BIOLOGISTS LIMITED

The Journal of Experimental Biology

EDITED BY

V. B. WIGGLESWORTH and J. A. RAMSAY

Contents	PAGE
Patterson, John. The eye muscle of Calliphora vomitoria L. I. Spontaneous activity and the effects of light and dark adaptation	565
Patterson, John. The eye muscle of Calliphora vomitoria L. II. Transient responses to changes in the intensity of illumination	585
SILVEY, GERALD E. Motor control of tail spine rotation of the horshoe crab, Limulus polyphemus	599
Evans, David H., Mallery, Charles H. and Kravitz, Larry. Sodium extrusion by a fish acclimated to sea water: physiological and biochemical description of a Na-for-K exchange system	627
ELDER, HUGH Y. Direct peristaltic progression and the functional significance of the dermal connective tissues during burrowing in the polychaete <i>Polyphysia crassa</i> (Oersted) .	637
NAITOH, YUTAKA and KANEKO, HIROKI. Control of ciliary activities by adenosinetriphosphate and divalent cations in triton-extracted models of <i>Paramecium caudatum</i>	657
Heinrich, Bernd and Kammer, Ann E. Activation of the fibrillar muscles in the bumblebee during warm-up, stabilization of thoracic temperature and flight	677
Tucker, Vance A. Bird metabolism during flight: evaluation of a theory	689
Hanson, D., Mann, T. and Martin, A. W. Mechanism of the spermatophoric reaction in the giant octopus of the North Pacific, Octopus dofleini martini	711
Pearson, K. G. and Iles, J. F. Nervous mechanisms underlying intersegmental co-ordination of leg movements during walking in the cockroach	725
Snow, P. J. The antennular activities of the hermit crab, Pagurus alaskensis (Benedict) .	745
Snow, P. J. The motor innervation and musculature of the antennule of the hermit crab, Pagurus alaskensis (Benedict)	767
Katz, Uri. Studies on the adaptation of the toad <i>Bufo viridis</i> to high salinities: oxygen consumption, plasma concentration and water content of the tissues	785
Sand, Olav and Hawkins, A. D. Acoustic properties of the cod swimbladder	797
TRUMAN, JAMES W. Physiology of insect ecdysis. III. Relationship between the hormonal control of eclosion and of tanning in the tobacco hornworm, Manduca sexta	821

Published for the Company of Biologists Limited CAMBRIDGE UNIVERSITY PRESS

BENTLEY HOUSE, 200 EUSTON ROAD, LONDON NW1 2DB AMERICAN BRANCH: 32 EAST 57TH STREET, NEW YORK, N.Y. 10022

Price f.4.00 net (U.S.A. and Canada US \$13.00). 1973 subscription per volume (£9.00 U.S.A. and Canada US \$30.00).

Published once every two months. Second class postage paid at New York, N.Y.