

proceeding obliquely to the middle. Nerves very fine and once-forked. Terminal leaflet broad. This fern so closely resembles *Pecopteris Serlii* and *P. lonchitica* that I should have been disposed to refer it to one or other of these species, but for the characters above stated, which appear to be constant. *P. Serlii* is abundant in the Lower Carboniferous of northern New Brunswick, and *P. lonchitica* is the most common Fern throughout the whole thickness of the Logging Coal Measures; but in neither locality does the fern found at St. John occur. On this account I think it probable that the latter is really distinct. In Murchinson's *Siluria* 2nd Edition p. 121 a fern from Colebrook Dale is figured as *P. lonchitica*, which so far as can be judged from the engraving, may be identical with the present species. Locality, St. John." It will be seen how far from dogmatic about its separation from *A. lonchitica* Dawson was in this original account of his St. John plant. The specimen figured by Murchinson is among his Carboniferous fossils, so it is obvious from the concluding sentence of Dawson, quoted above, that he was inclined to believe his plant the same as the Carboniferous form.

It will be seen from the above description that the principal character on which stress is now laid by Dr. Matthew, viz., the *dis-continuance* of the decurrent bases, is absolutely opposed to one of the main features given in Dawson's diagnosis of the type, viz, the connexion between the decurrent lower sides "to form a sort of margin to the rachis." Those who would uphold the difference of "*discrepans*" from *lonchitica* and its character as a St. John zone fossil, are thus placed in a dilemma. They must either give up the last remaining character by which they separate "*discrepans*" from the Coal Measures forms, when they must merge it with *lonchitica*; or they must reject the decurrent continuous bases described and figured by Dawson and look on them as fantasmal.

But the valuclessness of this point as a character on which to base specific distinction is immediately apparent on turning over the principal figures of the European *A. lonchitica* (for references see Kidston, 1911, p. 62) where both varieties are about equally numerous. Furthermore, in large specimens, e.g. in the Paris collections, one can find the continuous and discontinuous bases in different portions of the same specimen.