

Book reviews

Human Sperm Competition: Copulation, Masturbation and Infidelity. R. Robin Baker and Mark A. Bellis. Chapman and Hall, London. 1995. Pp. 353. Price £45.00, hardback. ISBN 0 412 45430 0.

There has been an increasing realization over the past three decades or so that sexual selection acts not only prior to and during courtship, affecting aspects of gross morphology, but can continue once sperm from more than one male has been deposited within the female reproductive tract. The success of different sperm pools is affected by the physical and physiological environment within the female and by the relative fitness of individual sperm. It is this sperm competition which determines their probability of being in the fertilisation set. In invertebrates it has long been recognized that the co-evolution of sexual morphology and peri-reproductive behaviour represents a sort of arms-race between the individuals with regard to maximizing the fitness of their offspring. In mammals the fact that similar processes are involved has taken longer to dawn.

This book explores the influence of sperm competition on the evolution of human sexual behaviour, physiology and morphology. All human (sexual) life is here and it is argued that virtually all aspects have evolved as a consequence of sperm competition, such as internal fertilization, penis size and shape, cryptic ovulation, female ejection of sperm, orgasm and cryptic masturbation. It addresses questions one never thought of asking and in this respect makes an absolutely fascinating read even if one cannot agree with the sometimes wild speculations made regarding certain aspects of human sexual behaviour. For example, the authors suggest 'an adaptive explanation could be considered necessary' for the increased incidence of Down's syndrome children with maternal age. The one they come up with is that older women may increase their (inclusive) reproductive fitness by producing non-reproductive 'carers' who can help in the rearing of siblings, nephews and nieces, as well as looking after their ageing parents. The rationale behind this suggestion is that people suffering from Down's syndrome are 'affectionate, caring and helpful, their social skills exceeding their other abilities' (p. 80). This bizarre idea clearly takes no account, *inter alia*, of the very high death rate of such children in the not-too-distant past, let alone over evolutionary time, making the idea of a carer 'strategy' almost impossible to contemplate. Much of the information analysed in this book is taken from a largely unpublished survey carried out by the authors, *via* a women's magazine. Throughout, one has a sneaking feeling that the 0.84% (3679) of estimated female readers who replied are

probably not a representative cross-section of British womanhood — the magnitude of this possible bias is hard to judge but it is probably in the direction of making the incidence of opportunities for sperm competition appear greater than it really is.

What audience is the book aimed at? I'm not sure. Gratuitous drawings of naked men and women, just standing around, copulating, masturbating or voiding sperm accompany every diagram, as if the casual reader will become bored with simple titles. The statistical analyses of data are presented in a rather cavalier way, often without bothering to mention what is being compared with what, and together with some poorly labelled diagrams act as a constant niggle and frustration to those who wish to understand fully the bases of the arguments. These gripes aside, the book is difficult to put down. There can be few people who are not fascinated by their own sexual behaviour and the attempt here is to place the whole thing in an evolutionary framework determined, and driven, by sperm competition. Baker and Bellis may not be always right, but it is hell of a good story.

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Molecular Genetics in Fisheries. Gary R. Carvalho and Tony J. Pitcher (eds). Chapman and Hall, London. 1995. Pp. 141. Price £24.99, paperback. ISBN 0 412 62950 X.

Why is *Molecular Genetics in Fisheries* like the *Alexandrian Quartet*? Here is a book which, against all the best principles of sound publishing, makes a most useful and interesting contribution. It is against the principles because, probably more by accident than design, the four main chapters are to a marked degree overlapping and even repetitious. On many topics this could be a recipe for disaster, but curiously, in the context of the contentious question of the relationship between fishery management and molecular genetics, it provides a novel treatment. There is something here which could usefully be tried again, the next time by design rather than, if my suspicion is correct, the largely accidental format. So, editors of the future, take note. If the topic for a planned book is relatively discrete but contentious, instead of the routine recipe of several authors contributing separate bits which, at least by interest go to make up the well-