

ABSTRACTS OF MEMOIRS
RECORDING WORK DONE AT THE
PLYMOUTH LABORATORY

BOADLE, M. C., 1969. Observations on a histaminase of invertebrate origin: a contribution to the study of cephalopod amine oxidase. *Comp. Biochem. Physiol.*, Vol. 30, pp. 611-20.

The amine oxidase of the renal appendages, pancreas and optic ganglia of *Eledone cirrhosa* acted on histamine, ω -*N*-methylhistamine and a variety of monoamines. Short-chain aliphatic diamines, e.g. putrescine and cadaverine, were not substrates.

The oxidation of histamine by these tissues proceeded unchanged in the presence of 10^{-2} M semicarbazide.

The K_m of the enzyme present in the renal appendages toward histamine was 6.25×10^{-2} .

The monocationic form of histamine was oxidized relatively more rapidly than the dicationic form by the amine oxidase of the renal appendages and pancreas. M.C.B.

GIBBS, P. E., 1969. Aspects of polychaete ecology with particular reference to commensalism. *Phil. Trans. R. Soc.*, B, Vol. 255, pp. 443-58.

An account of the associations involving polychaetes which were discovered in the Solomon Islands (West Pacific) is given: nine polynoids, two palmyrids and a eunicid were found living as commensals with a variety of host animals, chiefly echinoderms and sipunculids, and many of these associations are recorded for the first time. Some observations on the faunas of selected littoral habitats are also discussed. P.E.G.

MOMMAERTS, J. P., 1969. Données sur la distribution des éléments biogènes dans l'estuaire du Tamer, à Plymouth. *Hydrobiologia*, Vol. 34, pp. 182-92.

Some early results of the study on the distribution of major nutrients and phytoplankton in the Tamer estuary (see *J. mar. biol. Ass. U.K.*, 1969, 49) are published in a short paper. The emphasis is put on environmental factors. Temperature inversion with climate change, transparency variations and salinity non-sinusoidal oscillations in the estuary are particularly discussed. J.P.M.

MOMMAERTS, J. P., 1969. Données sur l'écologie de l'estuaire du Tamer (Plymouth). *Bull. Inst. r. Sci. nat. Belg.*, Vol. 45 (22), 24 p.

The estuary of the Tamer has been surveyed from March to September 1968. The distribution and the variation of temperature, salinity and major nutrients (phosphate, nitrate and silicate) has been studied and the connexion with some water circulation features discussed. The distribution of the various groups of phytoplankton in the estuary has been investigated and a comparison with open sea data carried out. J.P.M.

TAYLOR, D. L., 1969. Identity of zooxanthellae isolated from some Pacific Tridacnidae. *J. Phycol.*, Vol. 5, pp. 336–40.

The taxonomy and ultrastructure of zooxanthellae from six species of Pacific giant clam have been studied from cultures. Comparison with type material shows that all of the isolates are *Symbiodinium microadriaticum*, a symbiotic dinoflagellate originally recorded from coelenterates in the Caribbean. Specific criteria for the identification of this organism are discussed, and their value to the comparative taxonomy of marine zooxanthellae is noted.

D.L.T.

TAYLOR, D. L., 1970. Chloroplasts as symbiotic organelles. *Int. Rev. Cytol.*, Vol. 27, pp. 29–64.

It can be shown that chloroplasts are self-reproducing semiautonomous structures that possess their own independent genetic system. In many respects, chloroplasts resemble certain blue-green algae in their structure, biochemistry and genetic behaviour. It is suggested that chloroplasts originated through an association between a colourless host organism and a blue-green alga-like symbiont similar in form and function to those known to exist today. The assertion of these symbiotic origins may be found in situations in which isolated chloroplasts are known to exist endosymbiotically in the cells of invertebrates. Such an existence implies a return to a previous symbiotic situation.

D.L.T.