

THE AMERICAN RANGE OF *BOTRYCHIUM LANCEOLATUM*.¹— In recognizing as a distinct species, *Botrychium angustisegmentum*,² the Appalachian plant previously described as *B. lanceolatum* var. *angustisegmentum* Pease & Moore,³ Professor Fernald has pointed out that in Europe true *B. lanceolatum* is a subarctic or arctic-alpine plant of limited distribution, and has discussed its American range as follows: "In North America it occurs within the Arctic Circle in Greenland (latitude 63° N.) but is unknown elsewhere in the East; in the West it extends from the Aleutian Islands to Mount Ranier in Washington and the Selkirk Mts. in British Columbia. South and east of these mountain stations its occurrence is doubtful, for although often said to reach Colorado, it is noteworthy that in preparing his *Flora of Colorado* Rydberg was unable to verify its occurrence there." Subsequently⁴ Mr. F. W. Hunnewell reported having collected a specimen in the Yellowstone National Park, Wyoming, in 1914; and there is a Yellowstone specimen in the National Herbarium, collected many years before by Frank Tweedy.

Botrychium lanceolatum occurs in Colorado and Quebec, also, as shown by specimens in the National Herbarium. The Colorado collections are two: "Mt. Antero, spur of Sawatch Range," Aug. 1880, T. S. Brandegee; and "Glacier Lake, alt. 8,500 ft., on dry gravelly slopes composed of disintegrated granites," July 5, 1914, E. Bethel. Mt. Antero, named for an Indian chief, is in the region of Mt. Yale and Mt. Princeton. Mr. Brandegee writes that there are three Colorado specimens in his own herbarium, marked as collected by him in 1880 at an altitude of 10,500 feet in the Sawatch range. The Glacier Lake specimen of Mr. Bethel is large and complete, and altogether characteristic.

The Quebec record rests upon excellent specimens collected by Mr. William Palmer, Aug. 17, 1887, among grasses on a sandy beach at the mouth (eastern side) of the Mingan River, but a few rods distant from the Gulf of St. Lawrence. This extension of range, though notable, is not surprising.— WILLIAM R. MAXON, Washington, D. C.

[Besides the southern stations for *B. lanceolatum* recorded by Mr. Maxon the following may now be added: In sand, Pt. aux Basques, Seven Islands, Saguenay Co., Quebec, 1907, C. B. Robinson, no. 836

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² RHODORA 17: 87. 1915.

³ RHODORA 8: 299. 1906.

⁴ RHODORA 17: 143. 1915.

(Herb. N. Y. Bot. Gard.); near timber line, alt. 10,000–12,000 feet, high mountains about Gray's Peak, Colorado, August 20, 1885, *H. N. Patterson*, no. 164, in part (in Gray Herb.). Patterson's no. 164 was distributed as *B. Lunaria*, the material of this number in the Gray Herbarium consisting of three typical plants of that species and one of *B. lanceolatum*. Following the clew given by Maxon, an examination of an envelope of Brandegee's material in the Gray Herbarium from the Sawatch Range, labeled *B. Lunaria*, reveals seven plants of that species and one of undoubted *B. lanceolatum*. These two mixtures of *B. lanceolatum* with *B. Lunaria* indicate that *B. lanceolatum* should be sought where *B. Lunaria* occurs.— M. L. F.]

ADDITIONAL WOOL WASTE PLANTS.— Miss Emily F. Fletcher, who has so frequently recorded interesting foreign plants appearing on fields fertilized with wool waste, has recently sent some notable specimens to the Gray Herbarium. At North Chelmsford she found *Erodium laciniatum* (Cav.) Willd., var. *Bovei* (Delile) Murbeck, a native of Egypt, Tunis, and Algiers. At Westford she collected *Sphaeralcea Fendleri* Gray, a native of western Texas, Arizona, etc. Her most dramatic discovery was the occurrence at Westford of *Wissadula callimorpha* (Hoche) Hassl., var. *Friesii* Hassl., a native of eastern Bolivia and adjacent Brazil, which was not known to science until 1906, and even now is represented by only three collections. Miss Fletcher has inquired at the mill and ascertained that among the various sheep-raising districts from which wool was imported during the last two years to Westford, was "South America as far south as Chile and Argentine." This is circumstantial evidence which helps to explain the presence of this unusual plant in Massachusetts.— HAROLD ST. JOHN, Gray Herbarium.

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