

STEMS OF ARBORESCENT FERNS.—Notwithstanding the profusion with which the foliage of many kinds of ferns is distributed throughout the coal formation, the undoubted stems of plants of this family are rarely met with; for the numerous tribe called *Sigillariæ*, is now removed altogether from this class. It may, however, admit of question whether much of the foliage which, from the analogy of structure, has been referred to ferns, may not have belonged to those trees; for as in the animal kingdom, so in the vegetable, distinct types of living organisms are often found blended in the lost races; and as the stems of recent tree-ferns are even more durable than their leaves, it seems impossible to account for their absence in strata, that enclose entire layers of the foliage matted together. A few fossil stems, with all the essential characters of recent species, have been discovered, and these are arranged under the following genus.

CAULOPTERIS (*fern-stem*).—Stems not channelled, marked with discoidal, oblong, or ovate scars, arranged longitudinally; vascular cicatrices numerous. The specimen figured is from the coal, and resembles the trunks of the living tree-ferns in its proportions, and in the number, disposition, and size of the scars of the leaf-stalks; but these markings differ in their more lanceolate form, and pointed terminations, and in their peculiarly striated surface.

The coal also contains stems that are marked by