

THE SUPERORGANISM: THE BEAUTY, ELEGANCE AND STRANGENESS OF INSECT SOCIETIES
By Bert Hölldobler and Edward O. Wilson. W. W. Norton & Company, NY, 2009. 522
pp., illus., \$55.00 (ISBN 9780393067040 cloth).

In this highly anticipated book famous Pulitzer-prize winning duo Bert Hölldobler and Edward O. Wilson revive the old idea that social insect colonies act like single organisms raised to a higher level. Each insect is a cell, its queens are its genitals, its soldiers the equivalent of an immune system. This superorganism concept has long been rejected by science, following the discovery that the workers in insect societies do not always act in a completely unitary fashion. Now, Hölldobler and Wilson make a worthwhile attempt to bring the concept back to the working lexicon of the insect sociobiologist.

Throughout the book, and in keeping with the title, the authors emphasize the cooperative aspects of insect societies, covering such themes as division of labour, chemical communication, self-organisation, adaptive nest architecture and discussing some prime examples of true superorganisms, such as the leafcutter ants. Even the burgeoning field of sociogenomics is briefly mentioned – the study of what genes are involved in social behaviour. The book is also beautifully produced, featuring countless line drawings and colour photographs, and overall it makes for quite an enjoyable read.

On the other hand the book also has some severe shortcomings. Despite the subtitle which refers to "insect societies", the book only covers ants – bees, wasps and termites hardly get any mention. The expression of intracolony conflict also gets short shrift, despite the fact that this has been a major focus of enquiry in insect sociobiology for the last 30 years. And sadly the book also features one highly confusing chapter on the origin of social behaviour, in which the authors try to denounce kin selection and attempt to reinstate group selection as the explanation of insect altruism – a move which has baffled researchers worldwide and which is highly ironic given Wilson's pivotal role in promoting sociobiology in the 1970s, and the fact that kin selection has become one of the core theories of modern social evolution theory.

In summary, this is a very nice and beautifully produced book, but it won't please everybody because of its limited and somewhat poor coverage of modern sociobiological theory.

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