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Aubrey Manning and Marian Stamp Dawkins
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AN INTRODUCTION TO ANIMAL BEHAVIOUR

Sixth Edition

Wolves excitedly greet each other as members of the pack come together; a bumble bee uses its long tongue to reach the nectar at the base of a foxglove flower; a peregrine falcon stoops at high speed to strike a pigeon flying below; young cheetahs rest quietly together, very close to sleep.

Now in full colour, this revised and updated edition of Manning and Dawkins' classic text provides a beautifully written introduction to the fundamentals of animal behaviour. Tinbergen's four questions of causation, evolution, development and function form the fundamental framework of the text, illustrated with fascinating examples of complex behavioural mechanisms. The authors provide accounts of all levels of behaviour from the nerve cell to that of the population. The strengths of *An Introduction to Animal Behaviour* as a textbook include its clear explanations and concise, readable text, and the enthusiasm of the authors for their subject.

AUBREY MANNING, OBE FRSE was Professor of Natural History at the University of Edinburgh. His main research and teaching interests were based around the development and evolution of animal behaviour. He completed his DPhil under Niko Tinbergen and is now Emeritus Professor. He received the Zoological Society of London Silver Medal in 2003 for public understanding of science.

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University of Edinburgh

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PREFACE

It is 14 years since the last edition and the science or sciences of animal behaviour have progressed enormously. Topics which justified only a brief mention in an introductory text then, for example sperm competition as a factor in mating systems, have prospered to require textbooks of their own. How then to approach a new edition which cannot be allowed to become significantly larger.

It is our conviction that an introduction to the whole field, or at least a substantial part of it, remains as important as ever. Discussing new areas of research is best done from a firm basis of the basic concepts and for us these are still embodied in Niko Tinbergen's 1963 'Four Questions for Ethology' – function, evolution, causation and development. So the plan of our book remains essentially that of the other editions. There has been some extensive rewriting and we have tried to give good coverage to those areas where there have been important advances, notably in the evolution of behaviour and its development. We continue to give extensive references so that readers can easily get into the literature of areas that catch their interest. There is a great deal of new literature to be explored but we have never cited new work unless it really adds something. Often concepts are best illustrated by some of the now classical papers.

This edition benefits enormously from the encouragement we have had from Cambridge University Press to illustrate more widely and, in particular, to use colour photographs. Animals behaving provide stunning images and we are delighted with many of the new figures here. It remains to acknowledge the great help and support we have had from Martin Griffiths – it was he who first persuaded us to undertake a new edition. His team at CUP have helped us at every stage and it has been a pleasure to work with them.

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