

\**Aceste*.

*Aceste*, Wy. Thomson, 1877, The Voyage of the Challenger, Atlantic, vol. i. p. 376.

\**Aceste bellidifera* (Pl. XXII. figs. 7-11; Pl. XXXIII.<sup>a</sup> figs. 1-7; Pl. XXXIX. fig. 21; Pl. XL. figs. 66-68; Pl. XLI. figs. 13-16; Pl. XLII. figs. 26-28; Pl. XLIII. fig. 25; Pl. XLIV. figs. 45, 46).

*Aceste bellidifera*, Wy. Thomson, 1877, The Voyage of the Challenger, Atlantic, vol. i. p. 376, figs. 95, 66.

At first glance this appears one of the most remarkable of Sea-urchins. When seen from the abactinal side (Pl. XXXII. fig. 8) nearly the whole of the abactinal surface is occupied by the deeply-sunken, broad, odd anterior ambulacrum surrounded by a narrow elongated pentagonal peripetalous fasciole, within which spring large flattened spathiform spines curving over the few huge ambulacral suckers which fill nearly the whole of the sunken space of this area. The abactinal surface is quite flattened (Pl. XXXIII.<sup>a</sup> figs. 4, 5), so that when seen in profile (Pl. XXXII. figs. 9-11, figs. 9, 10, 11 are figured with the actinal surface towards the upper side of the plate) the test is seen to arch regularly towards both the anterior and posterior extremities (Pl. XXXIII.<sup>a</sup> fig.). The apical system is placed just within the posterior edge of the peripetalous fasciole (Pl. XXXII. fig. 8), from which the test slopes rapidly towards the actinal surface. The anterior extremity is deeply indented (Pl. XXXII. figs. 7, 8, 9), the anterior part of the odd ambulacrum running in a deep groove from the abactinal region to the actinostome (Pl. XXXII. fig. 9; Pl. XXXIII.<sup>a</sup> figs. 1, 5).

The actinal plastron is large and prominent (Pl. XXXIII.<sup>a</sup> fig. 4) carrying long spathiform spines (Pl. XXXII. figs. 7, 9-11); those which cover the test are shorter and stouter (Pl. XXXII. fig. 8), while those surrounding the anal system (Pl. XXXII. figs. 7, 10) are long, curved, and pointed. The spines on each side of the actinal groove are closely crowded. Seen from the extremities (Pl. XXXII. figs. 9, 10) the test is seen to arch regularly from the actinal keel in the centre of the plastron to the ambitus, which in this genus is close to the flattened abactinal surface (Pl. XXXII. fig. 9; Pl. XXXIII.<sup>a</sup> figs. 4, 5); the test is somewhat more rounded toward the posterior end (Pl. XXXII. fig. 10; Pl. XXXIII.<sup>a</sup> fig. 4).

The enormous development of the suckers of the odd anterior ambulacrum is an eminently embryonic feature, it exists in the youngest stages of all the Spatangoids of which we know the development. In some species of *Schizaster* this character is also found. In *Aceste* also, as in the *Schizasteridæ*, we find the apical part of the anterior lateral ambulacra made up of extremely narrow plates (Pl. XXXIII.<sup>a</sup> figs. 1, 7), which form the thin edge of the deep anterior groove, along the sides of which extend in *Aceste* the simple anterior lateral ambulacra (Pl. XXXIII.<sup>a</sup> figs. 1, 7), and in *Schizaster* proper the more or less narrow anterior ambulacral petals placed within the peripetalous fasciole,