

and they already show very distinct indications of the peculiarities which are characteristic of the type.

Ludwig<sup>1</sup> has made some observations as to the comparative distribution of calcareous plates and granules in the Neapolitan examples of *Antedon phalangium* and *Antedon rosacea*. He finds that while calcareous deposits are more or less developed on the disk of *Antedon rosacea*, that of *Antedon phalangium* is almost or entirely naked, which I find to be the case also both in Tunis and in Marseilles specimens, and in the Atlantic ones as well. But in the British variety of *Antedon rosacea* the perisome of the disk may be either naked or bear scattered tubercles containing groups of radiating calcareous spicules, and the perisomatic skeleton of the larval arms and pinnules disappears in later life. I have found no trace of it in any specimens of *Antedon rosacea*, even in those from the north of Scotland; though examples of *Antedon phalangium* from this neighbourhood have delicate plates on the pinnule-ambulacra. Like Ludwig, however, I have found small rods in the marginal leaflets on the pinnules of *Antedon rosacea* from Naples, and also in a Marseilles specimen; while in the Tunis variety of *Antedon phalangium* I find delicate perforated plates, the rudiments of the covering plates which are so largely developed in many tropical Comatulæ. They are less distinct in the specimens dredged by the "Dacia," and in those from Marseilles they are reduced to small Y-shaped rods, but little better developed than those of *Antedon rosacea*. In some individuals of the Scotch variety the pinnule-ambulacra are in this condition, while in others they have delicate, but still very definite plates, as in the examples from the Tunis coast. In those from 220 fathoms off Cape Mondego, however, these plates reach a considerable relative size and have a closer network of limestone rods. There are about three to each pinnule-joint, and they alternate pretty regularly with the sacculi, just as the side plates do in *Antedon acoela* and in other forms from the Eastern seas. They are much better defined than the side plates of many tropical species, but they do not support any covering plates above them. On the other hand, they are altogether different from the large and oval covering plates of *Rhizocrinus*, *Bathycrinus*, and *Hyocrinus*, which are unsupported by side plates, and rest directly on the pinnule-joints. Their occurrence in *Antedon phalangium* in the East Atlantic is the more interesting, as the locality is within a few miles of that which yielded *Pentacrinus wyville-thomsoni* and *Antedon lusitanica*, both with plated ambulacra; while the latter is the only European *Antedon* with both side plates and covering plates on the pinnules.

On the whole I am disposed to confirm Ludwig's observations respecting the greater length of the anal tube in *Antedon phalangium* than in *Antedon rosacea*; but the difference is not great, and is of no value as a specific character. The only two species which have any great amount of resemblance to *Antedon phalangium* are *Antedon hystrix* and *Antedon proluxa*. But it differs from both of them in the greater

<sup>1</sup> Über einige seltener Echinodermen des Mittelmeeres, *Mitth. d. zool. Stat. Neapel*, 1880, Bd. ii. p. 54.