out of mud and sand-banks left by the tide, and which sometimes cover great surfaces with the most elaborate tracery, on the modern tidal shores as well as in some of the most ancient rocks. *Dendrophycus* * of Lesquereux seems to be an example of rill-mark, as well as *Aristophycus*, *Clœphycus*, and *Zygophycus*, of Miller and Dyer, from the Lower Silurian.

Rill-marks occur in very old rocks,† but are perhaps most beautifully preserved in the Carboniferous shales and argillaceous sandstones, and even more elaborately on the modern mud-banks of the Bay of Fundy.‡ Some of these simulate ferns and fronds of Laminariæ, and others resemble roots, fucoids allied to *Buthotrephis*, or the radiating worm-burrows already referred to (Fig. 10).

Fig. 10.—Carboniferous rill-mark (Nova Scotia), reduced, to illustrate pretended Algæ.

Shrinkage-cracks are also abundant in some of the Carboniferous beds, and are sometimes accompanied with impressions of raindrops. When finely reticulated they might be mistaken for the venation of leaves, and, when complicated with little rill-marks tributary to their sides, they precisely resemble the *Dictyolites* of Hall from the Medina sandstone (Fig. 11).

An entirely different kind of shrinkage-crack is that which occurs in certain carbonised and flattened plants,

* "Coal Flora of Pennsylvania," vol. iii., Plate 88.

† "Journal of the Geological Society," vol. xii., p. 251.

‡ "Acadian Geology," 2d ed., p. 26.