late branchlets, or on the lower part of the stem the marks of the attachment of the roots. The Calamites grew in dense clumps, budding off from one another, sometimes at different levels, as the mud or sand accumulated about their stems, and in some species there were creeping rhizomata or root-stocks (Figs. 46 to 49).

But all Calamites were not alike in structure. In a recent paper *

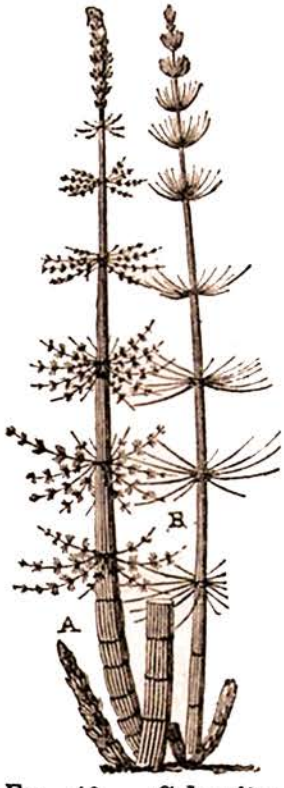

FIG. 46. — *Calamites.* A, *C. Suckorii.* B, *C. Cistii.* (From "Acadian Geology.")

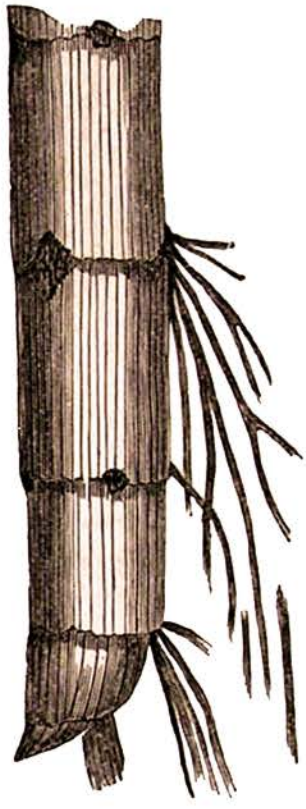

FIG. 47. — Erect *Calamites*, with roots attached (Nova Scotia).

FIG. 48.—Node of *C. Cistii*, with long leaves (Nova Scotia).

Dr. Williamson describes three distinct structural types. What he regards as typical *Calamites* has in its woody zone wedges of barred vessels, with thick bands of cellular tissue separating them. A second type, which

* "Memoirs of the Philosophical Society," Manchester, 1886–'87.