evident distinctive characters, that the botanist, from a mere fragment of a leaf, could detect the dicotyledonous structure in the fibrous interlacing of its vessels, as in that of the oak; and the monocotyledonous in the smooth parallel veins of the lily.* The application of these principles to the investigation of the fossil remains of vegetables we may now consider.

17. CLIMATE AND SEASONS INDICATED BY FOSSIL WOOD.—In the course of these lectures, it has been repeatedly demonstrated, how, by a knowledge of comparative anatomy, the form, structure, and economy of beings long since obliterated from the face of the earth, may with certainty be determined; in like manner, by the aid derived from a few botanical principles, we can not only discover the form and character of vegetables, of which but the faintest vestiges remain, but also point out important inferences relating to the state of the earth, the nature of the climate, and even of the seasons which prevailed at the periods when those plants flourished. Our distinguished countryman, Professor Babbage, has so forcibly exemplified the inductive process by which such results may be obtained, that I shall here avail myself of his interesting remarks.

* See Fossil Flora of Great Britain, vol. i. p. 27. The general reader will find the organization of vegetables explained in a clear and pleasing manner, in a little volume entitled, "POPULAR BOTANY," by James Main, Esq. A.L.S. London, 1835.