

The Journal of Experimental Biology

(Late *The British Journal of Experimental Biology*)

EDITED BY
J. GRAY

ASSISTED BY
J. Barcroft A. J. Clark J. B. S. Haldane J. S. Huxley W. H. Pearsall
S. C. Brooks F. A. E. Crew E. Newton Harvey M. H. Jacobs E. Ponder
R. Chambers W. O. Fenn L. T. Hogben C. F. A. Pantin J. T. Saunders

VOL. IX, No. 2 Price 12s. 6d. net *April*, 1932
SUBSCRIPTION PRICE PER VOLUME 40s. NET

CONTENTS

- The Growth of the Pituitary Body in the Female Rabbit.
(With Two Text-figures). By MARJORIE ALLANSON.
- The Osmotic Properties of Medusae. By J. B. Bateman.
- Studies on the Nutrition of Blow-fly Larvae:
II. Rôle of the Intestinal Flora in Digestion. (With One
Text-figure). By R. P. HOBSON.
- Studies on the Pituitary:
IX. Changes in Blood Calcium following Injection of
Anterior Lobe Extracts and Sexual Excitement in
Female Rabbits. By LANCELOT HOGBEN AND
ENID CHARLES.
- The Utilisation of Proteoses by Chicken Heart Fibroblasts
growing *in vitro*. (With Two Plates and Twelve Text-
figures). By E. N. WILLMER AND L. P. KENDAL.
- Quantitative Aspects of the Change of Phototropic Sign in
Daphnia. (With Eleven Text-figures). By GEORGE L.
CLARKE.
- On Phosphorus Metabolism in Embryonic Life:
II. Phosphagan in Cephalopod Development. (With Four
Text-figures). By JOSEPH NEEDHAM, DOROTHY
MOYLE NEEDHAM, JOHN YUDKIN AND ERNEST
BALDWIN.
- The Influence of Atmospheric Humidity on the Thermal
Death Point of a Number of Insects. (With Five Text-
figures). By KENNETH MELLANBY.

Published for *The Company of Biologists Limited* •
by THE CAMBRIDGE UNIVERSITY PRESS
LONDON: *Fetter Lane*, E.C. 4

CONTENTS OF NEW SERIES, Vol. XVIII, No. 1.

