

On the Portuguese coast Gwyn Jeffreys also found *Aphrocallistes bocagei*.

Carter, in his system of the Hexactinellidæ,<sup>1</sup> unites the characters which are common to the two then known species of *Aphrocallistes* in the following manner:—"Species tubular branched, branches closed at their free extremities, wall thick, formed of polyhedrally reticulated fibre possessing a scopuline shaft."

Of *Aphrocallistes beatrix*, Gray, he says:—"Rosette (small) with elongated shaft-like axis, many-rayed, rays straight, pointed or capitate, thorn-like chiefly situated in the middle and at the terminations of the shaft, arranged more or less verticillately; or (large) with microspined rays slightly curved and not capitate. Scopuline shaft headed with four rays of equal length, slightly everted, microspined, and terminating in small globular heads."

With respect to *Aphrocallistes bocagei*, Wright, on the other hand, he notes the following as peculiar:—"Rosette many-rayed; rays of equal length, straight, capitate; or with long shaft-like axis, like that of the small form in *Aphrocallistes beatrix*, with or without heads.

"Scopuline shaft headed with four rays of equal length flexed outwards, *en fleur-de-lis*, microspined, and each terminating in a large conical end."

In the more minute description<sup>2</sup> given of the two species, which are especially related by the form of the spicules, Carter notes the following different spicular forms as being characteristic of *Aphrocallistes bocagei*:—

- (1) "Linear fusiform spicules with inflated centre and extremities.
- (2) "More delicate linear fusiform spicules, spined throughout, all the spines being in the same direction.
- (3) "Hexradiate spicules whose arms are more or less unequal in length, five being smooth at the commencement and conically inflated and spined at the termination, and the sixth spined, *feather-like*, rounded, the spines increasing in length from the fixed end to the free.
- (4) "Scopuline spicules, consisting of a long shaft and four rays terminating in conical heads surrounded by recurved spines.
- (5) "Rosettes with five-rayed capitate arms.
- (6) "The same rosettes with the axis stretched out linearly, shaft-like, and the rays arranged round it more or less spirally.
- (7) "The same rosettes, with the rays of the shaft more confined to its centre and all simple (that is, not capitate, but pointed)."

In *Aphrocallistes beatrix*, Carter found the spicules generally similar to those in *Aphrocallistes bocagei*, yet some forms exhibited typical differences, namely, "the hexradiate spicules whose pointed arms are sparsely and irregularly covered throughout with smooth spines curved outwards: scopuline spicules whose four rays were quad-

<sup>1</sup> *Ann. and Mag. Nat. Hist.*, ser. 4, vol. xii. p. 359.

<sup>2</sup> *Loc. cit.*, pp. 449-452.