

with specimens of *Deltocyathus italicus*, kindly given to me for the purpose by Count Salvadori, of Turin, I considered that Pourtalès was quite justified in maintaining *Deltocyathus agassizi* as a separate species, on the grounds of the structure of the costæ; but I have, at the moment that this memoir is going to press, learned by a letter from Count Pourtalès that he has been led, by the examination of a long series of specimens dredged this year by Mr Agassiz, to the conclusion that the specific claims of *Deltocyathus agassizi* cannot be upheld, and that he intends to adopt for the American form the old name, as Professor Martin Duncan had already done. I have, therefore, done so also.

I give here woodcuts of the more usual form of the species, and of Pourtalès' variety *calcar*, from drawings by Mr J. J. Wild.

Although the series obtained near St Thomas, Danish West Indies, appeared to bear out Pourtalès' assertion that the young coralla of this species are cup-shaped, and that they gradually become more saucer-shaped as age advances, such is not the case in a long series of fifty specimens dredged off the Azores. In this nearly all the larger specimens have the calicle deeply cup-shaped, whilst the younger ones are flatter, and some of the very small ones (2.5 mm. in diameter) absolutely flat. Some of the specimens are 14 mm. in diameter, a shade larger than Pourtalès' largest specimen. The series presents points of well-marked variation from the West Indian specimens. The coralla are all characterised by having their primary and secondary septa, as well as their pali, extremely exsert; but the pali never project so high as the septa to which they are soldered at their bases, as they do in Pourtalès' specimens and in those dredged by the Challenger in the West Indies. No tendency towards the development of the horned variety described by Pourtalès is to be seen in the series obtained off the Azores, although Professor Lindström remarks on an approach to the variety *calcar* in some of his East Atlantic specimens, as shown in them by an excessive development of the primary costæ. It is remarkable that only one specimen of the horned variety was obtained by us, and that (the one figured) merely by accident, in the cup of a sounding machine off Bermuda. It is further very remarkable that none of the specimens obtained by us were attached, and that only one shows any trace of ever having been attached. This one specimen, however, is large, and though somewhat imperfect has a most distinct pedicle and scar of attachment, and evidently remained fixed up to a period of full maturity. It is figured on Plate II. figs. 2, 2a, 2b. Since, singularly enough, none of Count Pourtalès' specimens were attached, or showed traces of attachment, I figure (Pl. II. figs. 3, 3a) a specimen, one of two kindly sent to me for examination by Professor Lindström, and dredged off the Danish West Indies in from 200 to 320 fathoms. There can be no doubt as to the identity of this specimen with *D. agassizi*.

After comparing Professor Martin Duncan's specimen of *Sabinotrochus apertus* with the series of *Deltocyathus*, I conclude that Professor Lindström's conjecture that it is a