

My acquaintance with this latter plant, the Matricary Grape Fern, dates from 1907, when I first went from Ottawa to the Algonquin Park. I was out in a hardwood bush near Headquarters with the Park Superintendent, Mr. Wood, of the "Globe" staff, and the late Dr. Brodie. My companions were busy watching the movements of a pair of the Pileated Woodpecker (cock o' the woods); I walked down a slope of the forest floor towards a hollow filled with New York Fern when I almost set my foot on some plants of this (then) new species of *Botrychium*. It was early in August and the spores had been recently shed or in some cases were just being discharged. The fern varies greatly in size and in shape of frond, but it certainly deserves its title of "ramose," for it tends strongly to continued subdivision. The sterile frond is nearly sessile, never long-stalked; I have found it always in the rich leaf mould of hardwoods, usually near the foot of long gradual slopes, or in the shallow troughs and depressions just above actual swamp level. I have taken the fern as late as the first week of September; the plant was then sturdy and almost erect, having fruited (say) a fortnight or three weeks earlier.

It is the largest of the three species, *simplex*, *ramosum* and *lanceolatum*; I have a few specimens 9 inches high (one of 10 inches), but the average height of the plant is from 6 to 7 inches. I shall describe two plants (A and B) in some detail. A has a common stalk $4\frac{1}{4}$ inches high; a fruiting spike of $3\frac{1}{4}$ inches set on a stem of $1\frac{1}{2}$ inches; this fertile spike consists of 8 pair of pinnae, the lowest each an inch long, gradually reduced till at the apex of the fruiting division are 2 or 3 pairs of sessile clusters of sporangia; the barren frond is 2 inches long on a stalk about $\frac{1}{8}$ of an inch; it consists of 7 pairs of nearly opposite pinnae, the basal pair each $\frac{3}{4}$ of an inch long and divided into 5 pairs of ovate to narrow oblong lobes; the pinnae get gradually smaller till they end at the apex of the rhachis in 2 or 3 small sessile lobes. B has a common stalk of $5\frac{1}{4}$ inches; a fruiting spike of $2\frac{1}{4}$ inches on a stalk of $1\frac{1}{2}$ inches; this spike contains 5 pair of pinnae, the lowest pair each an inch or more in length, and ends at the apex in several sessile clusters of sporangia; the barren frond is $2\frac{1}{4}$ inches long and consists of 3 pair of ovate pinnae, the basal ones irregularly cut into about 5 lobes, the upper pair into 3 lobes, and at the apex a single 3 or 4 lobed pinna; this barren frond has a stalk of $\frac{1}{2}$ inch in length.

B. lanceolatum is a smaller plant than *B. ramosum* and usually ranges from 2 to 6 inches in height. The barren frond is not at all fleshy, but foliaceous and dark-green, sessile at the very apex of the common stem, or (if you prefer) at the base of the