

dicotyledonous tribes appear in great numbers; the Cycadeæ are very rare; the ferns in diminished numbers; and the Coniferæ more numerous. Palms, and other intertropical forms, are found associated with the existing European forest-trees, as the elm, ash, willow, poplar, &c. presenting, in short, the general features of our continental Floras.

But we must not omit to notice a remarkable feature in the Floras of the secondary strata, namely, the almost entire absence of the *gramineæ*, or grasses, which form so large a proportion of existing plants. It has been suggested, that the greater or lesser durability of the foliage of certain vegetables, may have occasioned their presence or absence in the carboniferous deposits, and experiments have been instituted with the view of determining this question. But although it was found that, when the foliage of various families of plants was subjected to long maceration, the leaves of dicotyledons and grasses disappeared, while the ferns and Cycadeæ remained, yet this experiment does not meet the exigencies of the case. We have no evidence to show that the fossil leaves were ever placed in similar conditions; on the contrary, there is reason to conclude that they were imbedded under circumstances that arrested the usual progress of decomposition, prevented the escape of the hydrogen and other gaseous elements, and gave rise to the bituminous fermentation by which they were converted into lignite and coal; and we have no proof that,