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ON SO-CALLED *SILENE MENZIESII*.

BY EDWARD L. GREENE.

The original specimens of what Sir William Hooker in his *Flora Boreali-Americana*, published as a rather dubious member of the genus *Silene*, under the name *S. Menziesii*, were from the shores of Puget Sound. Within the hundred years and more that have passed since Menzies gathered this, plants of just this type have been collected from almost every part of the western half of North America, and all the way from the humid seaboard woods and hills to the banks of little streams coursing down the slopes of desert mountains in the remote and arid interior of the continent; from the level of the sea to near the alpine summits of the Rocky Mountains and a thousand miles inland. No type of higher plant life remains specifically one and the same throughout so vast a range, and so great a diversity of geological and climatic conditions; and, quite as we should expect, these inland plants from one region and another, differ both from the original type, and from one another so widely and variedly that no unbiased mind would ever regard them as being all one *Silene Menziesii*. A low almost matted one from Idaho, at a point 8,000 feet above the sea, looks like Chickweed; another from 11,000 feet in Colorado, looks more like *Arenaria lateriflora*, while a third away up in Assiniboia resembles one of the most upright and delicate of *Stellarias*. A prolonged and careful study of the material of this kind now extant in the larger herbaria has made the distinguishing of eighteen species of this aggregate a necessity; and the characters of them have lately been given in Volume One of my *Leaflets*. The group is out of all harmony with *Silene*, as even Hooker felt, when he had but the one species in hand. It is every way more like either

Arenaria or *Stellaria*, except that the capsule alone is that of *Silene* rather; and I have named the genus *Anotites* in allusion to the absence of those ear-like appendages of the petals seen in *Silene* and in many another allied genus.

The herbarium specimens of the Canadian Geological Survey have been of great service in this study, and about four of the species already described are known to me only as in that collection, and as belonging to the Canadian side only of the International Boundary. That list is now raised to five by virtue of a new one more recently collected by Mr. Macoun, *A. picta*, the first account of which is herein published. With the description of this, I have thought it well to give the essential characters of all the Canadian species as I at present understand them; appending to such a key to the species, the notes of habitat furnished by the labels in the herbarium.

*Stems nearly upright, not slender.

Internodes 1 1-2 to 2 inches long, the lower retrorse-villous, the upper with spreading gland-tipped hairs; leaves as long as the internodes, elliptic lanceolate, acuminate *A. Menziesii*.

Internodes hardly an inch long, all devoid of gland-tipped hairs and retrorsely pubescent: leaves short and broad, not acuminate but cuspidately acute..... *A. latifolia*.

* * Stems upright, slender.

Stems terete, almost glabrous below, above glandular-hairy: leaves narrowly elliptical; cyme open, leafy: calyx-teeth detoid-ovate, abruptly acutish. *A. tereticaulis*.

Stems 4-angled, below retrorsely villous, above with gland-tipped hairs. leaves oblanceolate to elliptic, very acute: calyx-teeth triangular-lanceolate, acute *A. tenerima*.

* * * Stems lower, decumbent or even diffusely branched.

Stems terete, sparsely leafy, below scantily retrorse-pubescent, above glandular-hairy only: leaves elliptic-lanceolate, acute; flowers in an open leafy-bracted cyme: calyx-teeth triangular-subulate *A. picta*.

Stems 4-angled, very leafy, all the pubescence glandless and retrorse: leaves lanceolate or lance-linear, very acute..... *A. debilis*.

A. MENZIESII (Hook.) Greene, Leaf. i. 98. Along the seaboard and western slope of mountains generally in British Columbia, Oregon and Washington; also apparently in Northern Idaho. Almost the longest species, and with long pointed foliage commonly spreading, when well mature, having flowers and capsules in an ample cyme.

A. LATIFOLIA, t. Greene, l. c., known only from woods about

Yale, B. C., as collected by Mr. Macoun, Geol. Sur. N. 61,314, Under ground growth apparently different from that of *A. Menziesii*, and the leaves short, broad, not long-pointed; flowers few, not cymose but scattered in the axils of leaves.

