

BOOK REVIEW

Editor: K. T. Kiss

AL-HANDAL, A. Y. and AL-SHAHEEN, M. A. (2019): Diatoms in the wetlands of Southern Iraq. – In: CRAMER, J. (ed.): *Bibliotheca Diatomologica*, Vol. 67. Gebrüder Borntraeger Verlagsbuchhandlung, Stuttgart, Germany, 252 pp. (ISBN 978-3-443-57058-3)

The present volume leads us to the world of the diatoms of wetlands of southern Iraq, namely, diatoms from all three major Mesopotamian Marshes and the Shatt Al-Arab River. The speciality of the diatom communities living in this region is that this is a mixture of fresh, brackish and marine water species. A total of 293 taxa belonging to 88 genera were identified and documented. Included among these are three new species, *Biremis sigmoidea* sp. nov., *Fragilaria koensabbei* sp. nov. and *Scoliopleura basrensis* sp. nov.

This work is a documentary record of the diatom flora during the past 15 years. At the same time the content of this book is an example of the negative result of excessive human activities on the environment because it also preserves records and findings from taxa no longer present in Southern Iraq, due to human driven ecological impacts. Many species that were considered normal components of diatom communities in the region have disappeared due to changing environmental conditions, these include species of *Eunotia*, *Pinnularia*, *Mastogloia* and *Diatoma*.

Nevertheless, this guide is a nice resume which can be easy to use with its 652 figures on 62 plates. Not only LM but also SEM micrographs also help the users in the identification of diatoms. Furthermore, there is a useful taxonomic index at the end of the book which helps a lot in finding descriptions and photos on diatom frustules.

Similarly to the previous volumes of this series it is also recommended for algologists and students who just now get know to diatoms, and for those ones who are interested in diatoms living in special habitats.

Zs. TRÁBERT

PEETERS, V. and ECTOR, L. (2019): Atlas des diatomées des cours d'eau du territoire bourguignon. Vol. 3: Naviculacées partie 1. – Direction Régionale de l'Environnement, de l'Aménagement et du Logement Bourgogne-Franche-Comté, Dijon, 324 pp. (ISBN 978-2-11-162025-4)

Diatoms play a significant role in aquatic ecosystems as primary producers. They are also sensitive bioindicators of anthropogenic loadings on waters, therefore they are widely used in evaluation of water quality, particularly in ecological status assessment according to the European Union Water Framework Directive. This assessment relies on the sensitivity and abundance of diatom taxa in communities, thus it requires accurate identification of species and as much information on their ecological properties as possible. Such knowledge can be provided by books describing the diatom flora of a certain territory like the series describing diatoms from the rivers of the Burgundian territory (France).

The present book is the third volume of this series. The first volume deals with centric and araphid taxa, the second one is about Monoraphidae and Brachyraphidae.

This third volume treats a very important and diverse group of diatoms, Naviculaceae. It contains the characterisation of taxa of the following 28 genera of this family: *Adlafia* (4+1), *Amphipleura* (1), *Aneumastus* (1), *Anomooneis* (1), *Berkeleya* (1), *Biremis* (1),

Brachysira (2), *Caloneis* (8+1), *Cavinula* (2+1), *Chamaepinnularia* (4+1), *Craticula* (6+1), *Dia-desmis* (1), *Eolimna* (2), *Fallacia* (8), *Fistulifera* (1), *Geissleria* (3+3), *Gyrosigma* (6), *Hippodonta* (8), *Humidophila* (4), *Luticola* (7), *Mayamaea* (3), *Microcostatus* (1), *Neidiomorpha* (2), *Neidium* (8+3), *Nupela* (2), *Playaensis* (1), *Pseudofallacia* (1), *Sellaphora* (21+5). In the genera *Adlafia*, *Caloneis*, *Cavinula*, *Chamaepinnularia*, *Craticula*, *Geissleria*, *Neidium* possibly new species are described with the designation “sp.”.

Similarly to the previous volumes of the series, the descriptions of taxa are organised according to the genera. For each known species morphological features (including the characteristics of the valva, apex, longitudinal and central area, raphe, striae) and morphometric data (length, width and number of striae in 10 µm), taxonomic information and references, as well as, if known, ecological properties (including indicator and sensitivity values of the Specific Pollution Sensitivity Index that is widely used in ecological status assessment) are provided. The distribution of the species in the investigated territory is shown on a map with remarks on their occurrence frequency. Taxa are illustrated with good quality light microscopic images and in several cases with detailed scanning electron micrographs. Codes also given for each known species allow searching for these taxa in the database of the OMNIDIA, an important software for ecological status assessment based on diatoms.

At the end of this volume we can find a supplementation for the previous volumes of the series. This part involves the delineation of four monoraphid (an *Achnanthidium*, a *Cocconeis* and two *Planothidium*) and an araphid (*Nanofrustulum*) species.

Overall, this volume is a great presentation of naviculacean diatoms living in Burundian rivers, moreover, it can be efficiently used as book for identification of species. It can be recommended to everyone dealing with diatoms, both to beginners and experts.

M. DULEBA AND K. T. KISS

REAVIE, E. D. (2020): Monoraphid and naviculoid diatoms from the Coastal Laurentian Great Lakes. – In: WITKOWSKI, A. (ed.): Diatom Monographs, Vol. 19. Koeltz Botanical Books, Germany, 202 pp. (ISBN 978-3-946583-20-2)

The Laurentian Great Lakes provides diverse habitats for wildlife, such as wetlands, embayments, high-energy (unprotected) shorelines and deep, nearshore locales within three km of shore. This volume of Diatom Monographs displays this variability in the world of diatoms. The book contains two chapters. The first chapter (Reavie, E. D.: Monoraphid diatoms from the coastal Laurentian Great Lakes) includes descriptions of taxa from the diatom genera *Achnanthes*, *Platessa*, *Psammothidium*, *Rossithidium*, *Planothidium*, *Karayevia*, *Eucoocconeis*, *Cocconeis* and *Rhoicosphenia* from periphytic and surface sediment samples in the coastal ecosystems of the Laurentian Great Lakes. This chapter contains lake and habitat specificity for the 50 more common taxa modelled optima for phosphorus and chloride and tolerance to coastal anthropogenic stressors; these characteristics are shown on well-constructed graphs. In the second chapter (Reavie, E. D. and Andresen, N. A.: *Navicula* from the coastal Laurentian Great Lakes) there is another comprising descriptions of taxa from the diatom genus *Navicula* from the coastal ecosystems of the Laurentian Great Lakes. At the end of the chapter 26 new *Navicula* species are described. Both chapters show many light micrographs of diatom taxa.

This guide is particularly useful for identifying the genus *Navicula* but, of course, other naviculoid genera also present various communities of diatoms. Zs. TRÁBERT