

Antipredator Defences in Birds and Mammals

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Antipredator Defences in Birds and Mammals

By: Tim Caro

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No animals enjoy being killed by a predator, and have thus evolved ways of avoiding it. Tim Caro's book synthesizes the current knowledge on predator defences used by birds and mammals. Reading Dr. Caro's book, one can not help being fascinated by all the defences prey animals use to avoid being killed by a predator; like the spotted coat of young ungulates, the aposematic colour of some birds, alarm calls, hedgehogs' spines and injury-feigning behaviour exhibited by some birds to distract the predator and protect their young.

However, Dr. Caro goes further than describing the different strategies; he also presents hypotheses regarding their function and origin (less so on the latter). In each chapter, he presents up-to-date theory on the function of the different traits, and highlights them with many empirical studies. However, disappointing for readers who seek easy solutions and promising for those that want to do research, he rarely lends all his support to one of the proposed hypotheses.

There are several ways of classifying the different types of defences utilised by birds and mammals to avoid being killed by a predator. Dr. Caro structures the antipredator defences as a hypothetical chronological sequence of mechanisms used at different stages of the predation process. In chapter one, he justifies writing this book by showing how individual prey are able to recognise predators, and sometimes discriminate between different types of predators. He then describes how prey avoid being detected by predators by morphological (chapter two) and behavioural (chapter three) mechanisms, how prey detect predators (chapter four and five), and how they warn conspecifics about predator presence (chapter six). Next, he discusses how prey avoid being attacked once noticed, either when alone (chapter seven) or as a group (chapter eight). Then the focus is put on how prey fend off an attack, by morphological (chapter nine) and behavioural means (chapter ten and eleven), before he discusses flight and escape strategies (chapter twelve). In the last chapter, he provides 'framing questions', where he points to some important topics that could improve our understanding of the relationships between prey and predators.

Interested readers should be prepared to devote quite some time to the book. The theory is in some parts almost swamped by all the examples - thus readers should be sure to spend sufficient time to keep track of the theory and hypotheses, while at the same time enjoying all the fascinating examples that are cited.

This book represents the state-of-the-art in antipredator literature. As Dr. Caro has devoted much of his research to this field, he really knows what he is talking about, and the book will probably be a landmark in the field. This is a highly recommended read, and I am sure that researchers interested in the relationships between predators and prey (aren't we all?) will have a new set of studies outlined by the time they finish this book.

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