

and it is extremely difficult to determine precisely upon what it depends, but it seems probable that it is determined by a peculiar disposition of the cells in relation to the medullary spaces.

Large transverse sections also exhibit radial fissures due to shrinkage, but there appears to be a total absence of those radial bands simulating medullary rays, so conspicuous in *N. Logani*. On the other hand, the medullary spots, already described, are connected radially and tangentially by more continuous and open tracts as medullary spaces, which thus form a sort of netted system between the various sub-divisions of which the large cells lie in distinct and often more or less rounded groups. This distribution of the elements gives the transverse section a very characteristic appearance. It had already been noted in the previously described specimens of *N. crassum*, but owing to the very limited area of the Gaspé sections, and the highly altered character of the specimens from the Hamilton group, a proper description was not possible, and this structural feature was, therefore, omitted from the diagnosis. It is, nevertheless, an important diagnostic element, under the present circumstances of limited material, since it seems to definitely differentiate this species from all the others.

*Longitudinal Section.*

In longitudinal section the cells of the medulla are somewhat strongly interlacing, while groups of a dozen or more often cross the general direction of growth more or less abruptly, and sometimes turn off nearly at right angles for a short distance. These features also appear in previously described specimens, both from Gaspé and from New York. The intercellular hyphæ are freely interlacing and cross the large cells in all directions, but their structure is so altered by decay as to render it impossible to determine if they are septate or not. Nowhere have trumpet hyphæ been found, thus confirming previous observations in this respect.