

and after going almost to the waist more than once in a hole among the bushes of bog-myrtle, Labrador Tea and other shrubs we drew back a little from the lake and entered a narrow fringe of cedars at whose outer edge cropped out the rock that forms the foundation of the raised plateau mentioned before. I was just in the act of exclaiming about the similarity of this belt of cedars to the Newtonville cedar wood, when my pupil shouted to me to come and look at a strange plant he had found. Drooping, faded and yellow, it was the same *B. simplex* as I had found at Newtonville! We agreed to go different ways in search of more specimens along this fringe of cedars only a few yards wide; both of us were successful in finding more plants over a distance of 200 yards or more. More than 100 miles east of the first station, in conditions otherwise almost identical, the appearance of the plants differed not at all; the sterile part having a long-stalk, 3 or 4 pair of sessile, simple and entire cuneate lobes, and ending in a single similar but notched lobe.

Of course, these smaller Grape Ferns are a very variable genus, and for a long time confusion existed between *simplex*, *ramosum* and *laticeolatum*. Some botanists have yielded to the temptation of multiplying species by the separation of varieties, while others have nullified sound distinctions by confusing young immature plants of *ramosum* (for instance) with full-grown plants of *simplex*. From their habitat I have come to the conclusion that these plants of mine are the same as those described by A. A. Eaton as *B. tenebrosum*, and I was therefore greatly interested to find, on looking at the new edition of Gray *tenebrosum* treated as a variant form of *simplex* and not *ramosum*. Many qualities relied on for final identification, such as the veneration or manner of folding in the bud, the venation or form in which the veins spread, are doubtless of secondary importance but the long stalk of the sterile leaf and the shape of its lobes are possibly more essential characters, and there is another point on which I have assured myself; the point relied on by the late D. C. Eaton, author of Ferns of North America; I mean the size of the spores.

I got by exchange a few plants of the normal *B. simplex* (2-4 inches high), and I have looked microscopically at the spores of *B. simplex*, *B. ramosum* and my strange plant; through a lens of 1 inch objective, the spores of my plant and the spores of *B. simplex* are both larger than the spores of *B. ramosum*; through a lens of $\frac{1}{4}$ inch objective there is no difference to be detected in the size of spores of the two former plants, but the spores of both are (apparently) as large again as those of *B. ramosum*.