

he refers to *Calamopituis*, has woody bundles composed of reticulated or multiporous fibres, with their porous sides parallel to the medullary rays, which are better developed than in the previous form. The intervening cellular masses are composed of elongated cells. This is a decided advance in structure, and is of the type of those forms having the most woody and largest stems,

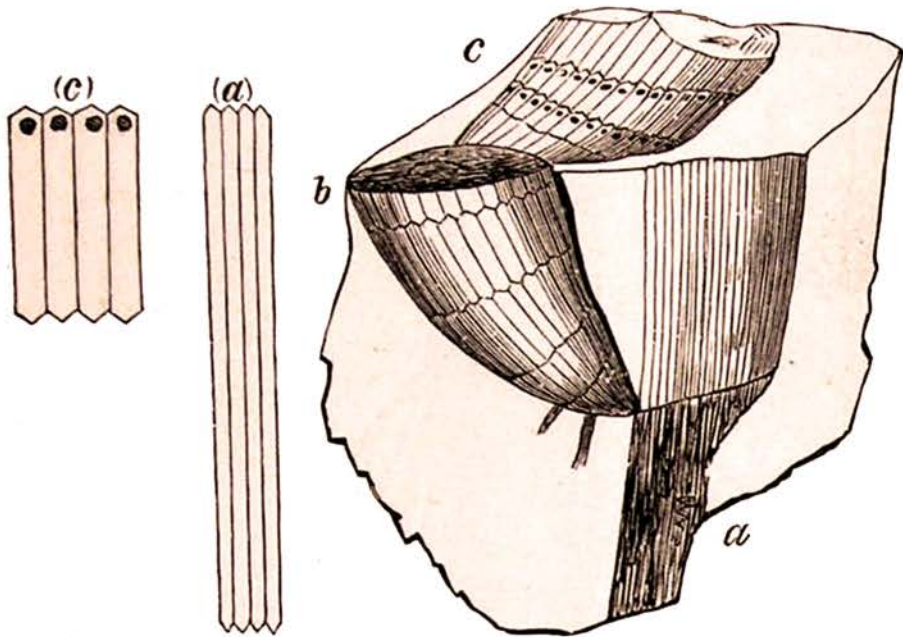


FIG. 49.—Erect *Calamites* (*C. Suckovii*), showing the mode of growth of new stems (*b*), and different forms of the ribs (*a*, *c*). (Pictou, Nova Scotia.) Half natural size.

which Brongniart named *Calamodendron* (Fig. 50). A third form, to which Dr. Williamson seems to prefer to assign this last name, has the tissue of the woody wedges barred, as in the first, but the medullary rays are better developed than in the second. In this third form the intermediate tissue, or primary medullary rays, is truly fibrous, and with secondary medullary rays traversing it. My own observations lead me to infer that there was a fourth type of calamitean stem, less endowed with woody matter, and having a larger fistulous or cellular cavity than any of those described by Dr. Williamson.

There is every reason to believe that all these various