Zoology Part LXIV: Report on the ALCYONARIA. By Professor E. Perceval Wright. Bound in Volume 31,1889.



with one end broad, and armed with spiny prominences; the other pointed. The axis is horny and fibrous.

This genus stands in near relationship to *Echinogorgia*, Kölliker, but at once shows a difference in the more fully developed polyps and their opercular coverings, and further in the form of the spicules.

1. *Acamptogorgia arbuscula* (Gray, MS.) (Pl. XXIII. fig. 7; Pl. XXVII. fig. 5).

*Menacella arbuscula*, Gray, *in litt.*

Under the title of *Menacella arbuscula*, Gray, the Natural History Department of the British Museum possesses the dried branch of an Alcyonarian which agrees in every detail with a species in the Challenger collection; the label attached to a portion of Dr. Gray's specimen, which had been communicated to one of us, is in Dr. Gray's handwriting; still it is difficult to understand why he should have placed it under the genus *Menacella*, as this genus was characterised by Gray himself as having "polyp cells covered with spicules like the bark," and those of the "bark" were described as "very slender fusiform spicules." Ridley also, who has investigated the type of *Menacella* (*Menacella reticularis*), confirms the statement that this genus has only simple spindles. The present species therefore cannot remain under the genus *Menacella*, and for it as a type the present genus has been established.

The colony has an upright stem, branched in one plane, with long branches at considerable intervals. The principal stem arises from a smooth expanded base to a height of 270 mm., it has a diameter at the base of 3 mm., gradually narrowing to one of 1·5 mm. On both sides, at angles of 45° to 60°, larger and smaller branches, almost opposite to one another, and at varying intervals, arise, which in part remain simple and reach to lengths of 15 to 20 mm., and in part are developed to a length of 120 mm., and then, in a similar manner to the principal stem, give off branches until these again develop branches of a fourth order. The larger branches have at the base a thickness of 1 to 2 mm.; the terminal branches one of 0·6 mm. The apices of the branches seem a little thickened at their terminations, having a diameter of 2 mm. The cœnenchyma is rather thick and rough. The polyps stand in spirals of three or four on the stem and branches, at intervals of 1 to 1·5 mm., but at the apices of the branches they are more closely packed and their bases are contiguous. The young polyps arise on the apices of the twigs. The shape of the polyps is cylindrical or bluntly conical, they are fixed at right angles on the branches. The operculum forms a low cone. The basal diameter of the polyps is 1·5 mm. with a height of 0·8 to 1 mm. The spicules of the cœnenchyma are bent, spiny, papilliform spindles, frequently with short foliar expansions from their convex portions; 0·2 mm. in length; 0·1 mm. in thickness with the foliar expansions, or 0·3 mm. in length, and 0·1 mm. broad. On the

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