

fig. 4) shows two such spines (the black ones on the left) similar to those covering the whole test of this specimen.

Samboangan; 10 fathoms.

Station 201. October 26, 1874. Lat. $7^{\circ} 3' N.$, long. $121^{\circ} 48' E.$; 82 fathoms and 102 fathoms; stones and gravel.

Phyllacanthus gigantea.

Chondrocidaris gigantea, A. Agassiz, 1863, Bull. Mus. Comp. Zool., vol. i.

Phyllacanthus gigantea, A. Agassiz, 1872, Revis. Ech., part 1, p. 150.

Off Honolulu Reef.

Phyllacanthus verticillata.

Cidarites verticillata, Lamk., 1816, Anim. sans Vert.

Phyllacanthus verticillata, A. Agassiz, 1872, Revis. Ech., part 1.

Station 186. September 8, 1874. Lat. $10^{\circ} 30' S.$, long. $142^{\circ} 18' E.$; 8 fathoms; coral sand.

Porocidaris.

Porocidaris, Des., 1854, Syn. Éch. Foss., p. 46.

**Porocidaris elegans* (Pl. III., XXXVIII. figs. 12-16; Pl. XLIV. figs. 6-14).

Porocidaris elegans, A. Agassiz, 1879, Proc. Am. Acad., vol. xiv. p. 198.

This species can at once be distinguished from *Porocidaris purpurata*, Wy. T., by the facies of the spines (Pl. III. fig. 1) and by the structure of the abactinal system (Pl. III. fig. 2). The interambulacral plates of the test also differ from those of *Porocidaris purpurata* in having a larger row of secondary tubercles surrounding the scrobicular circle (Pl. III. fig. 5). This is complete only in the first and second of the coronal plates nearest the abactinal system, the areas becoming confluent towards the ambitus and actinostome in the remaining plates. The median interambulacral space also differs from that of *Porocidaris purpurata* in having larger secondary tubercles, leaving a space nearly bare between the secondaries, or only sparsely covered by small irregularly arranged miliaries. There is a single row of small secondaries regularly arranged in a vertical line along the median ambulacral space (Pl. III. fig. 6.) with a few intervening miliaries along the median line. The pores are distinct, separated by a prominent median ridge. The primary interambulacral tubercles are surrounded by a large areola. They are small, crenulate, except the last formed near the actinal system.