

SPERM COMPETITION AND SEXUAL SELECTION

Edited by T.R. Birkhead and A.P. Møller

Competition between gametes for successful fertilization lies at the heart of the evolutionary process: individuals that are more successful contribute in greater measure to future generations and so have greater fitness. Hence this subject is key to a better understanding of the evolution of behaviour, anatomy and physiology and to the mechanism of sexual selection.

In recent years, a growing appreciation of the intricacies of sperm competition has both explained many behavioural curiosities and prompted sometimes radical reinterpretations of both male and female breeding behaviour: even the most apparently simple of breeding systems, such as monogamy, have taken on a new complexity.

Tim Birkhead and Anders Møller have been at the forefront of this field for the last 12 years and here present a collection of 17 papers providing the most comprehensive survey of the subject so far. Sperm competition occurs commonly in almost every animal group, and has resulted in a spectacular array of bizarre and fascinating adaptations. Four general chapters open the book, dealing with the theoretical bases of sperm competition, sperm competition and sexual selection, female perspectives, and paternity and paternal care. Each of the major animal groups, invertebrate and vertebrate, are then reviewed in turn from both functional and mechanistic viewpoints. A chapter which extends these ideas to plants and pollen competition provides extra insights.

This book will be of prime interest and importance to behaviourists, ecologists, evolutionary biologists and reproductive biologists of every kind, suggesting new avenues of research and new ways of approaching old problems.

Illustration: Elongated penes banging below the entwined bodies of a mating pair of Limax corsicus. The extended body length of the slugs is 12-15 cm. The elongated penes are approximately 60 cm. Photograph courtesy of M. Kaddatz & G. Falkner

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