

tender bodies are as little suited as those of all other mosses for being preserved in a fossil state, palæontology can give us no information about this.

We learn from the science of petrifications much more than we do in the case of Mosses of the importance which the second branch of Prothallus plants—that is, Ferns—have had in the history of the vegetable world. Ferns, or more strictly speaking, the “plants of the fern tribe” (Filicineæ, or Pterideæ, also called Pteridophyta, or Vascular Cryptogams), formed during an extremely long period, namely, during the whole primary or palæolithic period, the principal portion of the vegetable world, so that we may without hesitation call it the *era of Fern Forests*. From the beginning of the Devonian period, in which organisms living on land appeared for the first time, namely, during the deposits of the Devonian, Carboniferous, and Permian strata, plants like Ferns predominated so much over all others, that we are justified in giving this name to that period. In the stratifications just mentioned, but above all, in the immense layers of coal of the Carboniferous or coal period, we find such numerous and occasionally well preserved remains of Ferns, that we can form a tolerable vivid picture of the very peculiar land flora of the palæolithic period. In the year 1855 the total number of the then known palæolithic species of plants amounted to about a thousand, and among these there were no less than 872 Ferns. Among the remaining 128 species were 77 Gymnosperms (pines and palm-ferns), 40 Thallus plants (mostly Algæ), and about 20 not accurately definable Cormophyta (stem-plants).

As already remarked, Ferns probably developed out of the lower liverworts in the beginning of the primary period.