1}{2}$  lines long; petals 3 to 4 lines long: pod pubescent, oblong, acute, 4 or 5 lines long including the long slender style (a line long). — Siskiyou Mountains, California, Thomas Howell, June, 1884. Resembling forms of *D. alpina*, with larger deep-yellow flowers and longer long-beaked usually unsymmetrical pods.

**ATAMISQUEA EMARGINATA**, Miers (Trans. Linn. Soc. 21. 2, t. 1). This Capparidaceous species, originally discovered by Miers in the province of Mendoza, of the Argentine Republic, and credited to California in Coulter's collection, has been recently found by Mr. Pringle upon the sandy plains bordering the Altar River in Northwestern Sonora. It is here a large shrub, or sometimes a small tree, 15 or 20 feet high, and differing in no respect from the South American form.

**CERASTIUM SERICEUM.** Stems numerous, stout, 1 to 2 feet high, very leafy and densely silky-villous below, branching and glandular-pubescent above: leaves oblong-lanceolate, sessile, an inch or two long, the lower densely villous, the upper less so: panicle spreading and loosely flowered: sepals oblong or lanceolate, scarcely acute, 2 lines long, equalling the petals: capsule nodding, more than twice longer: seeds strongly tuberculate. — Collected in the Huachuca Mountains, Arizona, at 8,000 feet altitude, by Mr. and Mrs. J. G. Lemmon in 1882, and in the Santa Rita Mountains by C. G. Pringle in 1884. The seeds are twice larger and much more coarsely tuberculate than in *C. nutans*, to which it has been referred, though bearing little real resemblance to it.

→ **ARENARIA (ALSINE) HOWELLII.** A widely branching annual, about a foot high, glandular-hispid, but the internodes usually glabrous: leaves thick, narrowly lanceolate or linear with a clasping base, 6 to 9 lines long, blunt, spreading; bracts green, triangular-ovate to lanceo-

late: pedicels slender: calyx-lobes nerveless, margined, acutish, a line long; petals twice longer, narrowly oblong: capsule ovate, a little exceeding the calyx, 8-seeded: seeds nearly black, turgid, with several rows of minute tubercles along the rounded margins. — In the Coast Mountains, near Waldo in Southwestern Oregon, Thomas Howell, June, 1884. A stouter plant than *A. Douglasii*, and differing in its greater glandulosity, broader leaves and bracts, smaller flowers with nerveless calyx, and narrower capsule, and in the seeds.

**TALINUM BRACHYPODUM.** Perennial, the roots thick, elongated, not tuberous, and the caudex bearing several short leafy stems (1 to 2 inches long): lower leaves scale-like, the upper linear, 3 to 5 lines long: flowers few, axillary near the summit, on very short pedicels (1 or 2 lines long) jointed near the base: sepals acutish, 2 lines long, the bright pink petals twice longer or more: capsule ovate, 2 lines long. — A dwarf showy species allied to *T. aurantiacum*, with nearly sessile flowers. Found near the Indian village Laguna, or "Komack," in Northwestern New Mexico, by Mr. and Mrs. J. G. Lemmon, July, 1884.

**CALANDRINIA OPPOSITIFOLIA.** Root very thick and fleshy: radical leaves linear-oblongate, attenuate to the scarious-margined subterranean base,  $1\frac{1}{2}$  to 3 inches long, the lower cauline (1 to 3 pairs) opposite and similar, with occasionally scattered entire bracts above: stem 3 to 10 inches high, simple or branching, and bearing one or more terminal mostly 3-flowered umbels: pedicels elongated (1 to 3 inches long): sepals orbicular (3 or 4 lines long), acutely dentate but not glandular; petals 10, white or pinkish, 5 or 6 lines long: stamens 8 to 12 or more: style deeply 3-cleft: capsule oblong, 3 lines long, 5-10-seeded. — Collected by Thomas Howell at Waldo, Oregon, and in the Coast Mountains of Del Norte County, California, near Smith River.

**CALANDRINIA COTYLEDON.** Perennial, with thick roots and a stout rootstock crowned with a dense rosette of fleshy spatulate or oblanceolate leaves 1 or 2 inches long and  $\frac{1}{2}$  to 1 inch broad: scape-like stem bearing 2 or 3 lanceolate subscarious bracts below the short cymose panicle, 4 to 8 inches high; bracts glandular-ciliate; pedicels short: sepals orbicular, 2 lines long, many-nerved, the nerves excurrent and gland-tipped; petals 10, deep rose-color, oblanceolate, 6 lines long: stamens 7, equalling the petals, the filaments dilated below and somewhat coherent: style elongated; stigmas 3 or 2: ovary narrowly oblong,  $1\frac{1}{2}$  lines long, 3-4-valved; ovules 12 to 20. — A pretty and well-marked species, collected by Thomas Howell in the Siskiyou Mountains, Del Norte County, California, near the head of Illinois

River, June, 1884. Its resemblance in habit to small species of *Cotyledon* suggests the specific name. In this species, as in *C. Leana* and some others, the stigmas are often two, instead of three, and the capsule 2-4-valved.