	PAGE
1. RAYS AND SKATES OF DEVON AND CORNWALL. II. A STUDY OF THE FISHERY; WITH NOTES ON THE OCCURRENCE, MIGRATIONS AND HABITS OF THE SPECIES. By G. A. STEVEN. <i>With 6 Figures in the Text</i>	1
2. THE BACTERIAL FLORA OF THE SLIME AND INTESTINAL CONTENTS OF THE HADDOCK (<i>Gadus aeglefinus</i>). By MARY MACFARLANE STEWART	35
3. NOTES ON THE BIOLOGY OF SOME LAMELLIBRANCHS IN THE CLYDE AREA. By A. C. STEPHEN. <i>With 3 Figures in the Text</i>	51
4. OBSERVATIONS ON THE FAUNA AND CONSTITUENTS OF AN ESTUARINE MUD IN A POLLUTED AREA. By JAMES A. FRASER. <i>With 2 Figures in the Text</i>	69
5. THE FEEDING HABITS OF THE GALATHEIDEA. By EDITH A. T. NICOL. <i>With 7 Figures in the Text</i>	87
6. THE LARVAL STAGES OF <i>Simnia patula</i> . By MARIE V. LEBOUR. <i>With 1 Text-Figure and Plates 1-2</i>	107
7. THE EGGS AND EARLY LARVÆ OF TWO COMMENSAL GASTROPODS <i>Stilifer stylifer</i> AND <i>Odostomia eulimoides</i> . By MARIE V. LEBOUR. <i>With Plate I</i>	117
8. <i>Limacina retroversa</i> IN PLYMOUTH WATER. By MARIE V. LEBOUR. <i>With Plates 1 and 2</i>	123
9. ON THE BIOLOGY OF SAGITTA. THE BREEDING AND GROWTH OF <i>Sagitta elegans</i> VERRILL IN THE PLYMOUTH AREA, 1930-1931. By F. S. RUSSELL. <i>With 2 Figures in the Text and Plate I</i>	131
10. ON THE BIOLOGY OF SAGITTA II. THE BREEDING AND GROWTH OF <i>Sagitta Setosa</i> J. MÜLLER IN THE PLYMOUTH AREA, 1930-1931, WITH A COMPARISON WITH THAT OF <i>S. elegans</i> VERRILL. By F. S. RUSSELL. <i>With 2 Figures in the Text and Plate II</i>	147
11. THE DETERMINATION OF NITRATE IN THE SEA BY MEANS OF REDUCED STRYCHNINE. By L. H. N. COOPER. <i>With 1 Figure in the Text</i>	161
12. NITRATE IN SEA-WATER AND ITS ESTIMATION BY MEANS OF DIPHENYLBENZIDINE. By W. R. G. ATKINS. <i>With 4 Figures in the Text</i>	167
13. THE COPPER CONTENT OF SEA-WATER. By W. R. G. ATKINS	193
14. ON THE USE OF SODIUM BICARBONATE AND CALCIUM IN THE RECTIFICATION OF SEA-WATER IN AQUARIA. By C. M. BREDÈR, JR., AND H. W. SMITH	199
15. ON THE EFFECT OF LONG CONTINUED ADDITIONS OF LIME TO AQUARIUM SEA-WATER. By L. H. N. COOPER	201
16. THE DEVELOPMENT OF <i>Nereis pelagica</i> LINNÆUS. By D. P. WILSON. <i>With 12 Figures in the Text</i>	203
17. A NOTE ON <i>Balanus hyllus regis</i> , THE ONLY EUPSAMMID CORAL IN THE BRITISH FAUNA. By C. M. YONGE. <i>With 2 Figures in the Text</i>	219
18. NOTE ON AN UNUSUAL SPECIMEN OF <i>Asterias rubens</i> . By H. Q. BULL. <i>With 1 Figure in the Text</i>	225
19. SPECIFIC DIFFERENCES IN THE GONADIAL SPICULES OF <i>Echinus esculentus</i> (LINNÆUS) AND <i>Psammechinus miliaris</i> (GMELIN). By RUTH RAWLINSON. <i>With 4 Figures in the Text</i>	229
20. THE FECAL PELLETS OF THE TROCHIDE. By HILARY B. MOORE. <i>With 12 Figures in the Text</i>	235
21. THE SHELL GRAVEL DEPOSITS AND THE INFAUNA OF THE EDDYSTONE GROUNDS. By J. E. SMITH. <i>With 4 Figures in the Text</i>	243
22. A QUANTITATIVE STUDY OF THE FAUNA OF THE SANDY BEACH AT PORT ERIN. By MARJORIE E. PIRRIE, J. R. BRUCE AND H. B. MOORE. <i>With 8 Figures in the Text</i>	279
23. THE SALINITY OF THE WATER RETAINED IN THE MUDDY FORESHORE OF AN ESTUARY. By W. B. ALEXANDER, B. A. SOUTHGATE AND R. BASSINDALE	297
24. SALINITY INTERCHANGE BETWEEN SALT WATER IN SAND AND OVERFLOWING FRESH WATER AT LOW TIDE. II. By D. M. REID. <i>With 4 Figures in the Text</i>	299
25. SOME NEW EYE-COLOUR CHANGES IN <i>Gammarus chevreuxi</i> SEXTON. PART II. By E. W. SEXTON, A. R. CLARK AND G. M. SPOONER	367
26. AN EXPERIMENT ON BREEDING WILD PAIRS OF <i>Gammarus chevreuxi</i> AT A HIGH TEMPERATURE, WITH AN ACCOUNT OF TWO NEW RECESSIVE TYPES OF RED EYE. By G. M. SPOONER. <i>With 1 Figure in the Text</i>	337
27. DEGENERATION AND LOSS OF THE EYE IN THE AMPHIPOD <i>Gammarus chevreuxi</i> SEXTON. PART I. By E. W. SEXTON. <i>With 7 Figures in the Text and Plates III, IV, 5 and 6</i>	355
28. ABSTRACTS OF MEMOIRS RECORDING WORK DONE AT THE PLYMOUTH LABORATORY	395
29. REPORT OF THE COUNCIL, 1931	403
30. BALANCE SHEET AND INCOME AND EXPENDITURE ACCOUNT	424
31. LIST OF ANNUAL SUBSCRIPTIONS AND DONATIONS PAID DURING THE YEAR, 1ST APRIL, 1931, TO 31ST MARCH, 1932	428

NOTICE.

The Council of the Marine Biological Association wish it to be understood that they do not accept responsibility for statements published in this Journal excepting when those statements are contained in an official report of the Council.