Cuspidaria (= *Neæra*).

The structure of the genus *Cuspidaria* was till recently unknown. In 1886, in a query to Nature,[1] Mr. Wm. H. Dall, conchologist to the Washington National Museum, asked that facts which he had observed in the structure of this genus should be tested on European specimens. He thought it had neither gills nor labial palps. The reservations with which he stated these facts arose from his not having made his observations on specimens in a perfect state of preservation.

The query remained unanswered until I took up the question.[2]

Meanwhile, Dall had republished his statement in greater detail, but still with the same reservations: "If the writer has not been misled by contraction of the parts under the action of alcohol;"[3] "if confirmed by the study of fresh specimens."[4]

It would, however, be interesting to test the facts mentioned by Dall in his paper, especially as Gwyn Jeffreys[5] attributes to *Cuspidaria* (*Neæra*) "pink gills." It was therefore with great satisfaction that I found three specimens, each representing a different species of the genus *Cuspidaria*, in the Challenger collection entrusted to me.

22. *Cuspidaria curta*, Jeffreys. Station 75; 450 fathoms.
23. *Cuspidaria fragilissima*, Smith. Station 145; 300 fathoms.
24. *Cuspidaria platensis*, Smith. Station 320; 600 fathoms.

The structures which I shall describe and figure are based on the study of the three specimens already mentioned, and of specimens of *Cuspidaria rostrata*, Spengler, obtained from the Zoological Station at Naples,[6] that is to say, the best prepared specimens which can be found. Indeed, so well are they preserved by the clever conservator Salvator Lo Bianco, that one can cut sections and work with them as with fresh specimens.

It follows, therefore, that my examination has included a certain number of species, and several specimens of one of these species. What I have observed, then, does not constitute an individual variation or a monstrosity, but a normal, invariable disposition which is not peculiar to certain forms, but common to the entire genus. The different species resemble each other closely, and I shall not describe them separately.

The mantle is closed ventrally, in the posterior half of its length at least, and even a little more in certain species, as in *Cuspidaria curta;* the pedal aperture is therefore normal enough. The two pallial lobes are excessively delicate and transparent, as was already known.

[1] Vol. xxxiv. p. 122.
[2] Sur des Pélécypodes sans branchies, *Comptes rendus*, t. cvi. p. 1029.
[3] Report on the Mollusca, *loc. cit.*, p. 293.
[4] *Ibid.*, p. 302.
[5] British Conchology, vol. iii. p. 49.
[6] I have to thank Professor Anton Dohrn, who kindly sent me these specimens.