

and a few in the central region bear spines, whereas in the present form all are normally so furnished. On the actinal surface also the spines are similarly more numerous in *Calliaster baccatus*. The adambulacral armature in the two forms is strikingly different; in *Calliaster childreni* the furrow series of spinelets being seven or eight in number, very small and equal; but in the present form there are three only, which are large and unequal. Other differences occur in minor points of ornamentation, &c., to which it is unnecessary to refer in detail.

Genus *Chitonaster*, Sladen.

*Chitonaster*, Sladen in Narr. Chall. Exp., 1885, vol. i. p. 614.

Marginal contour stellate, with a rigid convex disk, and short, tapering, rounded rays. Abactinal area high and inflated over the disk.

Abactinal area covered with closely-fitting hexagonal, or slightly rounded, plates overlaid with a uniform layer of membrane. Each bearing a short obtuse spinelet or elongate tubercle.

Marginal plates large and covered with membrane. The superior and inferior series subequal, the latter being rather broader. The supero-marginal plates normally bear two short, obtuse, cylindrical spinelets, standing one above the other on the median transverse line of the plate. The infero-marginal plates are similar in form and character, and each bears two or three similar spinelets, also arranged in line transverse to the axis of the ray.

Adambulacral armature consisting of three large, isolated, cylindrical, obtuse spinelets, which form a line at right angles to the furrow.

Actinal intermediate areas small, confined to the region of the disk, and accommodating very few intermediate plates.

Madreporiform body small, situated nearer the margin than the centre of the disk.

Anal aperture subcentral.

No pedicellariæ present.

*Remarks.*—This genus is distinct from all known forms, and is remarkable not only for its structure, but also on account of the great depth at which it occurs. The general form and the character of the plating appear to justify the inclusion of *Chitonaster* in the *Pentagonasteridæ*, notwithstanding the fact that the family contains no genus with which a direct alliance can be established. This circumstance is, however, not so surprising as would at first appear, when it is borne in mind how very few members of the *Pentagonasteridæ* occur in deep water.

Unfortunately only a single example of this interesting starfish was collected by the Challenger: the following remarks are therefore necessarily limited entirely to external characters, as I consider it undesirable to mutilate this unique specimen.