## The Journal of Experimental Biology

## J. E. TREHERNE

### WITH W.A. FOSTER & P.K. SCHOFIELD

KIRSCHVINK, JOSEPH L., DIZON, ANDREW E. AND WESTPHAL, JAMES A. Evidence from strandings for geomagnetic sensitivity in cetaceans
evidence for the existence of an endogenous evisceration factor
hormone in the tobacco hornworm, Manduca sexta, is controlled intrinsically by juvenile hormone
(Heteroptera)
CAPPENTER ROGER F. Flight physiology of intermediate-sized fruit hats (Pteropodidae) 79
Contraction, reduct 2. I figure physicists of intermediate black it all basis (a temporalisate).
NOGUCHI, MUNENORI, INOUÉ, HIROSHI AND KUBO, KAZUMI. Control of the orientation of cilia by ATP and divalent cations in Triton-glycerol-extracted <i>Paramecium caudatum</i> 105
JOHNSTON, IAN A. AND WOKOMA, ALELE. Effects of temperature and thermal acclimation on contractile properties and metabolism of skeletal muscle in the flounder ( <i>Platichthys flesus</i> L.) 119
SMITH, WENDY A., BOWEN, M. F., BOLLENBACHER, WALTER E. AND GILBERT, LAWRENCE I.  Cellular changes in the prothoracic glands of diapausing pupae of Manduca sexta
Washio, Hiroshi. Spontaneous miniature potentials in denervated coxal muscle fibres of the American cockroach
HENSLER, KLAUS. Intracellular recordings of neck muscle motoneurones during eye cleaning behaviour of the cricket
Jellies, John and Larimer, James L. Activity of crayfish abdominal-positioning interneurones during spontaneous and sensory-evoked movements
KAYAR, S. R., CONLEY, K. E., CLAASSEN, H. AND HOPPELER, H. Capillarity and mitochondrial distribution in rat myocardium following exercise training
JONES, DAVID R., BRILL, RICHARD W. AND MENSE, DENNIS C. The influence of blood gas properties on gas tensions and pH of ventral and dorsal aortic blood in free-swimming tuna, .  Euthynnus affinis
WOAKES, A. J. AND BUTLER, P. J. Respiratory, circulatory and metabolic adjustments during swimming in the tufted duck, Aythya fuligula
Missom, W. K. and Chan, P. The relationship between lung volume, respiratory drive and breathing pattern in the turtle, <i>Chrysemys picta</i>
FLIE, GERT, FENWICK, JAMES C., KOLAR, ZVONIMIR, MAYER-GOSTAN, NICOLE AND WENDELAAR  BONGA, SJOERD E. Effects of low ambient calcium levels on whole-body Ca <sup>2+</sup> flux rates and internal calcium pools in the freshwater cichlid teleost, <i>Oreochromis mossambicus</i>
ROSSEL, SAMUEL. Binocular spatial localization in the praying mantis

ILLUSTRATIONS should be assigned figure numbers. Photographs should only be used where essential, for example for electron micrographs. Wherever possible, oscillographs should be made suitable for reproduction as line drawings. The cost of colour plates must be defrayed by the author.

Line drawings must be no more than twice final size. Maximum final size is 200×130 mm. Pen drawings should be in black Indian ink on unfolded heavy white paper or good quality tracing paper. Oscillographs should have a white background. Lettering will be inserted by the printers and should be indicated on the duplicate copies.

Photographs should be at final size. Maximum final size is 200×130 mm for a single plate, and 200×290 mm for a double plate. Photographs should be glossy bromide prints with good definition. They should be gummed on to white card and grouped as they are to appear. Numbering and lettering will be inserted by the printers and should be indicated on a tracing paper overlay. Magnification should be indicated, when relevant, by a scale line drawn on the overlay or beside the illustration.

SHORT COMMUNICATIONS must be original contributions to the literature and not preliminary reports. Methodological papers will only be accepted as *Short Communications*. All above instructions apply except that the communications must not exceed four published pages in length (including illustrations), no *Summary* is required, and line drawings must be at final size.

