

land and water, and a mild and equable climate, permitting the existence of a rich vegetation in high northern latitudes. Of this latter fact a remarkable example is afforded by the beds holding plants of this age in Spitzbergen and Bear Island, in its vicinity. Here there seem to be two series of plant-bearing strata, one with the vegetation of the Upper Erian, the other with that of the Lower Carboniferous, though both have been united by Heer under his so-called "Ursa Stage," in which he has grouped the characteristic plants of two distinct periods. This has recently been fully established by the researches of Nathorst, though the author had already suggested it as the probable explanation of the strange union of species in the Ursa group of Heer.

In studying the vegetation of this remarkable period, we must take merely some of the more important forms as examples, since it would be impossible to notice all the species, and some of them may be better treated in the Carboniferous, where they have their headquarters. (Fig. 15.)

I may first refer to a family which seems to have culminated in the Erian age, and ever since to have occupied a less important place. It is that of the curious aquatic plants known as Rhizocarps,\* and referred to in the last chapter.

My attention was first directed to these organisms by the late Sir W. E. Logan in 1869. He had obtained from the Upper Erian shale of Kettle Point, Lake Huron, specimens filled with minute circular discs, to which he referred, in his report of 1863, as "microscopic orbicular bodies." Recognising them to be macrospores, or spore-cases, I introduced them into the report on the Erian

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\* Or, as they have recently been named by some botanists, "Heterosporous Filices," though they are certainly not ferns in any ordinary sense of that term.