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Books reviews

WYNNE Michael J. — ***Portraits of marine algae: an historical perspective***. Ann Arbor (Michigan), University of Michigan Herbarium, 2006, viii + 180 p., 84 pl. (The University of Michigan Herbarium, Attn. : Algae book, 3600 Varsity Drive, Ann Arbor, Michigan 48108-2287, USA, ISBN 0962073377, US$44.00).

Our knowledge of plants relies on a variety of media: words, drawings describing them and herbaria to preserve biological records of them. Judging by their presence in ancient Greek and Latin manuscripts, drawings have accompanied descriptions ever since the dawn of natural history observations. The invention of printing in the mid-15th century made it possible for the drawing medium to better illustrate descriptions. Later, what evolved was not so much delicacy of line, but rather, the observations' scientific reliability. Previously, many drawings had been based on interpretations of the description of the object or the legends surrounding it, rather than the object itself. In addition, within each particular group of plants the scientific quality of drawings has generally increased as a function of advances in knowledge.

Although some of the first illustrations contain a few liberties, Leonhart Fuchs's *De Historia Stirpium Commentarii Insignes* (Basle, 1542, in folio, 512 fig.) is quite remarkable owing to the quality of the illustrations and descriptions. In order to provide his readers with plates enabling them to recognize the plants at hand, Fuchs associated himself with three artists whose work he supervised closely: Albrecht Meyer, who made the original drawings; Heinrich Füllmaurer, who copied them on to woodblocks; and Veit Rudolf Speckle, who carved out each woodblock so as to leave a raised surface from which the images could be reproduced. Such collaborations between botanists and illustrators were essential to ensure the quality and scientific accuracy of drawings. In France, collaborations such as these took place between C. Aubriet and J. Pitton de Tournefort, and C. Aubriet and S. Vaillant in the early 18th century; J.P. Redouté and E.P. Ventenat in the late 18th century; and A. Riocreux and the botanists J. Decaisne, Ad. Brongniart, G. Thuret, E. Bornet during the 19th century. In England, the botanist J.E. Smith collaborated with the engraver J. Sowerby during the production of *English Botany* (1790-1814), while Hooker senior and junior availed themselves of lithographer W.H. Fitch's hability. In Germany, the engraver J. Sturm was regularly employed by botanists such as A.K.J. Corda, Hoffmann and C.G. Nees von Esenbeck. In some cases it was the botanists themselves who produced their own engravings, as in the case of F.T. Kützing.

The botanical results of the great expeditions and campaigns around the world, together with newly available national as well as regional floras and monographs, provided impetus to the use of engravings. This applied to all plants, including the cryptogams. Owing to their natural aesthetic appeal the algae attracted special attention, and all the more so as phycology started to develop from the founding studies of Carl Agardh, John Stackhouse, Jean Vincent Félix Lamouroux and others. The high cost of such illustrations has always remained a serious hindrance.

Many species have been described in luxury quarto or folio editions and imposing multi-volume monographs. These works have now become rare and expensive. Although they are still consulted by specialists they are not so well-known by students and the general public.

In reaction to this situation Michael Wynne, who has a long-standing interest in the history of phycology, has taken the fortunate initiative of selecting and gathering illustrated works by more than fifty authors (botanists or phycologists), with special attention to macroalgae. Taking the publication of Linnaeus's *Species Plantarum* in 1753 as starting point, he has chosen his authors within a period going from the *Flora Danica* (started by G.C. Oeder in 1761 et seq.) to the very beginning of the 20th century with the Codiaceae of the Siboga Expedition by Antony and Ethel Gepp (1911). Mention is made not only of the most well-known phycologists – J.D. and W.J. Hooker, W.H. Harvey, C. and J. Agardh, G. Thuret and E. Bornet – but also other botanists whose phycological work is less widely known – for instance, T. Velley, A. Bertoloni and A.K.J. Corda. During the period under consideration the study of algae was carried out mostly by European botanists.

