



## BOOK REVIEWS

**Verhagen, A. & D. Mol. 2009.** De Grootte Wielen: er was eens...Wie woonden er in De Grootte Wielen in de ijstijd? – Norg, DrukWare

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The Netherlands is a small country: only 41 000 square kilometers, one-fifth of which consists of water. Despite the small area, The Netherlands currently houses about 17 million citizens and is, therefore, one of most densely populated areas in the world. The ever-increasing population requires homes to live in and much agricultural land and other open spaces are 'confiscated' for building projects. An example of the former is the agricultural area east of 's-Hertogenbosch and close to Rosmalen (in the south of The Netherlands) that is known as De Grootte Wielen, the name of which refers to the lake. A lake of 40 hectare large is the centre of a newly built residential quarter, consisting of 6500 houses, and including all facilities humans need to survive: schools, daycare centers, sporting facilities, shops etc.

Fairly quickly after the start of the preparation of the area, animal bones were found, which initiated unique palaeontological research. One of the reasons for the qualification 'unique' is the fact that, in contrast to usual practice, the dredging company Boskalis, dredged in thin layers on request of the city council of 's-Hertogenbosch. Thus the bones were not found in a usual mix of young and old, but much better separated (a subchapter of chapter 4 explains the dredging in detail). This, together with the wealth of material, allowed for a reconstruction of the area in Pleistocene days. We should, however, not forget (and this is also clearly explained) that the history of the Grootte Wielen continued after the Pleistocene area and finds include, for example, Roman *fibulae*.

The book, written in Dutch, presents this reconstructed environment, after a foreword by the responsible alderman of the city council of s'-Hertogenbosch. The first part informs the reader on the short history of the area that is nowadays known as The Netherlands, but also introduces the most important scientific disciplines that needs to collaborate in order to present a picture as complete as possible: geologists, palaeontologists, palaeobotanists and archaeologists. Of course many more people are involved, such as collection managers, photographers, draftsmen etc., but these are not mentioned. A relatively large part of the book is devoted to explaining what scientific research entails. This is not surprising: the book is meant for the general public. In this, the authors have done a great job. The start of the reconstruction of the environment is chapter 6. From here onwards, the various animals (such as the mammoths, cave bears and wolfs) are described, their bones illustrated by means of photographs and visualized by beautiful artistic impressions of Remy Bakker. The focus of the next chapter is on the early humans. Chapter 8 deals with animals that you do not often find included in books on fossil animals, flies, and explains why these animals are so important. The next chapter tells the story of the birds. Chapter 10 deals with a hot topic: climatic change, a feature of earth history as old as the earth itself, although, admittedly, the causes vary over time. A reconstruction of environment is not possible without plants, which are discussed in the last two chapters.

All in all, the book is very complete with beautiful illustrations and gives an exciting insight in a small part of the prehistoric world and the way we, scientists, come to these conclusions. Not a surprise: one of the authors, Dick Mol, is a world-leading authority on the mammoth and has done much work too on other Pleistocene mammals. Thus, the book is very well written: I am convinced that even younger readers will be able to understand it. Do not, however, think that this means the book is childish: on the contrary, the authors have written it in such a way that adults will enjoy it too. As always with publications by DrukWare, the quality of printing is very high, which one cannot say about the price: the book is really cheap for such a quality. One small negative aside of a more personal nature: the number of photographs that features one of the authors or persons that have advised

the authors is much too high. However, if you do not know these scientists, one will not be annoyed about it. In conclusion: if you like prehistoric animals and/or are interested in the early history of The Netherlands, you cannot but buy the book!

Verhagen, A. & D. Mol. 2009. De Groote Wielen: er was eens...Wie woonden er in De Groote Wielen in de ijstijd? – Norg, DrukWare. 192 pp. ISBN 978-90-78707-06-6. Price: €34.45 (hardback). [Www.DrukWare.nl](http://www.DrukWare.nl).

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