

# CONTENTS

	PAGE
LENT, CHARLES M. AND DICKINSON, MICHAEL H. On the termination of ingestive behaviour by the medicinal leech . . . . .	1
IERUSALIMSKY, VICTOR N. AND BALABAN, PAVEL M. Functioning of identified snail neurones in electric fields . . . . .	17
LEHMAN, H. K. AND PRICE, D. A. Localization of FMRFamide-like peptides in the snail <i>Helix aspersa</i> . . . . .	37
LEHMAN, H. K. AND GREENBERG, M. J. The actions of FMRFamide-like peptides on visceral and somatic muscles of the snail <i>Helix aspersa</i> . . . . .	55
PÖRTNER, HANS-OTTO. Contributions of anaerobic metabolism to pH regulation in animal tissues: theory . . . . .	69
PÖRTNER, HANS-OTTO. Anaerobic metabolism and changes in acid-base status: quantitative interrelationships and pH regulation in the marine worm <i>Sipunculus nudus</i> . . . . .	89
NAKAOKA, YASUO, KOHSAKU, KINUGAWA AND KUROTANI, TOHRU. Ca <sup>2+</sup> -dependent photoreceptor potential in <i>Paramecium bursaria</i> . . . . .	107
FELDKAMP, STEVEN D. Swimming in the California sea lion: morphometrics, drag and energetics . . . . .	117
HOULIHAN, D. F., AGNISOLA, C., HAMILTON, N. M. AND TRARA GENOINO, I. Oxygen consumption of the isolated heart of <i>Octopus</i> : effects of power output and hypoxia. .	137
LIGNON, J. M. Ionic permeabilities of the isolated gill cuticle of the shore crab <i>Carcinus maenas</i> . . . . .	159
WELLS, M. J., DUTHIE, G. G., HOULIHAN, D. F., SMITH, P. J. S. AND WELLS, J. Blood flow and pressure changes in exercising octopuses ( <i>Octopus vulgaris</i> ) . . . . .	175
HETHERINGTON, THOMAS E. Physiological features of the opercularis muscle and their effects on vibration sensitivity in the bullfrog <i>Rana catesbeiana</i> . . . . .	189
YAMANA, KENJIRO AND TOH, YOSHIHIRO. Intracellular recording from receptor cells of the temporal organ of the Japanese house centipede, <i>Thereuonema hilgendorfi</i> : receptor potential and conductance changes . . . . .	205
PHILLIPS, JOHN B. Laboratory studies of homing orientation in the eastern red-spotted newt, <i>Notophthalmus viridescens</i> . . . . .	215
SHIMAHARA, T., PICHON, Y., LEES, G., BEADLE, C. A. AND BEADLE, D. J. Gamma-aminobutyric acid receptors on cultured cockroach brain neurones . . . . .	231
SILLAR, KEITH T., CLARAC, FRANÇOIS AND BUSH, BRIAN M. H. Intersegmental coordination of central neural oscillators for rhythmic movements of the walking legs in crayfish, <i>Pacifastacus leniusculus</i> . . . . .	245
JOSEPHSON, ROBERT K. AND STOKES, DARRELL R. The contractile properties of a crab respiratory muscle . . . . .	265
NOBLE-NESBITT, JOHN AND AL-SHUKUR, MARWAN. Effects of desiccation, water-stress and decapitation on integumentary water loss in the cockroach, <i>Periplaneta americana</i> . .	289
NEWLAND, PHILIP L. AND NEIL, DOUGLAS M. Statocyst control of uropod righting reactions in different planes of body tilt in the Norway lobster, <i>Nephrops norvegicus</i> . .	301
YOUNG, STEPHEN AND TAYLOR, VICTORIA A. Spontaneous and evoked eye movements in <i>Polyphemus pediculus</i> (Cladocera: Crustacea): a case of open-loop tracking? . . . . .	323
WENNING, ANGELA. Salt and water regulation in <i>Macrobdella decora</i> (Hirudinea: Gnathobdelliformes) under osmotic stress . . . . .	337
JOHANSEN, JØRGEN AND KLEINHAUS, ANNA L. Saxitoxin differentiates between two types of Na <sup>+</sup> -dependent potentials in the Retzius cell of hirudinid leeches . . . . .	351

## Contents

	PAGE
LUTCAVAGE, M. E., LUTZ, P. L. AND BAIER, H. Gas exchange in the loggerhead sea turtle <i>Caretta caretta</i> . . . . .	365
RHEUBEN, MARY B. AND KAMMER, ANN E. Structure and innervation of the third axillary muscle of <i>Manduca</i> relative to its role in turning flight . . . . .	373
GABBOTT, GEOFFREY, R. J. AND JONES, DAVID R. Habituation of the cardiac response to involuntary diving in diving and dabbling ducks . . . . .	403
FRAIN, W. J. The effect of external sodium and calcium concentrations on sodium fluxes by salt-depleted and non-depleted minnows, <i>Phoxinus phoxinus</i> (L.) . . . . .	417
STEFFENSEN, J. F., TUFTS, B. L. AND RANDALL, D. J. Effect of burst swimming and adrenaline infusion on O <sub>2</sub> consumption and CO <sub>2</sub> excretion in rainbow trout, <i>Salmo gairdneri</i> . . . . .	427

### SHORT COMMUNICATIONS

ZETTLER, F. AND STRAKA, H. Synaptic chloride channels generating hyperpolarizing on-responses in monopolar neurones of the blowfly visual system . . . . .	435
TOOLSON, ERIC C. AND HADLEY, NEIL F. Energy-dependent facilitation of transcuticular water flux contributes to evaporative cooling in the Sonoran desert cicada, <i>Diceroprocta apache</i> (Homoptera: Cicadidae) . . . . .	439