

Spider Behaviour

Flexibility and Versatility

Spiders are often underestimated as suitable behavioural models because it is generally believed that, due to their small brains, their behaviour is innate and mostly invariable. Challenging this assumption, this fascinating book shows that spiders display surprising cognitive abilities, changing their behaviour to suit their situational needs. The team of authors unravels the considerable intra-specific as well as intra-individual variability and plasticity in different behaviours, ranging from foraging and web building to communication and courtship. An introductory chapter on spider biology, systematics and evolution provides the reader with the necessary background information to understand the behaviours discussed, and helps to place them into an evolutionary context.

Highlighting an underexplored area of behaviour, this book will provide new ideas for behavioural researchers and students unfamiliar with spiders, as well as a valuable resource for those already working in this intriguing field.

MARIE ELISABETH HERBERSTEIN is an Associate Professor in the Department of Biological Sciences at Macquarie University, Sydney. Her research investigates a range of behaviours in spiders such as web building, learning, mating (including sexual cannibalism) and the use of deceptive signals.

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How this book came about

This book is a community effort! We are a community of researchers who are fascinated by the behaviour of animals. We endeavour to describe behaviour and understand the proximate and ultimate mechanisms of behaviour. In this pursuit we are only few among the many other researchers in animal behaviour and behavioural ecology. What sets us apart is our choice of model: spiders. If you, valued reader, assume we have chosen to work on spiders because we have been ensnared by their curious biology you may be partly right. The main reason, however, why we address theoretical questions about behaviour in spiders is because we recognise their scientific value, versatility and often superiority over other animal models. We believe that the utility of spiders in behavioural research is grossly underestimated. The motivation behind this book is to showcase spider behaviour to the broader research community. The ten chapters of the book describe most aspects of spider behaviour, from foraging to communication to mating and deception. Some behaviour crosses these, often arbitrary, classifications, and hence it is not surprising to find a discussion of the same species and behaviour in more than one chapter. Some chapters are more extensive than others, not because that particular topic is more important than other topics, but primarily because we decided not to subdivide certain chapters into two or more smaller chapters.

Our efforts in putting this book together have been generously supported by our colleagues who provided helpful feedback and suggestions throughout as well as photographs. In particular we would like to thank Ingi Agnarsson, Suresh Benjamin, Jonathan Coddington, Fiona Cross, Sharon Downes, Bill Eberhard, Rainer Foelix, Matthias Foellmer, Volker Framenau, Lutz Fromhage, Felipe Gawryszewski, Rosie Gillespie, Madeline Girard, Charles Griswold, Aaron Harmer, Astrid Heiling, Karen Hollis, Rudy Jocqué, Michael

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