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PARONYCHIA ARGYROCOMA AND ITS NEW ENGLAND REPRESENTATIVE.

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ONE of the plants most familiar to all botanists who explore the White Mountains is the closely matted silvery-white perennial which is called in our floras *Paronychia argyrocoma*. In certain sections, as in Crawford Notch and on some of the mountains of adjacent Maine, the plant abounds on slides and even on exposed ledges and steep embankments seemingly to the exclusion of other vegetation. Notwithstanding its profusion in some districts, the plant seems to have been missed by Menasseh Cutler, William Dandridge Peck, Jacob Bigelow, and other New England botanists in their explorations of the White Mountains; and its first mention is apparently that of William Oakes who wrote:

"This beautiful plant was probably first collected in the Notch of the White Mountains, by Drs. Chapman and Alexander, in the summer of 1843. In the same year, I found it in the gravel of many of the recent slides of the Notch, and Mr. Tuckerman has since found it in unmoved soil on a flat rocky knoll, near the summit of Mount Crawford, several miles distant from the Notch. It has not been found elsewhere north of Virginia."¹

Gradually the known stations in New England for *Paronychia* have increased, and we are now acquainted with it from the mountains of Oxford County, Maine, west through the Crawford Notch region to Mount Clinton, and south to Mount Chocorua. In June, 1884, a singularly isolated station for the plant was found by Dr. Castelhun

¹ Oakes in Hovey's Mag. xiii. 217 (1847).

by the Merrimac River near Newburyport, Massachusetts, indicating that the plant has possibly washed down from some unverified station at the headwaters of the Merrimac.

Outside this very restricted area *Paronychia* is unknown in the Northern States. Since its discovery in Crawford Notch in 1843, it has, however, been supposed to be identical with the plant of the South described by Michaux as *Anychia argyrocoma*, "in rupibus montium superioris Carolinae,"¹ and afterward taken up by Nuttall as *Paronychia argyrocoma* and stated to grow "on rocks, in the mountains of upper Carolina, and on the banks of French Broad river, in Tennessee, near the thermal springs."² Subsequently the plant of the South has been found at various mountain-stations of North Carolina and Tennessee, locally south in the mountains of Georgia, and north to the Peaks of Otter in western Virginia.

In the region between the Blue Ridge of Virginia and the White Mountains of New Hampshire *Paronychia argyrocoma* is unknown (save at the small isolated station near Newburyport); yet, as already implied, the plant of the South is as characteristic of many dry summits and slopes at the southern extremity of the Appalachian system as is its northern representative in the White Mountains. North of the White Mountains the plant is quite unknown, nor does it occur in the polar regions. In fact, the genus *Paronychia* does not belong to the arctic flora which we find so generally represented on the exposed slopes of the White Mountains; instead, it is a genus confined primarily to the warmer temperate regions, in North America thirteen species occurring south of latitude 35°, and only one as far north as New England.

This very evident affinity of a typical plant of the naked slopes of the White Mountains with a distinctly southern flora is, so far as known to the writer, quite without parallel. In many cases typical White Mountain plants are also known at the highest altitudes in the Southern States, as for instance *Arenaria groenlandica*, *Lycopodium Selago*, *Potentilla tridentata*, and *Pyrus americana* above 6000 feet on Roan Mountain, North Carolina; but in northern New England and adjacent Canada these plants are often as abundant at sea-level as at high altitudes, and in their broad range they occur extensively in polar

¹ Michx., Fl. i. 114 (1803).

² Nutt., Gen. i. 160 (1818).

regions. Another typical plant of the White Mountains and of some exposed ridges in central and western Maine, *Geum Peckii*, has by some botanists been taken for an extreme form of the very local *G. radiatum* of the highest summits of North Carolina and Tennessee, and though the White Mountain plant is undoubtedly nearly related to the Carolinian species, both it and *G. radiatum* are more closely allied to certain polar species (of Alaska and Siberia) than to other American plants.

