

radial spines, each of which bears four crossed apophyses. The subfamily may be divided into two different tribes, the Stauraspida and Lychnaspida. In the Stauraspida either all twenty spines, or a part of them, bear no perforated plates, and the shell is composed wholly or partially of the meeting branches of their apophyses. In the Lychnaspida, however, the four apophyses of each single spine form, by reunion of their recurved branches, a plate or shield with four crossed aspidal pores. The Lychnaspida represent therefore a more developed stage in the shell-formation than the simpler Stauraspida. *Stauraspis*, as the common ancestral form of both, may be derived phylogenetically from *Xiphacantha* or *Stauracantha*, which differ only by the apophyses or branches of the apophyses not meeting. These branches (originally eight on each spine) are either simple or again branched.

#### Subgenus 1. *Staurasparium*, Haeckel.

*Definition*.—Apophyses of the spines simple, not branched; therefore each spine with four sutural condyles.

##### 1. *Stauraspis cruciata*, n. sp. (Pl. 134, fig. 5).

Radial spines thin, quadrangular, prismatic; outer and inner half nearly of equal length. Central bases pyramidal, with wing-like edges (fig. 5). Four apophyses of each spine simple, not branched, with thin condyles. Large meshes of the shell ten to twenty times as broad as the bars. This and the following species greatly resemble the simplest forms of *Phractaspis* (Pl. 137, figs. 1, 2); they differ from these, however, by the equal size and distance of the four branches of each spine, which thus form a rectangular cross.

*Dimensions*.—Diameter of the shell 0.1; breadth of the spines and bars 0.002.

*Habitat*.—Central Pacific, Station 268, surface.

##### 2. *Stauraspis xiphacantha*, n. sp.

Radial spines stout, cylindrical in the inner half, conical in the shorter outer half. Four apophyses of each spine simple, not branched, broad, with thick condyles. Meshes of the shell six to eight times as broad as the bars.

*Dimensions*.—Diameter of the shell 0.12; breadth of the spines and bars 0.008 to 0.01.

*Habitat*.—South Pacific, Station 290, surface.

#### Subgenus 2. *Stauraspidium*, Haeckel.

*Definition*.—Apophyses of the spines branched; therefore each spine with eight to twenty or more sutural condyles.