

Book review

CHERIX D., FREITAG, A. & MAEDER, A. 2006:
**Fourmis des bois du Parc jurassien vaudois. – Parc
jurassien vaudois & Musée de zoologie, Lausanne,
120 pp.**

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From the title, one could well imagine that this book, though small in size and number of pages (120 pages altogether) was essentially intended for the amateur naturalist curious to learn about the life of wood ants of the Swiss Jura. But this underestimates the book, whose content concerns this "amateur public" as well as readers already well informed of the behaviour of ants. A peculiarity of this book is that it is almost completely dedicated to the functioning of a single ant-hill, doubtless unique in the myrmecological literature. It should be mentioned that a single ant-hill is not common in *Formica paralugubris* (a primary subject of the book), more typically organized as a "super-colony" made up of hundreds of nests connected together by kilometres of trails.

The description of this huge society allows the authors to present everything a person with an inquiring mind needs to know about myrmecology: a simplified systematic, morphology, anatomy, castes, division of labour, function of pheromones, founding of societies, their life and their death... That is to say all the basic knowledge condensed in a few pages.

Concerning the wood ants we learn that they all practise the dependent founding but in different ways. *Formica paralugubris* prefers to mate in its native nest – which is the object of a detailed description further on in this book – thus avoiding the ever-precarious nuptial flight. This process increases considerably its degree of polygyny (several hundreds of queens per nest). Later, *F. paralugubris* will increase the number of nests by budding from the main nests. However, some queens of *F. paralugubris* prefer to fly away and to be fertilized in "leks" (mating

places). It is on this occasion that D. Cherix's team discovered the compounds of one of the first sexual pheromones to be known in ants. These freshly fertilized females then attempt to be adopted by a society of *Serviformica*. It is then a good opportunity for the authors to explain the advantages and the disadvantages of this temporary social parasitism.

The other species of wood ants to be found in Jura (*F. lugubris*) has only been differentiated from *F. paralugubris* for about 10 years as the morphology of the two species is very similar. *F. lugubris* practices temporary social parasitism too, but always starting with the nuptial flight. There is thus no possibility of budding in this species which also remains monogynous or very weakly polygynous.

Knowledgeable readers may be surprised to learn that the polyethism – a paradigm with ants – is not very strict in *F. paralugubris*. The workers of the outside work are versatile: during the same journey they collect the honeydew of aphids (stored in the social stomach) but also preys and building materials carried between their mandibles.

The biological part of the work ends with common sense recommendations in order to protect the wood ants, registered on the "red list" of the threatened European species. It suggests a wise exploitation of the forest which creates a wider variety of landscapes and so provides habitat and allows the protection of the wood ants. This book also provides a glossary and suggestions for the ant lovers on observing ants. It contains as well the complete list of the works that this team of Lausanne scientists have dedicated to these ants for 40 years.

I also would like to add that the work is richly illustrated with a great number of colour photographs and line drawings. It is a pity that the reduced size of the photos does not always allow the reader to see all the details mentioned in the legends. It is the only criticism which I can make about this work which honours the myrmecological literature in French. I hope that you will enjoy reading it whether or not you are an expert on ants.