This digression from the discussion of *Paronychia argyrocoma* itself is sufficient to show, as already stated, that the occurrence over a considerable area of the granitic mountains of New England of this representative of a characteristic southern genus is unique; and one is naturally led to ask whether, indeed, the plants of the South and the North are identical. Superficially they are very similar; yet in examining a large series of specimens one is struck with the fact that in the northern plant most if not all the ascending branches bear inflorescences, while in the southern plant many of the branches are merely leafy and sterile. In the southern plant, too, the leaves are flat and permanently covered with grayish silky hairs; in the northern the leaves are inclined to be involute at the margin and glabrate, though in the Newburyport specimen the pubescence is somewhat persistent. In the southern plant the inflorescence is more inclined to be glomerulate than in the northern, though occasional southern specimens show the looser cymes which are characteristic in the North. The only other character in which a distinction has been found is likewise an inconstant one; yet in a series of specimens there is a very apparent tendency in the northern plant to have a slightly shorter calyx than the southern, and the subulate awns nearly or quite glabrous; while in the longer calyx of the southern plant the awns are flattish and usually hairy.

It is apparent, then, that the two plants which have been passing as *Paronychia argyrocoma* are not strictly identical. Their distinctive characters are, however, somewhat inconstant, and only by its narrower glabrate leaves can the northern plant be clearly separated from the southern. In view of this character of the northern plant and the other tendencies which are found in most of the material it seems desirable to distinguish it as

PARONYCHIA ARGYROCOMA (Michx.) Nutt., var. *albimontana*, var. nov. Dense caespitosa; ramis plerumque floriferis; foliis glabratiss,

marginè involutis; cymis saepe laxis; calycibus 3.5–4 mm. longis, sepalis apice aristato-mucronatis, aristis subulatis glabrescentibus.—MAINE, clefts of rock, summit of White Cap Mt., Rumford, 1874 (*Cora H. Clarke*), August 1, 1889 (*J. C. Parlin*); mountain-top, Andover, 1902 (*Mrs. E. Schneider*); summit, Caribou Mt., Mason, 1898 (*L. A. Lee*): NEW HAMPSHIRE, slides, Mt. Clinton—TYPE (*E. Tuckerman*); Crawford Notch, 1843 (*Dr. Chapman, Wm. Oakes*), July 20, 1865 (*Wm. Boott*), July 7, 1878 (*E. & C. E. Faxon*); open summit and slides, Mt. Willard, July, 1889 (*M. L. Fernald*), July 4, 1889 (*E. & C. E. Faxon*), July 10, 1894 (*E. F. Williams*); Willey Slide, July 3, 1898 (*J. M. Greenman*); Willey House, July, 1871 (*F. Lamson-Scribner*), September 8, 1893 (*E. & C. E. Faxon*); crevices of rocks on mountain slides, North Conway, 1865 (*F. J. Bumstead*); crevices of rock, summit, Mt. Chocorua, July, 1894 (*B. L. Robinson*): MASSACHUSETTS, by Merrimac River, near Newburyport, June, 1884 (*Dr. Castelhun*).

GRAY HERBARIUM.

NEW SPECIES, ETC., ISSUED IN THE PHYCOTHECA BOREALI-AMERICANA.

F. S. COLLINS..

THE first fascicle of the *Phycotheca Boreali-Americana*, by Collins, Holden & Setchell, was issued in February, 1895. Between that date and the present time the writer has distributed in that work a number of new species, varieties, and forms; in some cases the MS. name was given in the label, with an indication of where the description would be published; in other cases a regular description was printed in the label. Several of these descriptions have since appeared elsewhere in papers or notes, but in most cases the new species or variety has not been published elsewhere. While no rules as to the nomenclature of thallophytes were adopted at the recent Vienna Congress, it is probable that when action is taken in regard to such plants, the rules governing the higher plants will be adopted, unless special reason appear for variation; and as the issuing of a new flowering plant in a set of exsiccatae, with or without description, is not now a valid publication, the position of an alga so issued is certainly precarious. To prevent possible future complications, the descriptions in question are here



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