WORD-PROCESSOR DISKS. JEB can now use author's word-processor disks for setting accepted articles. If available, please send a copy of the disk plus details of the word processor and program used with your manuscript after final revision. Disks will be returned after use.

PROOFSHEETS AND OFFPRINTS. Authors will receive one set of slip proofs for correction and return to the Editor. A page proof will also be sent if the slip proof is marked by the author 'Revise'. An allowance of 50p per sheet of sixteen pages will be made for alteration errors not made by the printers: any excess may be charged to the author. Authors will receive 200 complimentary copies of their papers: additional copies may be purchased at modest cost, and should be ordered when the proofs are returned to the Editor.

The Editors are pleased to announce that, starting in January 1986, the Journal will be published in seven volumes a year instead of the present six. This change is part of a continuing programme designed to improve the Journal and decrease publication times.

The Company of Biologists Limited is a non-profit-making organization whose members are active professional biologists. The Company, which was founded in 1925, is the owner of this journal and the Journal of Cell Science and Journal of Embryology and Experimental Morphology.

Copyright and Reproduction. Authors may make copies of their own papers in this journal without seeking permission from The Company of Biologists Limited, provided that such copies are for free distribution only: they must not be sold.

Authors may re-use their own illustrations in other publications appearing under their own name, without seeking permission.

Specific permission will *not* be required for photocopying copyright material in the following circumstances:

1. For private study, provided the copying is done by the person requiring its use, or by an employee of the institution to which he/she belongs, without charge beyond the actual cost of copying.

2. For the production of multiple copies of such material, to be used for bona fide educational purposes, provided this is done by a member of the staff of the university, school or other comparable institution, for distribution without profit to student members of that institution provided the copy is made from the original journal.

For all other matters relating to the reproduction of copyright material written application must be made to Dr R. J. Skaer, Company Secretary, The Company of Biologists Limited, Department of Zoology, Downing Street, Cambridge CB2 3EJ, UK.

ISI Tear Service, 3501 Market Street, Philadelphia, Pennsylvania 19104, USA is authorized to supply single copies of separate articles for private use only.

Subscriptions. The Journal of Experimental Biology (ISSN 0022-0949) is published as seven volumes a year in January, March, May, July, September, October and November. The subscription price of volumes 120–126 (1986) is £140.00 UK (USA and Canada US \$370.00, Japan £158.00) per annum, payable in advance; postage is included. Individual volumes may be purchased at £25.00 (USA and Canada US \$62.00) each, plus postage. Orders for 1986, which must be accompanied by payment, may be sent to any bookseller or subscription agent or direct to The Biochemical Society Book Depot, P.O. Box 32, Commerce Way, Colchester CO2 8HP, UK. Copies of the journal for subscribers in the USA and Canada are sent by air to New York to arrive with minimum delay. Second class postage paid at New York, NY and at additional mailing offices.

POSTMASTER, send address corrections to: The Journal of Experimental Biology, C/O Expediters of the Printed Word Ltd, 515 Madison Avenue, New York, NY 10022, USA (US Mailing Agent).

Claims for missing parts can only be considered if made immediately upon receipt of the subsequent issue.

Back Volumes Please contact The Biochemical Society Book Depot (see above) for prices.

Index. An annual index will appear in the last volume each year.

### This Publication is available in Microform

University Microfilms International

300 North Zeeb Road, Dept. P.R., Ann Arbor, Ms. 48106

# The Journal of Experimental Biology

EDITED BY

J. E. TREHERNE

WITH W. A. FOSTER & P. K. SCHOFIELD

VOLUME 120 1986

THE COMPANY OF BIOLOGISTS LIMITED

CAMBRIDGE

#### Published and Printed by The Company of Biologists Limited, Department of Zoology, University of Cambridge, Downing Street, Cambridge CB2 3EJ

© The Company of Biologists Limited 1986