

not wish to maintain untenable views, and not to seem to yield to apparently overwhelming evidence as to the way to use the position of the madreporic body to ascertain the axis of the body. It is not my intention to argue the question anew, but I must reiterate that no evidence has as yet been advanced disproving the position I start with, that the madreporic body is placed at the suture of the embryo Echinid formed by the junction of the ends of the open spiral forming the young Sea-urchin in the Pluteus, and no amount of observation on the abactinal system of young forms after they have resorbed the Pluteus, or in the adult stages, will throw any light on that point. I cannot see the force of the distinction made by Dr Duncan between embryonic spines and papillæ, which he says cover the apical disc, because they are not placed on tubercles. No young spine of any Sea-urchin is articulated when it first appears, nor is it placed upon a tubercle, and I merely intended to denote the fact that these appendages were embryonic spines, from their greater similarity to young spines, and remained so; and it does not seem to make a material difference in the description if we call them papillæ.

From the careful description of Duncan's *Salenia profundæ*, which is the name he gives to his species, it is evident that it is more closely allied to *Salenia gæsiæna*, of which it may be the adult, and that it differs very considerably from *Salenia varispina* (A. Agassiz); but not having seen Dr Duncan's specimen I am unable to associate it with *Salenia hastigera*, the spines of which differ radically from his. All the specimens (five) collected by the Challenger in the Bay of Biscay and off the coast of Portugal belonged to the species which I have here called *Salenia hastigera*, and have figured on Plate IV. of the Challenger Echinoidea. As these specimens were among the first returned to Sir Wyville Thomson before Dr Duncan's description appeared, I am unable to examine them again and compare them with Dr Duncan's description. Thomson's figures, on pp. 145 and 146, Voyage of the Challenger, Atlantic, vol. i., evidently represent *Salenia hastigera*. This is not the only instance of a Pacific species being found off Portugal. The same is the case with *Aspidodiadema tonsum*.

With regard to the crenulation of the primary tubercles, the primary ambulacral tubercles near the astinostome are certainly, as I have stated, crenulated like the primary tubercles of the interambulacral areas; but the secondary ambulacral tubercles, which continue the line of the larger primaries to the abactinal system, are not. My description was not sufficiently complete, and I should perhaps have stated that the smaller ambulacral tubercles are not crenulated. I did not attach special importance to this character, beyond stating the fact of its existence, on account of the great difference there is known to exist in other Echinidæ with reference to this very point. I must also add here that the large primary tubercles near the actinostome in *Salenia hastigera* are also distinctly crenulated, but the smaller ones are not. The structure of the spines most emphatically associates the Salenidæ with the Cidaridæ, as a cross section