The genus Stephanastrum, founded (1847) by Ehrenberg for the very peculiar Stephanastrum rhombus, differs from the nearly allied foregoing genera in the imperfect development of the peculiar patagium, connecting only the distal ends of the four arms, while it is absent at their base. Two new species, different from Stephanastrum rhombus by the regular square form, were found in the Challenger collection.

Subgenus 1. Stephanastrella, Haeckel.

Definition.—All four arms of the cross have the same size.

1. Stephanastrum quadratum, n. sp. (Pl. 46, fig. 5).

All four arms of the same size, six times as long as broad at their base, ending with a strong, short, four-sided pyramidal spine. In the outer half of each arm are two opposite lateral spongy wings, which form an equilateral triangle, and from union of the bases of the four triangles arises the peculiar patagium, which forms a square with four large interbrachial openings.

Dimensions.—Radius of each arm 0.25, basal breadth 0.035; length of the sides of the square patagium 0.3.

Habitat.—Pacific, central area, Station 268, depth 2900 fathoms.

2. Stephanastrum capitatum, n. sp. (Pl. 44, fig. 1).

All four arms of the same size, five times as long as broad at their base, at their distal end with a spongy, nearly spherical capitulum of twice their breadth, provided with a very strong, angular, pyramidal, terminal spine (half as long as the arm). All four arms connected by a square patagium, arising immediately below the capitula, and perforated by four large interbrachial openings.

Dimensions.—Radius of each arm (without the terminal spine) 0.25, basal breadth 0.05; length of the sides of the square patagium 0.3.

Habitat.—Pacific, central area, Station 265, depth 2900 fathoms.

Subgenus 2. Stephanastromma, Haeckel.

Definition.—Two opposite arms of the cross larger than the two others.

3. Stephanastrum rhombus, Ehrenberg.

Stephanastrum rhombus, Ehrenberg, 1854, Mikrogeol., Taf. xxxvi. fig. 33; Abhandl. d. k. Akad. d. Wiss. Berlin, 1875, Taf. xxv. fig. 1.

Two arms of the longitudinal axis one and a third times as long as two arms of the transverse axis. All four arms linear, about eight times as long as broad, at their distal end somewhat