

distinct. This varies greatly in the extent of its development, and is so slight in some individuals which I have seen from Mauritius, the locality of Lamarck's original specimen, that he would most assuredly never have given them the specific name *carinata*. There is always more or less of a tubercular elevation on the junction lines of the two outer radials and the two lower brachials respectively, and from the second of these onwards the median dorsal line of the arm is more or less sharply indicated, owing to the way in which the dorsal surface of each joint falls away from it, so that the arm has somewhat the appearance of having been compressed laterally. The bases of many arms show little more than this; but in others the middle of the distal edge of each joint is distinctly raised, and a sharp forward projecting crest or keel is gradually developed upon it (Pl. XXXIV. figs. 4-7), and continues for some way out on the arms, till it becomes less and less distinct in their terminal portions. In the few specimens which I have seen from Muscat and from the Red Sea, this character, and also the tubercular elevations on the radials and lowest brachials are considerably less distinct than in those from the Indian Ocean, Brazil, or the Caribbean Sea; while both in the African and in the Red Sea variety the terminal portions of the arms have stiffer pinnules and a less feathery appearance than in the Brazilian examples. The sacculi are extremely abundant in this species, and occur in considerable quantity at the sides of the ambulacra both in disk and arms, which is by no means always the case in other forms of *Antedon*. The ambulacra are often supported by delicate rods and spicules of limestone, but there is never anything like a definite skeleton. The colour is extremely varied. Some specimens are dark reddish-purple or light yellowish-brown all over; others have alternating bands of these two colours, each band covering two or three arm-joints; in others again the bands are quite narrow, while some individuals have a more or less mottled appearance, with the brown occasionally replaced by white.

The cirri of *Antedon carinata* are peculiar from the very general absence of an opposing spine on their penultimate joint (Pl. XXXIV. figs. 1-3). In two individuals, one from Mauritius and one from Bahia, I have found a cirrus which shows signs of having been broken and subsequently repaired, the distal portion of it being much smaller than the base. This is worth recording, because I have generally found that regeneration after fracture, though common enough in the arms, occurs but rarely in the cirri.

The centro-dorsal of this type is very characteristic (Pl. III. figs. 1a, 3b; Pl. XXXIV. figs. 1-3). It is a thick disk with a single or partially double row of marginal cirri, but its dorsal surface is smooth and free from cirri, just as in *Actinometra* (Pl. V. figs. 1b, 2b, 2e, 4b, 5b, 5c), though in young individuals it is more convex, with only a small cirrus-free space at the dorsal pole. The ventral surface (Pl. III. figs. 1b, 3a) is marked by an indistinct pentagonal impression which corresponds to a similar marking on the under surface of the radial pentagon (Pl. III. fig. 1c), and is of interest from its foreshadowing to a certain extent the deeper bilobed impressions in the corresponding positions on the centro-dorsal and radials of *Antedon quinduplicava* (Pl. IV. figs. 1c, 1d).