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The Leafcutter Ants: Civilisation by Instinct by Bert Hölldobler & Edward O. Wilson. W.W. Norton & Company, 2011. 160pp., 48 colour plates, 8 figures. Sbk. ISBN 978-0-393-33868-3. £14.99.

In these temperate climes ants generally don't grab the attention in the way that butterflies, moths or dragonflies can. In the tropics it can be a different matter, and anybody who's been to Central or South America will have seen the trails made by leafcutter ants, criss-crossing the forest floor.

Hölldobler and Wilson have form when it comes to writing about ants, and this book is as illuminating and accessible as you'd imagine it would be, from the authors of the Pulitzer-winning 'The Ants'. Leafcutter ants profoundly alter their environment and have co-evolved with a particularly rich web of organisms that are involved in breaking down leaves in their nests. The ants depend entirely on fungus gardens for their nutrition; they cannot digest the leaves that they assiduously harvest so have entered into a very long relationship with the fungi that they nurture. These fungal gardens are ripe targets for colonisation by other fungi so some beneficial bacteria are also cultured. As you can guess, the interactions between various fungi, bacteria and, of course, ants, are complex and new details are constantly emerging.

The authors do a great job of summarising some quite complex science in a manner that is easy to follow but not dumbed down; I learnt a lot. The photos are mostly stunning and are all informative. My only gripes are very minor and relate to the fact that this book originated as a chapter in another book written recently by the authors, 'The Superorganism'. Given that the leafcutter ants form such incredible societies, it seems a shame that the book is actually rather short. There are 127 pages of rather few words and lots of pictures so there would have been space for more natural history and more of an explanation of the superorganism concept. The latter is touched upon in various places but receives little explanation here. You could, of course, buy their other book to find out more about this fascinating concept but the way it is

introduced here just adds to the feeling that this book is a spin-off from that work. That said, the leafcutter ants are amazing enough to warrant this popularising treatise and the authors have done a great job in bringing a body of quite technical information into the popular realm.

Gavin Broad

Spider-hunting wasps (Hymenoptera: Pompilidae) of Poland by Bogdan Wiśniowski. Ojców National Park, Ojców, 2009. 432pp., 154 photos, line drawings. PL-ISBN 83-60337-15-4. €50 (approx.).

Perhaps this title sounds a little obscure? However, it covers practically all the British species, and there is no currently available British guide available. And it might just be the best book ever published on spider-hunting wasps.

Spider-hunting wasps are distinctive looking animals between 5 and 17mm long; they are usually black and red or just black, a couple have additional white markings and some have black markings on their wings, but their curly antennae are always a feature. Their behaviour is also characteristic, they flit and dash about in the sun on the ground and low in vegetation, and can be seen feeding on nectar from umbellifers or other flowers.

Spider-hunting wasps do just that; but the 89 species in this book (41 in the UK) have differing hunting strategies. Most catch a large spider and paralyse it with a quick sting. The subdued spider is then dragged or carried to a nest, usually a burrow that they excavate, but a few species build a mud cell or use a hollow stem or existing insect tunnel in deadwood. An egg is laid on the spider on which the wasp larva then feeds. A small number of spider-hunting wasps lay an egg on a temporarily paralysed spider that then recovers, resumes its activities, but is slowly consumed by the larva (each of these wasps usually specialises on one species of spider). The third main strategy used by several species is to steal another wasp's spider; either raiding her nest, or more cunningly just nipping in and laying an egg in one of the spider's book lungs while the spider's captor is not looking.



The book contains excellent information on the ecology, phenology and conservation of the wasps. The distribution data is based on a review of over 20,000 specimens in museums and collections that were all checked by the author and other Polish hymenopterists. The resulting maps and data are of limited use to the British naturalist. On the other hand the book is well illustrated with excellent colour photos, although these are not always referenced from the species descriptions (which make up the bulk of the book) or the index, which is an oversight. The keys are accessible and illustrated with clear photos and line drawings. There are only two British species not included, but their absence

is not a problem. The parthenogenic *Priocnemis propinqua* was only recorded here once and over 100 years ago at that, and *Aporus unicolor* (a specialist on the Purse-web spider (*Atypus affinis*)) is our only member of the genus and a distinctive species; in Poland it is replaced by the very similar *Aporus pollux* that preys on *Atypus muralis*, a spider that does not occur in the UK.

This is a very well-produced book with a low print run and is an important text for anyone wanting to study or understand the ecology of British Hymenoptera.

Matt Shardlow