

about thirteen species of cryptogamic plants, four of which are sea-weeds (*algæ*) and the remainder ferns, comprise all that is known of the vegetable kingdom, anterior to the carboniferous system ; no trace remaining of any additional tribes, which may have existed at that period.*

The carboniferous era, as we have seen, abounded in the vascular cryptogamia to a degree unexampled at the present time ; the plants belong to species and genera now extinct, but allied to existing types by common principles of organization. The numerical preponderance of the cryptogamia in the coal is such, that while in the present order of nature they are to the whole number of known plants as one to thirty, at that epoch they were in the proportion of twenty-five to thirty. In the saliferous system, about fifty species have been ascertained, some of which differ from any observed in the coal-measures. They were discovered by M. Voltz, of Strasburgh (to whom I am indebted for the specimens before us), in the shale, or indurated marl, belonging to the new red sandstone at Sulz-les-bains. These fossils consist of a large species of equisetum, four species of ferns, and the frond of a plant bearing some resemblance to the common adder's tongue (*Scolopendrium*) so

* Fossil fuci abound in the transition rocks of the Alleghany Mountains, sometimes forming entire layers, one hundred of which occur in a thickness of twenty feet. Dr. Harlan's Medical and Physical Researches, p. 399.