

The other species, besides these two which were dredged at Station 214, off the Meangis Islands, were *Metacrinus costatus*, *Metacrinus moseleyi*, *Metacrinus varians*, and *Metacrinus wyvillii*. As this last also occurred at Station 170, off the Kermadec Islands, it was probably one of those which were coloured dark purple, owing to the presence of acid pentacrinin. Prof. Moseley can give me no clue, however, as to the anomalous form which did not contain pentacrinin at all, but an entirely different colouring matter. It was of a light pink colour when fresh, and when treated with absolute alcohol gave a simple, light red solution, with an absorption spectrum totally different from that of pentacrinin.

All Prof. Moseley's spectroscopic observations of the colouring matter of the Pentacrinidæ were made in the Pacific; and it therefore became a matter of some importance to determine the presence of pentacrinin in the Atlantic species of the family. For this purpose Prof. Moseley has been kind enough to examine some of the deeply coloured spirit in which there had been preserved several individuals of *Pentacrinus wyville-thomsoni* that were dredged by the "Porcupine" in 1870, off the coast of Portugal. As might have been expected, the colouring matter proved to be pentacrinin.

A still more interesting point is the presence of this substance in *Holopus*. Immersion of a dry, greenish-black *Holopus* in alcohol for a few minutes yielded a dichroic solution, which gave the characteristic spectrum of pentacrinin. It is more than probable, therefore, that this substance will be found to be present in the four Caribbean species of *Pentacrinus*.

Most species of the Comatulæ "appear to be either usually of a rose colour or of an orange or yellow, running into a yellow-brown or of a dark purple. Both the rose or red and yellow colouring matters are freely soluble in alcohol, and usually in fresh water." The colouring matter of most of them, like that of *Antedon rosacea*, has no characteristic absorption spectrum showing bands. But a dark purple species common at Cape York yielded a special colouring matter which Prof. Moseley has termed "Antedonin." It is freely soluble in weak spirit, and gives an intense fuchsin-coloured solution, which yields spectrum consisting of three well defined absorption bands.

I have little doubt that the species in question was *Actinometra strota*. Two species of *Antedon* which were also obtained at Cape York, but in less abundance, seem to have been tinged with the same colouring matter, as their appearance is the same as that of the *Actinometra*. The most remarkable point about this colouring matter is its presence in a slightly modified form in various deep-sea Holothurians.