menophyllaceæ, and the Marattiaceæ, go back to the coalformation.*

Some of these ferns have the more complex kind of spore-case, with a jointed, elastic ring. It is to be ob-

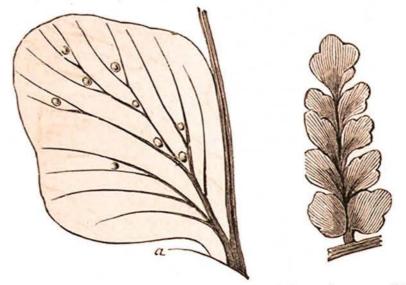
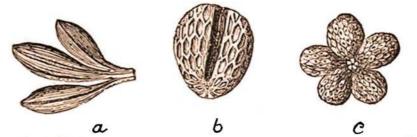


FIG. 54.—Sphenopteris latior, Dawson. Coal-formation. a, Pinnule magnified, with traces of fructification.

served, however, that those forms which have a simple spore-case, either netted or membranous, and without annulus, are most common in the Devonian and lowest



F10. 55.—Fructification of Palæozoic ferns. a, Thecæ of Archæopteris (Erian). b, Theca of Senftenbergia (Carboniferous). c, Thecæ of Asterotheca (Carboniferous).

Carboniferous. Some of the forms in these old rocks are somewhat difficult to place in the system. Of these, the

^{*} Mr. R. Kidston has recently described very interesting forms of fern fructification from the coal-formation of Great Britain, and much has been done by European palæobotanists, and also by Lesquereux and Fontaine in America.