The drawings given by Dawson in his first account of the St. John *Neuropteris* are very incomplete, and we must turn to the fig. 212, pl. XVIII, in his 1871 monograph for a sketch of what is the most characteristic specimen obtained from the St. John beds. This specimen is in the McGill University collection, No. 3311, and is by far the most perfect obtained from the locality, though smaller portions and isolated pinnules are frequent. It is shown in fig. 35, pl. XIV, of the present paper, and in the outline sketch text fig. 9. A single pinnule is enlarged to show the veins in text fig. 10. Dawson's description (1862, p. 320, and 1871, p. 49) is as follows:—"Pinnate or bipinnate. Rachis or secondary rachis irregularly striate. Pinnules varying from round to oblong, unequally cordate at base, varying from obtuse to acute. Terminal leaflet ovate, acute, angulated or lobed. Midrib, delicate, evanescent. Nervures slightly arcuate, at acute angles with the midrib." To this in 1862 he added: "In its variety of forms it resembles *N. heterophylla* Brongn., or *N. hirsuta* Lesquereux; but it differs from the former in its delicate midrib, and acutely angled nervures, and from the latter in its smooth surface." This was written before many of the most important works on Coal Measure plants were published, but now that they are available reference should be made to the leading illustrations of *N. heterophylla* when the remarkable resemblance, amounting to identity of the Canadian and European plants, will be observed. At M. Zeiller's suggestion, I took Dawson's specimen with me to Paris, and on comparing it with specimens of Westphalian age, there remained no doubt that the Canadian plant is simply *N. heterophylla*. The terminal pinnule, which is rather pointed, may at first suggest that the form is a local variety, but a specimen from the Paris collection labelled "Mines d'Anzin, Etage, Westphalien No. V, 520" is identical with the Canadian form in these particulars. Prof. Zeiller kindly lent me the specimen to photograph. This is shown in fig. 36, pl. XV, of the present paper, so that it is possible for the reader to compare the two plants.

The Canadian specimens are all sterile foliage, and the majority of them are fragmentary. Separated from the rachis innumerable pinnules occur on the slates with other plants (see fig. 56, pl. XXI). The pinnules are very variable in size