

plates (Pl. VIII. fig. 11), forming two median vertical rows; these secondary tubercles are slightly larger near the actinal edge of the test. There are in addition irregular lines of miliary tubercles running transversely near the upper edge of the ambulacral plates parallel with the trend of the pores (Pl. VIII. fig. 16). The primary interambulacral tubercles are perforated and crenulated as in *Aspidodiadema tonsum*. The ambulacral system is separated from the interambulacral area at the actinal area by a slight lip as in the Diadematidae (Pl. VIII. fig. 11). The genital ring is comparatively narrower than in the other species of the genus; the ocular plates are wider than the genital plates, and they are both covered by large, rather distant miliaries. The anal membrane is strengthened by a number of plates forming two irregular rings (Pl. VIII. fig. 13) round the large anal opening; they are covered by short slender diminutive spines. The inner ring is composed of the largest plates. Plate VIII. fig. 15 shows the large size of the ten buccal plates of this species which cover, when denuded, nearly the whole of the actinal membrane. In a specimen measuring 26 mm. in diameter there are eight primary tubercles on the interambulacral plates. In a younger specimen measuring only 10 mm. in diameter there are five primary plates. The ambulacral tentacles are, like those of the Diadematidæ, pointed near the abactinal surface, and carry powerful suckers near the actinostome.

Station 298. November 17, 1875. Lat. $34^{\circ} 7' S.$, long. $73^{\circ} 56' W.$; 2225 fathoms; bottom temperature, $1.3^{\circ} C.$; grey mud.

Station 299. December 14, 1875. Lat. $33^{\circ} 31' S.$, long. $74^{\circ} 43' W.$; 2160 fathoms; bottom temperature, $1.1^{\circ} C.$; grey mud.

Station 134. October 14, 1873. Lat. $36^{\circ} 12' S.$, long. $12^{\circ} 16' W.$; 2025 fathoms; bottom temperature, $1.6^{\circ} C.$; globigerina ooze.

Station 122. September 10, 1873. Lat. $9^{\circ} 5' S.$ to $9^{\circ} 10' S.$, long. $34^{\circ} 49' W.$ to $34^{\circ} 53' W.$; 356 fathoms.

Off Macio. September 11, 1873. 1700 fathoms.

**Aspidodiadema tonsum* (Pl. VIII. figs. 1-9; Pl. XXXVIII. fig. 19; Pl. XLII. figs. 4-6; Pl. XLIV. fig. 15).

Aspidodiadema tonsum, A. Agassiz, 1879, Proc. Am. Acad., vol. xiv. p. 199.

This species is readily recognised by the uniform coating of short, slender miliary spines, which cover the whole test, and by the small number of long slender radioles, some of them nearly three times the diameter of the test, carried upon the interambulacral system (Pl. VIII. figs. 1-3). The genital ring is remarkable for the uniform size of the ocular and genital plates, and the close granulation with which they are covered, with the exception of one or two larger tubercles placed near the anal edge of the plates (Pl. VIII. fig. 4). Immediately round the anal tube there are five large elliptical plates and one