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LETTER TO THE EDITORS

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Dear Editors,

MR. A. K. TOTTON had for several years been studying the nematocysts of siphonophores, especially the Mediterranean species, with a view to producing a review article. However, his death on 12 January 1973, preceded by many illnesses has prevented the completion of this task and so I have taken the liberty of abstracting for publication an account of his method for discharging nematocysts. Mr. Totton wrote an account of this method after his visit to Villefranche-sur-Mer in 1967.

Mr. Totton's collection of named siphonophores, copious notes, manuscript papers and reprints has been presented to the British Museum (Natural History) by his son. A bibliography of Mr. Totton's published papers has been compiled, with the assistance of Dr. P. F. S. Cornelius, and is included here. His notes and manuscripts included amongst them a review of the available knowledge of *Gerardia savaglia* Rossi (Zoanthinaria) with a new record from Gibraltar; an account of the hydroid and young medusa of *Pachycordyle* Weissmann (Hydrozoan); and some brief notes on the phylogeny of the Anthozoa in which the stauromedusan radial canal walls are proposed as the origins of the Anthozoan septa. However, his most important uncompleted work probably is that which is concerned with the origin and function of the bracts in siphonophores. This manuscript discusses the medusoid or polypoid origin of the bracts from the various families. The physonect bracts, such as those of *Nanomia bijuga*, arise from the stem, as do the palpons and gastrozooid and are thus polypoid in origin. However, a medusoid origin is proposed for the bracts of the Diphyidae and Abylidae as the gonophores and the phyllocyst of the eudoxid bract were shown by Totton to be budded from the pedicel of the gastrozooid in *Chelophyes appendiculata*. More recent and laborious work with specimens of *Praya dubia* led Mr. Totton to conclude that the origin of the Prayidae bracts was also medusoid, as similarly they were budded off amongst the gonophores from the pedicels of the gastrozooids. He also drew attention to the basic plan of the four bracteal canals in the Prayidae which is reminiscent of the radial canals of Hydromedusae.

An obituary of Mr. Arthur Knyvett Totton appeared in *Nature*, London **244**, 187–188, 1973.

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