**CALYPTRIDIMUM QUADRIPETALUM.** Loosely branching from the base and prostrate, with broad spatulate leaves 1 to 3 inches long by 3 to 8 lines broad: racemes axillary and terminal, scorpioid and nearly naked: flowers nearly sessile and mostly imbricated, the round-reniform sepals conspicuously nerved and scariously margined, the longer 2 to 4 lines broad, exceeding the four oblong or round-ovate nearly equal petals: stigmas broad, nearly sessile: capsule oblong, 3 lines long, 12-20-seeded. — On the head-waters of Eel River in Lake County, California, Volney Rattan, June, 1884. It was also collected by Dr. Torrey in the same county in 1865, and referred in the Botany of California to *C. roseum*. It differs from the other species in the increased number of petals, and its broader sepals give it somewhat the appearance of *Spraguea*, which genus now rests only on its three exerted stamens and the elongated style.

**MALVASTRUM FOLIOSUM.** Stout, tall and erect, simple above and leafy to the summit, densely and coarsely stellate-pubescent throughout: leaves thick, broadly ovate, subcuneate at base, shortly or obscurely 5-lobed, the lobes acute and acutely dentate,  $1\frac{1}{2}$  to 2 inches long, on petioles a half-inch long; flowers nearly sessile in axillary nearly sessile panicles shorter than the leaves; bracts filiform: calyx 6 to 8 lines long, the lobes attenuate; petals purplish, little exceeding the calyx: carpels round-oblong, smooth, a line long. — Allied to *M. densiflorum*, more leafy above, more abundantly pubescent, the leaves not cordate at base, acutely lobed and toothed, the panicles somewhat less dense, and shortly peduncled. Found at Santo Thomas, on the coast of Lower California, by C. R. Orcutt, September, 1884.

— **SIDA ALATA.** Erect, 3 to 6 feet high or more, branching, densely stellate-tomentose: leaves ovate to oblong-ovate, cordate at base, acute or obtusish, 1 to  $2\frac{1}{2}$  inches long, exceeding the petioles: pedicels slender, axillary, mostly solitary, exceeding the petioles, jointed above the middle: calyx-lobes acuminate; petals purplish, 5 lines long: carpels numerous, the small dark-colored triangular coriaceous body (1 line long) bicostate on the back, strongly reticulated on the sides, dehiscent at the summit and bearing two broad membranous crests 2 lines long: seed dark-colored. — A remarkable species on account of the early development of the upper portion of the valves of the carpels into free wing-like crests, in which respect it resembles *Cristaria*. But the

carpels do not separate from a persistent basal disk as in that genus, and there seems to be no good reason for excluding it from *Sida*. Collected by C. G. Pringle in Sonora, Mexico, about one hundred miles south of the boundary, in a low range of hills thirty miles from the Gulf.

**ABUTILON AURANTIACUM.** Woody at base, the herbaceous stems  $\frac{1}{2}$  to 2 feet high, pubescent and somewhat villous: leaves densely soft-tomentose, velvety and whitish, round-cordate, acute, the rounded basal lobes overlapping, unequally serrate,  $\frac{1}{2}$  to  $1\frac{1}{2}$  inches broad, shorter than the petioles: flowers axillary and solitary, on villous-pubescent pedicels, which are as long as the petioles and mostly jointed near the base or the lower above the middle: calyx-lobes broadly ovate, acute; corolla bright orange, 6 to 9 lines long: calyx and fruit villous-pubescent; carpels 10, abruptly short-beaked, 3-seeded, 4 lines long, about equalling the calyx. — On Todos Santos Bay, Lower California, by C. C. Parry, January, 1883, and at Tia Juana, by C. R. Orcutt, in May of the same year.

**ABUTILON PARISHII.** Stout, branching from the base, the herbaceous stem (2 feet high or more), branches, and petioles more or less villous with reflexed hairs and tomentose: leaves on slender elongated petioles, covered with a dense fine apparently not stellate pubescence, white or whitish beneath, darker above, cordate-ovate with a deep narrow sinus, acute or acutish, coarsely and unequally toothed, 1 or 2 inches long: pedicels axillary, short, 2 to 6 lines long in fruit, jointed above the middle: calyx thinly tomentose, green, 3 lines long, the lobes lanceolate; petals orange, 4 to 6 lines long: carpels thinly pubescent, somewhat villous along the dorsal suture, 4 lines long, with a divergent narrow beak a line long. — On the foothills near Lowell, Arizona, W. F. Parish, May, 1884, and in the Santa Catalina Mountains, C. G. Pringle, April, 1884. Near *A. Wrightii*, but stouter, the leaves on longer petioles and more coarsely toothed, the pedicels shorter, calyx much smaller and less tomentose, etc.

**ABUTILON LEMMONI.** Perennial, the stout half-woody branching stems 1 to 2 feet high, hoary throughout with a very dense short stellate pubescence, its stellate character scarcely perceptible on the calyx: leaves cordate to cordate-lanceolate, acute or slightly acuminate, dentate, the blade usually an inch or less (sometimes two inches) long, about equalling or shorter than the slender petioles, slightly greener above: peduncles axillary, solitary, shorter than the leaves, jointed near the top: calyx with broadly ovate acute lobes; corolla yellow or orange, small (3 to 4 lines long): carpels about 9, acute, 4 or 5 lines