

ecophysiological pieces of the puzzle have been elucidated, and, in some cases, a holistic view of something can be approached (with some good examples here, including Galen's paper on water and the flower). But assembling this into a complete conceptual model has yet to be achieved.

## References

- 1 Cody, M. (1966) A general theory of clutch size. *Evolution* 20, 174–184
- 2 Harper, J.L. (1989) The value of a leaf. *Oecologia* 80, 53–58

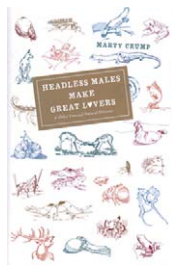
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# Ways of getting ahead: excerpts from natural history

**Headless Males Make Great Lovers & Other Unusual Natural Histories, with illustrations by Alan Crump** by Marty Crump, The University of Chicago Press, 2005, US\$25.00 hbk (207 pages) ISBN: 0-226-12199-2

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It never ceases to amaze me as to the diversity of natural histories. No matter how many books I read, or videos and television programs I watch, there is something new almost every week. *Headless Males Make Great Lovers* by Marty Crump was no exception. For example, it introduced me to the southern gastric brooding frog *Rheobatrachus silus*, which is found in Queensland, Australia (or was

found as it has not been sighted in over ten years). Females swallow their offspring and brood them in their stomachs for several weeks [1], during which time the offspring feed off of their yolk sac, while the mother goes without food. The offspring release a substance called prostaglandin E<sub>2</sub>, which inhibits the mother's stomach acid secretion, so the young do not get digested. Once ready, the female belches up her little froglets. Other intriguing examples detail the farming practices of leaf-cutting ants and their symbiotic relationships with the fungus that they grow as well as with a mold-killing bacterium, or envenomation by vipers, elapids and rear-fanged snakes (and why Shakespeare's Cleopatra correctly chose a cobra to end her life with).

In an enjoyable and readable style, Crump takes the reader through mating systems, parental care, food and feeding, defense and communication. Each of the subsections begins with a quote, passage or poem (and in one case a recipe for grasshopper tacos) that set the stage for what the section is about. I found many of these openings witty and insightful. The book is clearly intended for a lay or general audience and the author does err on the side of readability for such an audience as opposed to the technical and formal treatment that scientific literature demands. Thus, the author does sometimes come across as either teleological or anthropomorphic. *Headless Males Make Great Lovers* contains no formal citations to the primary

literature, but at the back there is a list of nearly 300 references, broken down by subsection, that were consulted by the author. This provides an excellent source of suggested readings for those in the targeted audience who might be interested in reading the primary literature. The book also contains an index that should prove useful for finding a section on one's favorite species. For example, before I read the book from cover-to-cover, I was able to quickly find a section on a favorite fish of mine. Many of the pages also contain a small sketch (by Alan Crump) of the species being discussed. These sketches pique one's curiosity and help to detail the species and its behavior.

Marty Crump is an adjunct professor in the Department of Biological Sciences at Northern Arizona University and is a herpetologist who has written many scientific publications and three other books. She is clearly an avid field biologist and in the present book draws on many examples from her adventures in South and Central America. In addition to her wealth of knowledge about amphibians and reptiles, she draws on examples from more than a hundred other species, from sponges to mammals. If you have not already guessed, the title comes from the sexually cannibalistic mating system of the praying mantid *Iris oratoria*.

In the preface, the author states her objective for writing the book as, 'If I can whet the appetite of a few budding naturalists and increase the curious laymen's appreciation for natural history, then I will have been successful.' I believe that *Headless Males Make Great Lovers* will do exactly that.

## Reference

- 1 Corben, C.J. et al. (1974) Gastric brooding: unique form of parental care in an Australian frog. *Science* 186, 946–947

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