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Programme and Abstracts

Edited by Leonida Fusani,
Timothy Coppack & Māris Strazds



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OLD VERSUS NEW WORLD: ADAPTIVE SIGNIFICANCE OF NEST DEFENCE IN TWO BROOD PARASITISM SYSTEMS

Presented by **Daniela Campobello**

Daniela Campobello^{1,2}, Spencer G. Sealy²

1 Department of Animal Biology, University of Palermo, 90123 Palermo, Italy;

2 Department of Biological Sciences, University of Manitoba, Winnipeg, MB R3T2N2, Canada

Adaptiveness of behavioural plasticity in defensive behaviour has been assumed implicitly when animals react specifically to a particular threat. Learned enemy recognition, therefore, has often been considered synonymous with increased fitness. Some hosts of avian brood parasites can discriminate in such a way that allows them to adjust their response to the risk posed by the species approaching their nest. Their defence may be learned either individually or socially. However, quantification of fitness advantages gained by adopting specific defensive strategies and their contextual adjustments are scarce in the literature. We determined whether nest defence and its flexibility enhanced nest survival of hosts in two parasitic systems, an older system involving the common cuckoo (*Cuculus canorus*) and its host, the reed warbler (*Acrocephalus scirpaceus*), and a more recent one, with the brown-headed cowbird (*Molothrus ater*) and its host, the yellow warbler (*Dendroica petechia*). Starting in 2002, we tested individual versus social learning and recorded defensive responses by these warblers to taxidermic mounts of the parasite presented at their nest. Reed warblers uttered rasp calls more frequently to cuckoos than to other threatening species and the most vocal individuals during the first cuckoo encounter also tended to escape parasitism. Nest survival in the face of parasitism also was predicted by changes in the number of rasp calls following a threatening experience. Yellow warblers also responded to cowbirds with specific defences but none was associated with higher or lower nest survival when parasitism was considered but aggressive or distraction displays were associated with an increased survival of nests under the threat of nest predation. In both yellow warblers and reed warblers, enhanced intensities of some defensive responses were associated with increased nest survival, and these strategies spread most commonly throughout the populations.

danielacampobello@hotmail.com