New Plants from Wyoming, XIV

By Aven Nelson

Eriophorum ocreatum

Culms growing singly, from the corm-like crowns of the short slender rhizomes, the base sheathed in old leaf bases, subterete, finely striate, smooth, slender, 2–3 dm. high: sheaths 2–3, 2–3 dm. long, all blade-bearing; blades folded-channelled, obscurely roughened on the margins, broadly linear, rather rigid, short, 5–10 cm. long, tapering to a triangular point, leaves of the involucre 2–4, the longer usually erect and surpassing the inflorescence: spikelets 3–6, subumbellate, the longer-peduncled drooping: scales oval or ovate, obtuse or scarious-lacerate, brown, not obviously veined: bristles numerous, glistening-white, 4–6 times as long as the scales: akene broadly obovate, obtuse, dark brown (nearly black).

This species is most nearly allied to *E. polystachyon* L., but is readily distinguished from it by its more slender habit, shorter and fewer leaves, generally fewer and larger heads, longer and more glistening-white bristles, very different scales and akene. In its few, long-vaginate, short leaves, and in its akene it reminds one of *E. vaginatum* L. In its slender culm which often greatly surpasses the uppermost leaf it suggests *E. gracile* Koch. It is probably a rare plant as thus far I have seen but two collections of it. The type was secured in an open, grassy, subalpine park in the Medicine Bow Mountains, Lincoln Gulch, August 8, 1900, no. 8014.

Hemicarpha aristulata (Coville)

Hemicarpha micrantha aristulata Coville, Bull. Torrey Club, **21**: 36. 1894.

Annual, glabrous, culms few to several, erect, 8–15 cm. high, filiform or capillary, exceeding the capillary leaves: involucral leaves 2–3, unequal, 5–20 mm. long: spikes 2 (sometimes but 1), ovoid, 3–5 mm. long: scales rhombic, acuminate, the body nearly 1 mm. long, scarious-margined, some of the margins turning brown, with a green midrib and inconspicuous nerves; the acumination green, subulate, somewhat spreading, nearly as long as the body of the scale or in the lower ones exceeding: sepal large, as long as the ovule, obtuse or even with a truncate or toothed apex: filament barely exceeding the ovule: style short, its

branches inconspicuously if at all barbellulate: akene obovoid, shorter than the body of the scale.

The above description had been drawn before I was aware of Mr. Coville's variety of *H. micrantha* Vahl, which does not appear in Heller's recent Check-list of North American plants. After carefully considering all that appears in Mr. Coville's excellent and complete discussion of the genus I am still of the opinion that the plant deserves specific rank. Besides the characters pointed out by Mr. Coville which separate it from *H. micrantha*, decided differences in size and form of the floral structures are to be noticed. The following collection greatly extends the range of this species. It was found in a moist, sandy cañon, altitude 2000 m., in company with *Cyperus inflexus*. Halleck cañon, Albany county, July 4, 1900, no. 7428.

Juncus saximontanus

J. xiphioides montanus Engelm. Trans. Acad. Sci. St. Louis, **2**: 481; Bot. Calif. **2**: 290.

As there is a variety *montanus* of *J. Balticus*, this plant, which seems well to deserve specific rank as well as a separate name within the genus, may take the above as indicating its center of distribution.

Trifolium scariosum

Densely caespitose, silvery or cinereous-pubescent throughout, becoming greener and more glabrate with age; the caudex freely branched and clothed with the dead petioles; stemless or nearly so: leaves crowded on the crowns; the leaflets narrowly linear-oblong, widest at the middle and tapering gradually to each end, 1.5–2.5 cm. long, sessile or nearly so; the petioles slender, from twice to several times as long as the leaflets: peduncles surpassing the leaves, like the leaves prostrate-spreading or ascending: the adnate portion of the stipules broad, sheathing, scarious-margined; the free portion linear-acuminate, reduced to merely the greenish midrib, less than 1 cm. long: involucre usually (always?) present, of several very unequal scarious-margined linear-lanceolate segments: heads globose, rather few-flowered: calyx-tube short, narrow-campanulate; its teeth linear, unequal, exceeding or often twice as long as the tube, purple as is also the upper portion of the tube: corolla purple, fading in drying; the standard broadly elliptic, equaling and enclosing the wings which exceed the keel petals: pod 6-ovuled, fewer seeded: the style slender, as long as the pod.

I propose this species as a segregate from *T. dasyphyllum* T. & G. That species was described from James's collections from "Summit of the Rocky Mountains." Specimens from similar situations agree with the original in the brownish pubescence, the absence of an involucre (usually so at least), and the subequal calyx teeth. *S. scariosum* is a larger plant with whiter, more permanent pubescence, a conspicuous scarious involucre, the segments of which are marked by a green midrib. Its petals are uniformly reddish-purple or shading to violet when fresh, while the petals of *T. dasyphyllum* differ in color from each other, the standard being whitish or ochroleucous, barely tinged with purple, the wings and tip of the keel a deep purple hue. The latter, as already stated, occurs in alpine stations while *T. scariosum* occurs at middle elevations, mostly on very stony slopes in the foothills. It is often found on naked ledges where the roots find no soil except in the crevices. Probably not very rare, at least is not in southeastern Wyoming. No. 7270, Laramie Hills, June 20, 1900, is taken as the type.

This seems so strangely characterized that one may venture to name it in the absence of mature fruit. The inflorescence in appearance is much like that of *A. Canadensis*, but of course it cannot even be placed in the same section.

