# THE MARINE BIOLOGICAL ASSOCIATION OF THE UNITED KINGDOM

THE ASSOCIATION was founded in 1884 to promote accurate researches leading to the advancement of zoological and botanical science and to an increase in our knowledge of the food, life, conditions and habits of British fishes. The work of the Association is controlled by a Council elected annually by its subscribing members.

Professor T. H. Huxley took the chair at the initial meeting held in the rooms of the Royal Society and was elected the first President. Among those present were Sir John Lubbock (afterwards Lord Avebury), Sir Joseph Hooker, Professor H. N. Moseley, Mr G. J. Romanes, and Sir E. Ray Lankester who, after Professor Huxley, was for many years president of the Association. It was decided to build a laboratory at Plymouth, where a rich and varied fauna is found.

The Plymouth Laboratory was opened in June 1888, and, since that date, considerable additions have been made to the buildings, including a library, lecture-hall, and extensive laboratory accommodation with up-to-date equipment. Additional sea-water reservoirs have also been built, and an aquarium, modernized in 1959, opened to the public.

Since its foundation the Association has been supported by subscriptions and donations from private members, universities, learned societies, the Fishmongers' Company and other public bodies. For some time past, however, the main financial support for the work of the Plymouth Laboratory has come from Government funds, and since 1965 the Laboratory has been grant-aided through the Natural Environment Research Council.

The Marine Biological Association, under the direction of its Council, undertakes research in all branches of marine science and the main results are published in this journal. Accounts of the laboratory and aquarium are to be found in Vol. 27 (p. 761), Vol. 39 (p. 391) and Vol. 43 (p. 281), and summaries of the activities and research of the Association are given annually in the Report of the Council in the November issue of the Journal.

The laboratory is open throughout the year and its work is carried out by a fully qualified research staff under the supervision of the Director. The names of the members of the staff will be found on the inner page of the front cover. Accommodation is available for British and foreign scientific workers who wish to carry out independent research in all branches of marine science. Arrangements are made for courses for advanced students, and marine animals and plants are supplied to educational institutions.

Work at sea is undertaken by three research vessels and by a motor boat, and these also collect the specimens required in the laboratory.

### TERMS OF MEMBERSHIP

| 00 |
|----|
| 00 |
| 00 |
| 00 |
|    |

Annual subscriptions become due on 1 January.

Members of the Assocation have the following rights and privileges: they elect annually the Officers and Council; they are entitled to receive the Journal of the Association at a reduced rate; they are admitted to view the laboratory at Plymouth; they have the first claim to rent a place in the laboratory for research, with use of tanks, boats, etc.; they have the privilege of occupying a table for one week in each year free of charge; and they have access to the books in the library at Plymouth during working hours.

The Commissioners of Inland Revenue have approved the Association for the purposes of Section 16, Finance Act, 1958, and that the whole of the annual subscription paid by a member who qualifies for relief under the section will be allowable as a deduction from his emoluments assessable to income tax under Schedule E.

All correspondence should be addressed to the Director, The Laboratory, Citadel Hill, Plymouth, PL1 2PB.

JOURNAL OF THE MARINE BIOLOGICAL ASSOCIATION

### Vol. 61 No 3

## CONTENTS

DACE

|  | FAGE |
|--|------|
| DAVIES, A. G. and SLEEP, J. A. Nutrient stimulation of carbon fixation in summertime<br>English Channel phytoplankton assemblages  | 551  |
| MADDOCK, L., BOALCH, G. T. and HARBOUR, D. S. Populations of phytoplankton in the western English Channel between 1964 and 1974  | 565  |
| WILSON, D. P. An experimental search for phytoplanktonic algae producing external meta-<br>bolites which condition natural sea waters  | 585  |
| PINGREE, R. D. and GRIFFITHS, D. K. S2 tidal simulations on the north-west European shelf  | 609  |
| PINGREE, R. D. and GRIFFITHS, D. K. The N <sub>2</sub> tide and semidiurnal amphidromes around the British Isles   | 617  |
| WRIGHT, J. R. and HARTNOLL, R. G. An energy budget for a population of the limpet Patella vulgata  | 627  |
| BOWMAN, R. S. The morphology of <i>Patella</i> spp. juveniles in Britain, and some phylogenetic inferences   | 647  |
| DAVENPORT, J. The opening response of mussels (Mytilus edulis) exposed to rising sea-water concentrations  | 667  |
| FANKBONER, P. V. A re-examination of mucus feeding by the sea cucumber Leptopentacta<br>(= Cucumaria) elongata   | 679  |
| BINYON, J. The effects of lowered salinity upon Branchiostoma lanceolatum from the English<br>Channel  | 685  |
| BERGMANS, M. A demographic study of the life cycle of <i>Tisbe furcata</i> (Baird, 1837) (Copepoda: Harpacticoida)   | 691  |
| GIBBS, P. E., BRYAN, G. W. and RYAN, K. P. Copper accumulation by the polychaete Melinna palmata: an antipredation mechanism?  | 707  |
| HERRING, P. J. The comparative morphology of hepatic photophores in decapod Crustacea  | 723  |
| MEADOWS, P. S., DEANS, E. A. and ANDERSON, J. G. Responses of Corophium volutator to sediment sulphide   | 739  |
| MOORE, P. G. A functional interpretation of coxal morphology in <i>Epimeria cornigera</i><br>(Crustacea: Amphipoda: Paramphithoidae).  | 749  |
| MYERS, A. A. and MCGRATH, D. Taxonomic studies on British and Irish Amphipoda. The genus <i>Photis</i> with the re-establishment of <i>P. pollex</i> (= <i>P. macrocoxa</i> ). | 759  |
| SHEADER, M. Development and growth in laboratory-maintained and field populations of<br>Parathemisto gaudichaudi (Hyperiidea: Amphipoda)                                       | 769  |
| PROBERT, P. K. Changes in the benthic community of china clay waste deposits in Meva-<br>gissey Bay following a reduction of discharges  | 789  |
| DIXON, D. R. Reproductive biology of the serpulid Ficopomatus (Mercierella) enigmaticus in the Thames Estuary, S.E. England  | 805  |
| SHORT NOTE,<br>FORSTER, G. R. A note on the growth of Arctica islandica  | 817  |
| BOOK NOTICES   | 819  |
|  |      |

### © Copyright by the Marine Biological Association of the U.K. 1981

The subscription price of volume 61, 1981 of the Journal to non-members of the Association is  $\pounds$ 78.00 net a volume of four parts, post free, or US \$218.00 in U.S.A. and Canada, payable in advance. Single parts cost  $\pounds$ 23.00 (US \$64.00 in U.S.A. and Canada) plus postage. Subscriptions may be sent to any bookseller or to Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge CB2 2RU, or in the U.S.A. and Canada, to Cambridge University Press, 32 East 57th Street, New York, 10022. All orders must be accompanied by payment.

### **CAMBRIDGE UNIVERSITY PRESS**

THE PITT BUILDING, TRUMPINGTON STREET, CAMBRIDGE CB2 1RP

#### 32 EAST 57TH STREET, NEW YORK, N.Y. 10022

Printed in Great Britain at the University Press, Cambridge

https://doi.org/10.1017/S0025315400048037 Published online by Cambridge University Press