conical depression occurs, or, when this is absent, a space devoid of spines; this is the hilum, and either contains, or marks the position of, the nucleus of the scleroblast. When the hilum is a cavity it results from the fact that the actines which radiate towards it are shorter than those which occur elsewhere, and shorter as they are traced from the margin towards the centre of the hilum; the ends of the actines which lie within the hilum are not expanded and spined, but simply rounded and roughened.

Reductions of the Aster.

In many sponges asters occur in which the number of actines is both few and variable, presenting a mixture of forms which repeat many of those of the megascleres. Thus in the same sponge triaxons with from six to three actines are met with, associated with tetraxons of from three to four actines, and monaxons with one or two actines; when these forms occur confusedly mixed together as variations of the aster in one and the same sponge, distinct names are not given to them, but when one or other of them is a constant characteristic of a particular species special names become necessary.

Thus we have a series of tetraxon microscleres and of monaxon microscleres: the latter we shall term microrabds, the former microcalthrops and microtriods. The microtriods do not call for special notice.

The microcalthrops.—This is an aster which in its simplest form repeats the calthrops *in parvo*. It presents, however, several interesting modifications, most of them described by Schulze, which are peculiar to it; these are chiefly produced by cladosis of the actines.

1. *Monolophous microcalthrops* (Fig. XII., *k*).—A microcalthrops in which a single centrifugally directed actine is cladose at the extremity.

2. *Dilophous microcalthrops* (Fig. XII., *l*).—Two centrifugally directed actines are similarly cladose.

3. *Trilophous microcalthrops* (Fig. XII., *m*).—Three centrifugally directed actines are similarly cladose.

4. *Tetralophous microcalthrops* (Fig. XII., *n*).—All four actines are similarly cladose.

5. *Candelabrum* (Fig. XII., *o*).—A tetralophous microcalthrops in which the single centrifugal actine differs from the three basal actines, which are similar to each other; the difference may consist in the form, size, or direction of the cladi. Schulze extends the definition so as to include all cladose microcalthrops in which the basal actines are cladose and curved.

The microrabdus or microrabd (Fig. XII., γ, η, ζ, μ).—This is an aster in which all actines but two directed along the same axis are suppressed. In some few instances the microrabd is derived from a spire (*Tetilla australiensis*).