"Sponge typically corticate. Skeleton usually more or less radiately arranged, with a dermal crust of spicules, which may be either of the same form, as in the main skeleton, or of a special form (spined spirulæ, &c.). Megasclera typically tylostylote. Microsclera, when present, belonging almost invariably to the stellate group; never chelæ or sigmata. Spongin usually absent."

A great deal depends on the exact meaning of the word "typical"; if, as I imagine, it is to be understood as an equivalent to "most usually," then it will be found that there is not a single character in the whole definition which can be maintained as absolutely constant. This is not the fault of the framers, but of the group on which it is framed. Its value as a definition can be still better exemplified by applying it to some particular instance, let us say *Suberites domunculus*, the typical species of the genus *Suberites*, which stands as the first genus of the Clauvulina. The cortex of this is very poorly expressed, no better than that of some Desmacidine species; the arrangement of the spicules is rather less than more radiate and might just as well be termed reticulate; the spicules are, however, tylostyles, and in the cortex though nowhere else are arranged in the typical *Suberite* fashion. In this sponge the most valuable characters are the presence of tylostyles and their radial position in the cortex; by these marks it is recognised at once as a *Suberite*, and in an exceedingly closely allied species we find centrotylote microstrongyles,—microscleres which are always derived from some astral form. The form of the microsclere in *Suberites* is thus traceable to an astral ancestor, and consequently Ridley and Dendy might have dispensed with "almost," and have written without qualification that the miscrosclere in the Clauvulina can "invariably" be traced to an astral origin. If now we extend our survey from the genus *Suberites* we shall find that the tylostyles are inconstant, in the allied genus *Stylocordyla* they are replaced by oxeas, and in the Spirastrellidæ we frequently encounter diactinose in place of monactinose megascleres. The radial arrangement of the cortical spicules further is inconstant, since in the Spirastrellidæ they are tangentially disposed. Thus the only character which is constant whenever present is that of the microsclere.

I now give in tabular form the proposed classification:—

Order MONAXONIDA.

Suborder I. ASEMOPHORA.

With a single family.

Family I. HOMORAPHIDÆ, Ridley and Dendy.

Homorrhaphidæ, Ridley and Dendy, Report on the Monaxonida, Zool. Chall. Exp., part lix.