

III.—THE GEOGRAPHICAL AND BATHYMETRICAL DISTRIBUTION OF THE COMATULÆ.

Our knowledge of the existing species of the Comatulæ is at present so imperfect that it affords but a slight foundation for any generalisation respecting their geographical distribution and the origin of specific types. For they occur in the most extraordinary abundance over certain large areas, such as the Caribbean Sea, and more especially the Eastern Archipelago and Australasia. Every large collection that I have examined, and they are many, contains a number of forms from the latter district, the specific relations of which will require months of detailed work before they can be properly elucidated.

Nearly all of these are littoral species, and it is chiefly with regard to them that any generalisation would be premature at present. But the dredgings of the Challenger have accumulated a large mass of information concerning the Comatulæ of other seas than those of Australasia. This relates more especially to the *Comatula*-fauna of the continental and abyssal regions, about which we cannot expect to gain very much additional knowledge in future. The Comatulæ of the Arctic and Sub-Arctic seas are also pretty completely known; while the Strait of Magellan and the Southern Indian Ocean between Marion Island and Melbourne have yielded some dozen species for comparison with those of the northern circumpolar fauna.

The following conclusions, then, embody the condition of such knowledge of the Comatulæ as I have been able to gain from the study of the Challenger collection and preliminary work upon the material dredged by the U.S. Coast Survey steamer "Blake"; together with my notes upon the Comatulæ in the museums of London, Paris, Berlin, Vienna, Copenhagen, Lund, Stockholm, Amsterdam, Leyden, Hamburg, Dresden, Kiel, Munich, Stuttgart, and also upon the collections made by Professor Semper in the Philippines, Dr. Döderlein in Japan, Dr. Anderson in the Mergui Archipelago, and Dr. Hickson in North Celebes.

The Comatulæ range in latitude from $81^{\circ} 41' N.$ to $52^{\circ} 5' S.$, being represented in each locality by a ten-armed *Antedon*, a point which will be considered later.

Although abundant near the coasts in the Arctic Ocean and on both sides of the North Atlantic, no Comatulæ have been dredged there at a greater depth than 800 fathoms, nor were any met with in either of the Challenger's two traverses of the North Atlantic; while, though one species has been obtained at the Canaries and Madeira, there is no record of any from the Azores, Bermuda, or the Cape Verde Islands. The two Mediterranean species range as far north as Scotland, but I do not know of their passing the meridian of $20^{\circ} E.$, either in the Mediterranean or in the Baltic. In the Florida Channel and in the Caribbean Sea, however, Comatulæ have been dredged in abundance. But none are known from the African Coast between Cape Verde (Goree) and the Cape of Good Hope,