

CONTENTS

Professor Alexander S. Danilevsky — V.N. BELOZEROV	125
Fourth European Workshop on Invertebrate Ecophysiology — V.E. KIPYATKOV	126
REVIEWS	
The range of insect dormancy responses — H.V. DANKS	127
Ecophysiological consequences of variability in diapause intensity — S. MASAKI	143
MINI-REVIEW	
Photoperiodism and seasonal adaptations in some seed-sucking bugs (Heteroptera) in central Japan — H. NUMATA & K. NAKAMURA	155
POINT OF VIEW	
Controversial aspects of diapause development — I. HODEK	163
ARTICLES	
Maternal age and endogenous variation in maternal influence on photoperiodic response in the progeny diapause in <i>Trichogramma embryophagum</i> (Hymenoptera: Trichogrammatidae) — S.YA. REZNIK, T.S. KATS, T.YA. UMAROVA & N.D. VOINOVICH	175
Physiology of cold-acclimation in non-diapausing adults of <i>Pyrrhocoris apterus</i> (Heteroptera) — M. ŠLACHTA, P. BERKOVÁ, J. VAMBERA & V. KOŠTÁL	181
Effects of host plant quality on overwintering success of the leaf beetle <i>Chrysomela lapponica</i> (Coleoptera: Chrysomelidae) — E.L. ZVEREVA	189
Reaction norm in response to temperature may change to adapt rapid brood development to boreal and subarctic climates in <i>Myrmica</i> ants (Hymenoptera: Formicidae) — V.E. KIPYATKOV & E.B. LOPATINA	197
Interrelations of gas exchange cycles, body movements and heartbeats in the foragers of bumblebee <i>Bombus terrestris</i> (Hymenoptera: Apidae) at low temperatures — A. KUUSIK, A.-J. MARTIN, M. MÄND, K. HIIESAAR, L. METSPALU & U. TARTES	209
Tonic immobility in adult Colorado potato beetle, <i>Leptinotarsa decemlineata</i> (Coleoptera: Chrysomelidae) evoked by mechanical and optical stimuli — L. METSPALU, A. KUUSIK, K. HIIESAAR & U. TARTES	215
Utilization of lipid for flight and reproduction in <i>Spodoptera litura</i> (Lepidoptera: Noctuidae) — M. MURATA & S. TOJO	221
Latitudinal and local geographic mosaics in host plant preferences as shaped by thermal units and voltinism in <i>Papilio</i> spp. (Lepidoptera) — J. M. SCRIBER	225
Food induced variation of thermal constants of development and growth of <i>Autographa gamma</i> (Lepidoptera: Noctuidae) larvae — A. HONĚK, V. JAROSÍK, Z. MARTINKOVÁ & I. NOVÁK	241
The role of the subelytral cavity in water loss in the flightless dung beetle, <i>Circellium bacchus</i> (Coleoptera: Scarabaeinae) — F.D. DUNCAN	253
Interactions of water, ice nucleators and desiccation in invertebrate cold survival — W. BLOCK	259
Announcement – Ecology of Aphidophaga 8	188