I have met with this plant but once and then it was found in the greatest abundance in the sand dunes of the Red Desert, at the base of Steamboat Mt., Sweetwater county, collected June 9, 1900, no. 7051.

MERTENSIA CILIATA **longipedunculata**

Size of the species, stems more freely branched, stem and branches few-leaved, terminating in long naked peduncles: calyx lobes oblong, subacute, ciliate-margined.

This variety is very common along the streams of eastern Wyoming and apparently occurs at lower altitudes than the species. No. 7321, Chug Creek, Albany county, June 30, 1900, as well as many earlier collections represent it.

Mertensia coriacea

Very leafy from base to summit, tufted, the numerous glabrous stems assurgent, 2–3 dm. long: leaves thick, coriaceous, smooth on both faces except for the flat-topped papillae on the upper sur-

face and on the margins (these are probably the pustulate bases of deciduous hairs); root-leaves numerous, oblong or elliptic, mostly obtuse, 4–8 cm. long, on somewhat shorter petioles; the lower stem-leaves oblanceolate or broadly spatulate, obtuse, tapering into a short petiole, passing into sessile ovate leaves upward; those of the inflorescence crowded, from lanceolate to broadly ovate, acute, 3–5 cm. long: flower-clusters terminal and in the axils of the upper leaves, crowded even in the fruit: calyx-lobes triangular-lanceolate, subciliate, from ⅓ to ½ as long as the tube; of the corolla, somewhat enlarged in fruit: corolla tube 5–6 mm. long, the very villous ring ⅓ its length from the base, the crests in the throat and the 10-toothed ring at the base evident; limb funnelform, only slightly spreading, usually exceeding the tube; the orbicular lobes less than half its length: filaments inserted in line with the crests, membranous, spatulate, as broad or broader than the somewhat longer anthers: seeds 2–3 mm. long, ovate, coarsely rugose.

I have sought in vain for any near ally for this truly alpine species. It was collected about the summits of the Medicine Bow Mts., Albany county, Wyoming, Aug. 1, 1900. It occurred in the rock-slides, mostly in the vicinity of snow banks. The type no. is 7870.

Mertensia coriacea dilatata

Very similar, leaves less coriaceous: inflorescence more open and less leafy: sepals lance-linear, longer (especially in fruit): filaments shorter, dilated, mostly broader than the anthers.

This variety is readily distinguished from the species in the field but less readily in the dried state when the texture of the leaves is not so evident. In herbarium specimens the greater leafiness, especially of the inflorescence, and the broader sepals of the species in contrast with the opener and less leafy inflorescence and the narrower sepals of the variety are the most obvious points of distinction. The habitat of the variety is in general the same as that of the species and it was secured at the same time; no. 7844.

Mertensia coronata

Tufted, from large friable roots: stems glabrous, shining, assurgent, 2–4 dm. long: leaves numerous, large for the plant, smooth below, minutely scabrous above (the hairs very short and curved and sometimes early deciduous from the small pustulate bases); the radical on petioles 2–3 times as long as the oblong,

mostly obtuse blades (5–10 cm. long); the lower stem-leaves similar, tapering into short petioles, the upper ovate-lanceolate, subacute, sessile: flower-clusters terminal and axillary, at length open-paniculate among the large floral leaves: calyx cleft nearly to the base, the lobes triangular-lanceolate, sparingly ciliate, more than half as long as the corolla-tube: corolla tube rather broad, about 5 mm. long, not noticeably hairy within near the base; limb a little shorter than the tube; the lobes suborbicular, abruptly dilated from the rounded sinus: stamens inserted a little below the conspicuous crown of crests in the throat; filaments as long as the anthers, dilated, as broad or broader than the anthers which do not equal the lobes of the corolla.

Probably somewhat related to *M. papillosa* Greene and in some points to *M. foliosa* A. Nelson, but not very closely to either. It seems to be confined to the Leucite formations of south-central Wyoming, occurring among the rocks on the buttes of the Leucite Hills. Collections as follows: Sweetwater county, June 9, 1900, no. 7071 (type); Steamboat Mt., same county and date, no. 7072; N. Vermillion Creek, July 24, 1897, no. 3593.

CASTILLEJA ANGUSTIFOLIA **dubia**

The woody caudex short, giving rise to few or several, slender, simple, ascending or erect stems, 2–3 dm. high: pubescence sparse, cinereous, consisting of fine puberulence and some white, soft hairs: the body or axis of the leaf linear, 3–5 cm. long, 3–5 mm. broad, usually with 1 or 2 pairs of widely divergent linear lobes which are one third to one half as long as the leaf: bracts shorter, the blade and lobes relatively broader and tending to become scarious, decidedly yellowish or at the summit bright yellow: calyx about 2 cm. long, equally cleft to nearly one third its length: corolla scarcely longer than the calyx; the galea and tube subequal; lip almost wanting, not noticeably saccate, truncate and short-toothed.

C. angustifolia Don. is really a species of the far Northwest Its history and characters are well set forth by Mr. M. L. Fernald in Erythea, 6: 46. In the specimens cited, two from Wyoming are included which possibly are similar to those now before me. While it seems possible that the variety here proposed might properly be constituted a species, yet, as Mr. Fernald's description is drawn, I find no good differences except the yellow color, scantier pubescence (especially in the inflorescence), shorter corolla and sparser leafiness and the longer more open spike in the variety.