The plates of macroalgae in this book have an undeniable aesthetic appeal, and especially so in the case of the red algae – the quality of these plates is often such that one might be led to believe that the book actually contains real specimens! The author has also taken much care not to omit illustrations of the green and the brown algae.

For each author included in the book there is a short biography, a list of main publications, one or two representative plates and a list of references. If desired, by consulting *Taxonomic literature* by F.A. Stafleu and R.S. Cowan (2nd edition, 12 volumes, 1976-2000) it is possible to find the complete references to the works selected in the book. An historical sketch of phycology is thereby produced, which lightly permeates the entire book like a kind of watermark.

In a book where images have such an important role, one might be disappointed by the lack of indications on the original size of plates which have reproduced. Some have been enlarged (which appears to me as a serious mistake), while others have been reduced down to about one-half the original size; only few have been reproduced in life-size. By mentioning this in the figure captions it would have been possible to get a better idea of the original drawing and its quality. Additionally, gathering together on a single page four plates by A.K.J. Corda (Deutschlands Algen, in J. Sturm, *Deutschlands Flora in Abildungen nach der Natur*, Nürnberg, 1839) simply because they are small in size is a bit unfortunate; in effect, more space is necessary for these excellent illustrations to be appreciated fully.

Similarly, if each plate had contained a comment placing its contents in the correct position within the context of the evolution of phycological knowledge it would have been possible for readers to use this book not only as a purely pictorial work.

In spite of these shortcomings, this aesthetically pleasing book represents a good first entry point to the history of phycology. It will instigate both the general public and the specialist audiences to the study of algae.

(Translated by the editor in chief).

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COESEL P. F. M. and MEESTERS K. J. – ***Desmids of the Lowlands. Mesotaeniaceae and Desmidiaceae of the European Lowlands.*** Zeist, The Netherlands, KNNV Publishing, 2007, 351 p. (ISBN 978 90 5011 265 9. Price: € 89.95. Contact: info@knnvuitgeverij.nl).

This book is largely an English translation of the well-known Dutch series "De Desmidiaceeën van Nederland" published by Peter Coesel between 1982 and 1997. The scope of the original book has been expanded somewhat to include data from neighbouring parts of Belgium and Germany, and the text has been updated based on the most recent results in desmid taxonomy and nomenclature.

From the studied area the authors report 5 families, 28 genera and 675 species or infraspecific desmid taxa. The family Desmidiaceae, with 19 genera and 546 species or infraspecific taxa is the largest, comprising the two most important genera (*Cosmarium* with 226 taxa and *Staurastrum* with 126 taxa). *Closterium,* which belongs to the monogeneric family Closteriaceae, is the third most important genus with 90 species and infraspecific taxa.

Each taxon is described and illustrated by means of very accurate line drawings, generally made by the first author from material collected in the area under discussion. Identification keys are provided for families, genera, species and infraspecific taxa, and data on the occurrence of the taxon (especially in the Netherlands) are also given. The keys are clear and quite easy to use. However, in the key to *Micrasterias* species the second dichotomy of entry 2 should lead to 7 and not 6, otherwise it becomes impossible to reach the second part of the key.

A CD-rom is included, providing a wealth of general information on the biology of desmids and the ecology of their assemblages. It is illustrated by beautiful colour drawings. It also includes an annoted list of desmid species with their ecological characteristics, and a calculation program to assess the conservation value of given sampling sites on the basis of their desmid populations.

Because many desmids have a wide geographical distribution this book can be used in many European countries, well beyond the Netherlands and the neighbouring lowland countries. Therefore it will be very useful also to researchers in limnology, hydrobiology or nature conservation interested in assessing the value of aquatic habitats harbouring desmid populations. Above all, owing to the wealth of information on such a large number of taxa this book will become an indispensable companion to all desmidiologists and freshwater phycologists.

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