

# CONTENTS

	PAGE
KIRSCHVINK, JOSEPH L., DIZON, ANDREW E. AND WESTPHAL, JAMES A. Evidence from strandings for geomagnetic sensitivity in cetaceans . . . . .	1
BYRNE, MARIA. Induction of evisceration in the holothurian <i>Eupentacta quinquesemita</i> and evidence for the existence of an endogenous evisceration factor . . . . .	25
ROUNTREE, DOROTHY B. AND BOLLENBACHER, WALTER E. The release of the prothoracicotropic hormone in the tobacco hornworm, <i>Manduca sexta</i> , is controlled intrinsically by juvenile hormone . . . . .	41
CLOAREC, ANN. Distance and size discrimination in a water stick insect, <i>Ranatra linearis</i> (Heteroptera) . . . . .	59
CARPENTER, ROGER E. Flight physiology of intermediate-sized fruit bats (Pteropodidae)	79
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 <i>Manduca sexta</i> . . . . .	131
WASHIO, HIROSHI. Spontaneous miniature potentials in denervated coxal muscle fibres of the American cockroach . . . . .	143
HENSLER, KLAUS. Intracellular recordings of neck muscle motoneurons during eye cleaning behaviour of the cricket . . . . .	153
JELLIES, JOHN AND LARIMER, JAMES L. Activity of crayfish abdominal-positioning interneurons during spontaneous and sensory-evoked movements . . . . .	173
KAYAR, S. R., CONLEY, K. E., CLAASSEN, H. AND HOPPELER, H. Capillarity and mitochondrial distribution in rat myocardium following exercise training . . . . .	189
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, <i>Euthynnus affinis</i> . . . . .	201
WOAKES, A. J. AND BUTLER, P. J. Respiratory, circulatory and metabolic adjustments during swimming in the tufted duck, <i>Aythya fuligula</i> . . . . .	215
MILSOM, W. K. AND CHAN, P. The relationship between lung volume, respiratory drive and breathing pattern in the turtle, <i>Chrysemys picta</i> . . . . .	233
FLIK, GERT, FENWICK, JAMES C., KOLAR, ZVONIMIR, MAYER-GOSTAN, NICOLE AND WENDELAAR BONGA, SJOERD E. Effects of low ambient calcium levels on whole-body $Ca^{2+}$ flux rates and internal calcium pools in the freshwater cichlid teleost, <i>Oreochromis mossambicus</i> . . . . .	249
ROSSEL, SAMUEL. Binocular spatial localization in the praying mantis . . . . .	265
HERREID, CLYDE F., II AND FULL, ROBERT J. Locomotion of hermit crabs ( <i>Coenobita compressus</i> ) on beach and treadmill . . . . .	283
HERREID, CLYDE F., II AND FULL, ROBERT J. Energetics of hermit crabs during locomotion: the cost of carrying a shell . . . . .	297

## Contents

	PAGE
BEAL, A. M. Responsiveness of the parotid salivary gland of red kangaroos ( <i>Macropus rufus</i> ) to mineralocorticoids . . . . .	309
WESTBY, G. W. MAX AND PARTRIDGE, KAREN J. Human homing: still no evidence despite geomagnetic controls. . . . .	325
BOUTILIER, R. G., EMILIO, M. G. AND SHELTON, G. The effects of mechanical work on electrolyte and water distribution in amphibian skeletal muscle . . . . .	333
HUDSON, DENNIS M. AND JONES, DAVID R. The influence of body mass on the endurance to restrained submergence in the Pekin duck . . . . .	351
WEILAND, G., BÄSSLER, U. AND BRUNNER, M. A biological feedback control system with electronic input: the artificially closed femur-tibia control system of stick insects .	369
HEITLER, W. J. Aspects of sensory integration in the crayfish swimmeret system . . . .	387
PFLÜGER, HANS-JOACHIM, ELSON, ROBERT, BINKLE, ULRIKE AND SCHNEIDER, HENNING. The central nervous organization of the motor neurones to a steering muscle in locusts . . . . .	403
ELSON, ROBERT AND PFLÜGER, HANS-JOACHIM. The activity of a steering muscle in flying locusts. . . . .	421
SHORT COMMUNICATION	
LOUW, G. N., NICOLSON, S. W. AND SEELY, M. K. Respiration beneath desert sand: carbon dioxide diffusion and respiratory patterns in a tenebrionid beetle . . . . .	443