# The Journal of Experimental Biology

## J. E. TREHERNE

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

	PAGE
VIDELER, J. J., WEIHS, D. AND DAAN, S. Intermittent gliding in the hunting flight of the kestrel, Falco tinnunculus L	1
GOLDRING, JAMES M., KATER, JOANNE W. AND KATER, STANLEY B. Electrophysiological and morphological identification of action potential generating secretory cell types isolated from the salivary gland of <i>Ariolimax</i>	13
COHAN, CHRISTOPHER S. AND MPITSOS, GEORGE J. The generation of rhythmic activity in a distributed motor system	25
COHAN, CHRISTOPHER S. AND MPITSOS, GEORGE J. Selective recruitment of interganglionic interneurones during different motor patterns in <i>Pleurobranchaea</i>	43
PASZTOR, V. M. AND CLARAC, F. An analysis of waving behaviour: an alternative motor programme for the thoracic appendages of decapod crustacea	59
COYER, PHILIP E., HALSEY, JAMES H., JR. AND STRONG, EDWARD R. Reversible changes in the intracellular potassium ion activities and membrane potentials of <i>Aplysia</i> L <sub>2</sub> -L <sub>6</sub> neurones in response to normoxia and hypoxia	79
EGELHAAF, M. AND BENJAMIN, P. R. Coupled neuronal oscillators in the snail Lymnaea stagnalis: endogenous cellular properties and network interactions	93
Webb, P. W. Speed, acceleration and manoeuvrability of two teleost fishes	115
McDonald, D. G. The interaction of environmental calcium and low pH on the physiology of the rainbow trout, Salmo gairdneri I. Branchial and renal net ion and H <sup>+</sup> fluxes	123
McDonald, D. G., Walker, R. L. and Wilkes, P. R. H. The interaction of environmental calcium and low pH on the physiology of the rainbow trout, Salmo gairdnen. II. Branchial ionoregulatory mechanisms.	141
Graham, Jeffrey B. The transition to air breathing in fishes. II. Effects of hypoxia acclimation on the bimodal gas exchange of <i>Ancistrus chagresi</i> (Lorocariidae)	157
CRUSE, H. AND SCHMITZ, J. The control system of the femur-tibia joint in the standing leg of a walking stick insect Carausius morosus	175
FISCHER, LUDWIG AND FLOREY, ERNST. Modulation of synaptic transmission and excitation-contraction coupling in the opener muscle of the crayfish, Astacus leptodactylus, by 5-hydroxytryptamine and octopamine	187
Wolfersberger, Michael G. and Giangiacomo, Kathleen M. Active potassium transport by the isolated lepidopteran larval midgut: stimulation of net potassium flux and elimination of the slower phase decline of the short-circuit current.	199

### All communications should be addressed to the Editor, The Journal of Experimental Biology, Department of Zoology, Downing Street, Cambridge CB2 3EJ, England.

STYLE. Papers should be as concise as possible, be written in English (spelling as in Oxford English Dictionary), and use S.I. units.

SUBMISSIONS must include two copies of the text, one set of original illustrations and two sets of copy figures.

TEXT (including tables, references and figure legends) must be typewritten, in double-spacing, with numbered pages. The position of the figures and tables should be indicated in the margin. The title page must include the address(es) where the work was carried out, a page heading of up to 40 characters, and three or more key words. Where applicable, the present address and address for correspondence should also be given. A Summary must be the first section of the ms, stating as briefly as possible (typically 150–200 words) the results and conclusions of the work. Each table must be on a separate page. Figure legends must be in a single series at the end of the ms. References must be listed alphabetically. The titles of journals should be abbreviated according to the World List of Scientific Periodicals, 4th edn (1963), and should be presented as follows:

Brines, M. L. & Gould, J. L. (1982). Skylight polarization patterns and animal orientation. J. exp. Biol. 96, 69-91.

MAZIA, D. (1961). Mitosis and physiology of cell division. In *The Cell*, Vol. 3, (eds J. Brachet & A. E. Mirsky), pp. 77-412. New York and London: Academic Press.

Citations in the text are as 'Jones & Smith (1980)' or '(Jones & Smith, 1980)'. The form 'Jones et al.' is used after the first citation if there are 3 or 4 authors, and is used throughout where there are 5 or more authors. The form 'Jones (1980a,b)' is used to cite papers by authors with the same name in the same year.

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 about twice final size. Maximum final size is  $200 \times 125$  mm. Pen drawings should be in black Indian ink on unfolded heavy white paper, good quality tracing paper, or graph paper ruled in pale blue. Oscillographs should have a white background. Lettering will be inserted by the printers and should be indicated on the duplicate copies; it may also be indicated on the original either in soft blue pencil, or on a tracing paper overlay.

or on a tracing paper overlay.

Photographs should be at final size. Maximum final size is  $200 \times 140 \,\mathrm{mm}$  for a single plate, and  $200 \times 290 \,\mathrm{mm}$  for a double plate. Photographs should be glossy bromide prints with good definition. They should be gummed on to white card, grouped and numbered as they are to appear (e.g. Fig. 1A, B etc.).

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 in Indian ink on 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.

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 Journal of Experimental Biology

EDITED BY

J. E. TREHERNE

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

VOLUME 102 1983

THE COMPANY OF BIOLOGISTS LIMITED

CAMBRIDGE

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

© The Company of Biologists Limited 1983

Filmset by Filmtype Services Limited and Printed in England by Pindar Print Limited, Scarborough, North Yorkshire.