

and its surroundings harbour all but 2. These include 2 species of *Cystopteris* (Bladder Fern), 2 species of *Onoclea* (the Sensitive and the Ostrich), 2 species of *Osmunda* (the Royal and the Cinnamon), the Adder's Tongue, and 2 species of *Botrychium* (the Virginia Rattle-snake and the Ternate Grape Fern).

The Bladder Bulblet Fern (*Cystopteris bulbifera*) forms a tangled mass of intertwined fronds about the banks of the stream and the swampy hollows of the wood. The stipe is reddish, translucent and brittle; the frond takes one of two forms, either short, triangular, rather longer than wide, or a very prolonged narrow oblong; this latter form is usually procumbent and straggling, especially where the fern grows over the talus of loose limestone blocks at the foot of a shaded bank or cliff, it seems to take a new lease of life. Antæus-like, at every point of contact with mother earth, I have found the frond running along like a creeper in a slightly upward plane from stone to stone with a straggling growth of 4 feet or more. The species is unique among our northern ferns in forming green bublets about the rhachis and pinnae, whence a new fern-plant springs as soon as the bublet drops to the ground.

The other species (*Cystopteris fragilis*) is usually found growing in tufts from seams and clefts of damp rock, but like many plants it has another home, in which it grows to greater size and sturdiness; this second home is in crumbly soil on mounds and about the upraised mossy turf at the base of trees. I gathered 5 or 6 fronds to-day from such a place, they were fairly rigid and erect for so delicate a fern, about 12 inches in height, $4\frac{1}{2}$ inches of stipe, dark-brown, nearly black at the base, lighter above, green on the rhachis from base to tip of frond. These erect ferns were fruiting freely and growing up out of a tangled mat of smaller more or less prostrate fronds, hardly fruiting at all. The genus develops very early in the season, but early as *C. bulbifera* is, *C. fragilis* is more than a fortnight earlier; I saw this year a mound of earth in my wood covered with expanded fronds 2 or 3 inches long by the 7th of April, and last year at the beginning of May, when other ferns were in the young crosier stage, its fronds were full-grown and the fruit dots appearing.

Something must now be said about the 2 species of *Onoclea*—the Sensitive Fern (*O. sensibilis*) and the Ostrich Fern (*O. Struthiopteris*). To the uninitiate eye there is little or no resemblance between these ferns, but "by their fruit ye shall know them," dissimilar as are the barren fronds of the two *inter se*, they are yet more alike than the fertile fronds in either species are like the sterile of their own plant; on the other hand the fertile fronds in both species differ from the sterile in the same way and for