Mr. Carruthers prefers to compare the plant as to *structure* with certain chlorospermous Algæ, and as to *size* with certain gigantic Melanosperms, not pretended to show similar structure. This is obviously a not very scientific way of establishing affinities. But let us take his grounds separately. He selects the little jointed calcareous sea-weed *Halimeda opuntia*, as an allied structure, and copies from Kutzing a scarcely accurate figure of the tissue of the plant as seen after the removal of its calcareous matter.* He further gives a defective description of this structure; whether taken from his own observation or from Kutzing, he does not say. Harvey's description, which I verified several years ago, in an extensive series of examinations of these calcareous Algæ, undertaken in consequenceof a suggestion that Eozoön might have been an organism of this nature, is as follows:— "After the calcareous matter of the frond has been removed by acid a spongy vegetable structure remains made up of a plexus of slender longitudinal unicellular filaments constricted at intervals, and at the constrictions emitting a pair of opposite decompound, dichotomous, corymboso-fastigiate horizontal ramelli, whose apices cohere and form a thin epidermal or peripheric stratum of cells." It will be seen at once that this structure has no resemblance whatever to anything existing in Prototaxites, even as interpreted by Mr. C., and without taking into account the fact that *Halimeda opuntia* is a small calcareous sea-weed, divided into flat reniform articulations, to which this structure is obviously suited, as it would be equally obviously unsuited to the requirements of a thick cylindrical trunk, not coated with calcareous matter.

In point of size, on the other hand, Mr. Carruthers adduces the great *Lessonia* of the Antarctic seas, whose structure, however, is not pretended to resemble that of Prototaxites except in the vague statement of a pseudo-exogenous growth. Lessonia I have not examined, but the horny *Laminariæ* of our North American seas have no resemblance in structure to Prototaxites.

Nothing further, I think, need be said in reply to Mr. Carruthers' objections; and *Nematophycus* may be allowed to take its place along with a multitude of obsolete fucoids which strew the path of palæontology. As to Prototaxites, it is confessedly an obscure and mysterious form, whose affinities are to be dis-

* A more characteristic figure is given in Harvey's "North American Algæ."