

BOOK REVIEW

RUXTON G.D., SHERRATT T.N. & SPEED M.P. 2004: AVOIDING ATTACK. THE EVOLUTIONARY ECOLOGY OF CRYPISIS, WARNING SIGNALS, AND MIMICRY. Oxford University Press, Oxford, 249 pp. ISBN 0-19-852859-0 (hardback) / 0-19-852860-4 (paperback). Price GBP 75.00 / GBP 37.50.

Deceiving, startling, warning, defence – these and other rather negatively perceived words describe what animals do in order to avoid being killed or eaten – and also what this book is about. Not only the animal is killed, but its enemy gains food and information on how to find and kill more similar individuals – relatives sharing common genes. This is an important evolutionary explanation why animals possess so many structures, compounds, behavioural patterns and other mechanisms targeted against predators. On the other side of the predator-prey relationship, predators usually only risk starvation. Thus, the counter-adaptations of predators are not as numerous, common, or sophisticated, as the adaptations of their potential victims. This evolutionary view of how organisms avoid detection, attempt to attack or its success, is central to this book.

The authors cite many diverse case studies illustrating how animals defend themselves against other animals. Moreover, the authors of this book are also authors of several original scientific articles on defence and mimicry and also the mathematical modelling of these phenomena. The review character of this book and its role as a source of information is clearly indicated by the very long list of references; which makes up one eighth of the book (thirty pages) and is printed in a smaller font.

This book focuses mainly on the morphological aspects of avoiding predation, the form and colouration that make a potential prey either cryptic (invisible) or aposematic (warn that they

are unpalatable), which may be true or false (Müllerian or Batesian mimicry). An important feature determining the effectiveness of a defence strategy, based on form and colour, is specific behaviour like startling, which it is also described and discussed. On the other hand, the information on the physical and chemical nature of defence, which would fill another large volume (and such books already exist), is mentioned only briefly.

Examples used throughout the book are mainly of insects, as they represent the most diverse and species-rich class, but there are also many examples for fish, snakes, lizards and even mammals. Sometimes, a particular defence mechanism is specific for a particular animal group, like silvering in fish and lizard tail autotomy, but the authors always try to generalize and describe the mechanism, not particular cases.

Some chapters are illustrated by a meagre number of tables, diagrams, graphs, drawings and equations, plus three (!) colour photographs. The few tables and figures are appropriate and carefully prepared. There are two appendices, listing the mathematical and computer models dealing with Batesian and Müllerian mimicry – the main field of the third author. The book has author, species (or, more precisely, taxonomic, with both English and scientific names), and subject indexes.

I have found no errors, either factual or typesetting. Despite the very precise and scientifically informative character of the book, which one would expect to reduce the number of serious readers, the generally interesting topic and the pleasant way it is written, make it more likely to be read by a variety of naturalists, which like uncovering the amazing secrets of nature.

O. Nedvěd