## Book review

## KELLER, L. & GORDON, É. 2009: The lives of ants

Translated from French by James GRIEVE

Oxford University Press, Oxford, UK, XI + 252 pp.; Hardback, ISBN13: 9780199541867, Price: £ 16.99

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Myrmecol. News 13: 29-30 (online 29 October 2009) ISSN 1994-4136 (print), ISSN 1997-3500 (online) Received 7 September 2009; accepted 7 September 2009

Scientists have a responsibility not only to inform the general public about what they discover or invent but indeed to engage the public in a discussion of what they do and how they do it. The more successful the scientist the more important this function becomes. Sadly, scientists are often loath to perform this function. The more successful the scientist, the more reluctant he / she is to "waste" time in engaging the public. There is often a negative peer pressure and social selection against those who venture to do so. "Have you retired from doing science?," "Have you run out of ideas?," "Are you running after quick fame?" are some of the frequent questions that are used to shy working scientists away from addressing the public or the press. There are of course notable exceptions - Richard Dawkins, Stephen J. Gould and Edward O. Wilson in our own field come to mind. But in my opinion that's not enough. I believe that most working scientists should spend part of their time explaining and discussing their work with a larger audience. There are at least three important reasons for this. One is that science needs to become an integral and essential part of society and not be perceived as an outside force that is at loggerheads with society. Second, scientists need to recruit the best young minds to make up the next generation and that can only happen if we devote time to communicate with the general public. Third, I have no doubt it will help us appreciate our own work better. And that is why I was so delighted when I received a copy of "The lives of ants" by Laurent KELLER and Élisabeth GORDON. Laurent KELLER is one of the most prolific and successful ant researchers active today and his willingness to devote time to inform and engage the general public is a most welcome sign. The least we can all do in return is to read the book and spread the word. I have done the first with pleasure and am now doing the second with no less pleasure.

Ants have captured man's attention since time immemorial – philosophers and poets have used ants to illustrate moral values, the Old Testament uses the ants to admonish man, natural historians over at least 300 years have painstakingly documented the lives of ants, ants have been used as favourite model systems in modern ethology and behavioural ecology in the first half of the previous century and finally the revolutions in molecular biology have repeatedly turned ant biology on its head in the last few decades. In this remarkable little book readers will find, in simple lan-

guage devoid of jargon, all of this knowledge and wisdom about ants, integrated and put in perspective. Keller and Gordon have rather remarkably managed to touch on nearly every imaginable topic about ants. They discuss the taxonomic position of ants, their origin and phylogeny, their ecological success story, their social life, division of labour and work organization, social parasitism and slave making, ant-plant interactions and ant agriculture, their ability to become serious pests, their kin structures and social evolution, right up to the recent molecular studies on their socio-genetics and end with most recent work-in-progress on the use of robot ants to unravel the intricate mechanisms of their collective behaviour. It is hard to imagine a significant topic that has been left out.

A potential criticism of this book may be that the topics covered and examples drawn are often from the author's own research. Yes, there is a discernible bias toward work from KELLER's group but this I see as a strength rather than a weakness. I began this essay by suggesting that, rather than having just a few individuals being responsible for the public understanding of science, a large proportion of famous working scientists should take up this responsibility. If that be so, the bias toward one's own research is not only inevitable but desirable. After all who is better equipped to speak of a complex subject than the original researcher? And if a large proportion of working scientists speak to the public, then the biases tend to cancel out anyway. So anyone who might feel that their work does not get the treatment it deserves, should take a shot at writing about their work for a general audience. Another potential criticism might be that the book is not directed at any particular audience. I agree that this book does not appear to have a defined target audience but again that is a strength rather than a weakness. It is written in a fashion that almost anyone can enjoy reading it. From complete laypersons, to young students to active researchers – everyone will have something to learn and to enjoy. I recommend it highly to each kind of audience and I especially recommend it to graduate students beginning research on social insects.

Now to the flip side. This book comes to us via a complicated route. Keller has decided that he needed the help of a journalist to tell his story. I am sure that the book benefits in many ways from this decision but it also suffers in one way, at least from my point of view. In my ideal world where scientists, and large numbers of them, speak to the public, any intermediary between the scientist and the public is undesirable. In this case there is yet another layer of complexity. Keller and Gordon wrote their text in French and we have it in English through the mediation of a translator and we thereby lose Keller even more! Apart from the fact that this book does not quite come from the horse's mouth, there is another problem. In the passage from scientist to journalist to translator there have accumulated a sig-

nificant number of awkward turns of phrases, jarring combinations of words, ambiguous passages and even grammatical errors. On this matter I have different things to say to different groups of people. First, to the publisher, who is most culpable. While reviewing a book on wasps published by Oxford University Press in 1994, I had remarked: "... a serious shortcoming of this book is the lack of careful copy-editing, which could have greatly improved the text in many places ... Given that the author is not a native English speaker ... the blame falls more heavily on copy-editor and publisher." (GADAGKAR 1994). Things don't seem to have changed much in the intervening fifteen years. I have the same comment all over again. Next, to the author who is slightly culpable. I really think that KELLER should speak to us directly in his next book, without the help of a journalist or translator and I know he is capable of doing so - he just has to find the time. And finally, to the reader. Perhaps because of our colonial legacy, I have been brought up in a tradition bordering on the supremacy of form over content. In India we are taught to pay extreme attention to grammar and style and encouraged to cultivate the art of recognising and appreciating good prose and poetry, es-

pecially in the English language. That's why we love 19<sup>th</sup> century English novels so much and that's probably why there is now a glorious genre of Indian writing in English. The same can be said about spoken English – we frown upon accents and errors of grammar to a point where diction sometimes becomes a substitute for content. In my more recent encounters with scientists from different parts of Europe, I have become much more tolerant of different accents and minor errors and "in-elegant" styles and have come to accept spoken English that my school teacher would have been shocked to hear. If we are to communicate science widely and engage working scientists from across the world in doing so, and if we are to make English the international language of science, we need to go back to the supremacy of content over form, both in speaking and in writing. With that advice to myself, I thoroughly enjoyed this book as I am sure any reader would.

## References

GADAGKAR, R. 1994: Behaviour and social evolution of wasps: the communal aggregation hypothesis. Yosiaki Ito. – Quarterly Review of Biology 69: 558-559.