2. *On an UNDESCRIBED FOSSIL FERN from the LOWER COAL-MEASURES of NOVA SCOTIA.* By DR. J. W. DAWSON, F.G.S.

(Abstract.)

IN a paper on the Lower Carboniferous rocks of British America, published in the 15th volume of the Geological Society's Journal, Dr. Dawson noticed some fragmentary plant-remains which he referred with some doubt, the one to *Schizopteris* (Brongn.), and the other to *Sphæreda* (L. and H.). With these were also fragments of a fern resembling *Sphenopteris* (*Cyclopteris*) *adiantoides* of Lindley and Hutton. Since 1858 the author has received a large series of better-preserved specimens from Mr. C. F. Hartt; and from these he finds that what he doubtfully termed the frond of *Schizopteris* is a flattened stipe, and that the leaflets which he referred to *Sphenopteris adiantoides* really belonged to the same plant. Mr. Hartt's specimens also lead Dr. Dawson to suppose that what he thought to be *Sphæredæ* were attached to the subdivisions of these stipes, and may be the remains of fertile pinnæ, borne on the lower part of the stipe, as in some modern ferns. This structure he regards as being something like what obtains in the Cuban *Aneimia adiantifolia*, as pointed out to the author by Prof. Eaton, of Yale College. No sporangia are seen in the fossil specimens.

Dr. Dawson offered some remarks on the difficulties of arranging this fern among the fossil *Cyclopterides*, *Næggerathiæ*, and *Adiantites*; and, placing it in the genus *Cyclopteris*, he suggested that it be recognised as a subgenus (*Aneimites*) with the specific name *Acadica*.

The regularly striated and gracefully branching stipes, terminated by groups of pinnules on slender petioles, must have given to this fern a very elegant appearance. It attained a great size. One stipe is 22 inches in diameter, where it expands to unite with the stem; and it attains a length of 21 inches before it divides into branches. The frond must have been at least 3 feet broad. The specimens are extremely numerous at Horton.

The author then noticed that the long slender leaves so common in the Coal-measures of Nova Scotia, and hitherto called *Poacites*, though sometimes like the stipes of *Aneimites*, are probably leaves of *Cordaites*.

On some specimens of *Cyclopteris* (*Aneimites*) *Acadica*, markings like those made by insects have been observed; also a specimen of the *Spirorbis carbonarius*.