

K. SZEROCZYŃSKA, K. AND K. SARMAJA-KORJONEN. 2007. **Atlas of subfossil Cladocera from Central and Northern Europe.** Publisher: Friends of the Lower Vistula Society. pp 84. ISBN 978-83-924919-6-5. Price 35€ in Europe, 43 € outside Europe. To order: send an email to aborygeniznadwisly@wp.pl, or uroczadolina@wp.pl

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If lakes are archives of Earth's history, then subfossil Cladocera can be thought of as one of the foundations of paleolimnology. Cladocera remains can provide one of the most exciting resources of modern paleolimnology, permitting not only the exploration of past ecological conditions of lakes, but also of local climate change over several thousand years.

The Atlas of subfossil Cladocera presents headshields, shells and postabdomens collected from 404 sites located throughout central and northern Europe. It describes and illustrates 55 species and 19 higher taxons of the most common of the Cladocera species remains preserved in lake sediments. Furthermore, it describes the latest development of the field by presenting the description of ehipia. Additionally, the authors have prepared a detailed description of Cladocera morphology, and laboratory methods, along with the basis of identification and cladoceran analysis. Each of the species described is illustrated using photographs of real remains, showing typical fragments of shells or postabdomens. The Atlas is a valuable addition to a not well-known paper published in Russian by Smirnov (1978). The Smirnov paper, which is rarely found in libraries, provides the key to the identification of Cladocera using only their headshields. The Atlas is divided into 6 chapters: 1. From lake to diagram; 2. List of cladoceran species with described remains; 3. Descriptions of subfossil remains; 4. List of sites where the remains presented were found; 5. References; and finally, 6. Index of Cladocera taxa.

The Atlas is dedicated to the pioneers of Cladocera analysis, namely to the memory of an American - David Frey, Finn - Pentti Ahlonen and Pole - J.S. Mikulski, who was also my mentor. I will always remember when, as a senior limnology student, I had approached Professor Mikulski with the slide of an unknown Cladocera specimen, which no one in the Hydrobiology Department had been able to help me identify. Professor Mikulski examined it using a compound microscope, then covered the slide with another glass slide and then, to my surprise, forcefully pressed the two slides against each other, damaging the only specimen I had! After another look through the microscope, he proudly announced, "Well, it was the *Holopedium gibberum*, but I have never seen the whole specimen before".

It must be stated that while identification of living Cladocera is not an easy task, identification from remains is much more difficult! Now, the authors of the atlas have made

the task easier, providing us with the illustrated description of the Cladocera remains. It is an especially valuable book for less experienced young cladoceran analysts, to whom it is also dedicated. This atlas should be on the shelf of all Cladocera scientists.

REFERENCES

Smirnov, N. N., 1978. Metody i nekotorye rezultaty istoričeskoj biocenologii vetvistousych rakoobraznych [Methods and some results of historical biocenology of Cladocera]. In Smirnov, N. N. & L. I. Smirnova (eds), *Ekologia soobschestv ozera Globokogo*. Nauka, Moscow: 105-173 (in Russian).

FRANCK COURCHAMP, LUDEK BEREK, AND JOANNA GASCOIGNE. 2008. **Allee Effects in Ecology and Conservation.** Oxford University Press. ISBN 978-0-19-857030-1. 256 p. US\$90.00

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"Allee, or not to be, that is the question!"

An 'Allee effect' refers to a decline in fitness of an individual organism caused by declines in population size or density. The name of this phenomenon recognizes the contributions of Warder Clyde Allee, an early 20th century American behavioural ecologist who tested the importance of density dependent processes on individual fitness.

Importantly, these effects contrast the long held perspective that decreases in population density lead to higher fitness due to reduced competition. One important implication of an Allee effect is the potential existence of a quantifiable threshold for adult population sizes below which negative fitness consequences would lead to extinction. These effects therefore fit within the growing body of research that acknowledges the roles of positive interactions within and among species. Moreover, as the title of the book suggests, the authors describe Allee effects as highly applicable to conservation issues and, unfortunately, such effects are becoming increasingly apparent given the trend towards widespread population declines. In six chapters, the authors provide a succinct summary of a range of examples, models and implications of Allee effects developed within recent decades. Perhaps of particular interest to readers of *Limnology and Oceanography*, starting with the cover photo of a sardine school avoiding a predatory seal, the examples illustrate the many contributions of aquatic studies (>20% of the volume's