A. TERETICAULIS, Greene, l. c. 105. Of this I know but a single specimen, Herb. Geol. Surv. n. 10,123, from Waterton Lake, Alberta, 1895, by Mr. John Macoun, but the characters of the species are excellent, the stems with no trace of angularity, and openly dichotomous from the middle, the inflorescence therefore ample, but leafy.

A. TENERRIMA, Greene, l. c. 104. This is remarkable for extremely thin vivid green foliage, and the whole plant, even to the 4-angled stems is very slender and delicate, the scattered flowers on the most slender of pediceis in the axils of the leaves. Notwithstanding its slenderness and delicacy the plant appears to be upright. The specimens are from Medicine Hat, Assiniboia, by Mr. Macoun, June, 1904, the fine herbarium sheet being numbered 3,090.

A. DEBILIS, Greene, l. c. 104. A low small depressed and much branched herb., nearly as delicate as the last, as different as possible as to mode of growth, the angles of the stem almost uncinat-prickly in a very delicate fashion, the very lowest internodes somewhat villous downwards. The species is another of Mr. John Macoun's gathering in Assiniboia, June, 1895, from Farewell Creek in the Cypress Hills, the number, 10124.

A. PICTA, sp. nov. Loosely tufted, ascending 8 to 10 inches high, the stems terete, dichotomous, leafy and floriferous from below the middle but loosely so, the internodes often of more than twice the length of the leaves, the lower with a minute and scanty retrorse pubescence, the upper and the pedicels with as minute but more copious and spreading gland-tipped hairiness: larger leaves little exceeding an inch in length, spreading, elliptic-lanceolate, very acute, sparingly and retrorsely scabro-pubescent on both faces: reduced leaves of the cyme ovate-elliptic, the pedicels short, the lower not exceeding the leaves; calyx small, oval, the triangular-subulate teeth erect or connivent and wholly red-purple: petals small.

Hector, B.C., 4th Aug., 1904, J. Macoun, Geol. Surv., n.

64,707, the type. This species bears a remarkable likeness to the common chickweed as that appears in its later and fructiferous development. It is akin to *A. alsinoides* of Idaho, yet very distinct.

AN ALPINE VARIETY OF *CNICUS MUTICUS*.

By M. L. FERNALD.

Cnicus muticus of our eastern swamps and low woods is a tall loosely branched plant with numerous scattered heads, the involucre of which are whitened with dense cobwebby hairs. This plant is frequent in southern New England, and in the more northern States and adjacent Canada it becomes one of the conspicuous elements of lowland vegetation.

On the alpine tableland of Mt. Albert in the Shickshock Mountains, a low simple-stemmed *Cnicus* abounds in boggy spots. Ordinarily only 3-6 dm. tall and very strict, with the 3 to 5 showy heads sessile in a terminal glomerule, the plant suggests at first sight some species very remote from the tall loosely branched *C. muticus* of low altitudes. In its dark purplish-green nearly glabrous involucre the plant is likewise quite different from typical *C. muticus* with its strongly white-arachnoid bracts.

On Mt. Albert the plant, as stated, is strict and low, but when it occasionally descends from the alpine tablelands and follows the rivers which have their sources in the Shickshock Mountains it becomes very tall. Thus, in alluvial thickets of the Little Casapedia River the plant, retaining its simple habit and glomerulate heads, becomes 1.6 m. high. As far as known to the writer this characteristic plant is confined to a limited area in eastern Quebec, where it is usually constant to the peculiar characters described. Occasional plants from adjacent territory are similar in habit but with the involucre quite as arachnoid as in typical *Cnicus muticus*. On this account and in the absence of any constant character in the foliage or in the form and texture of the bracts the plant should be considered an extreme variation of the widely distributed *C. muticus*, and on account of its great development in the alpine regions of Mt. Albert it may be called

CNICUS MUTICUS (Michx.) Pursh, var. *monticola* var. nov. Caule



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