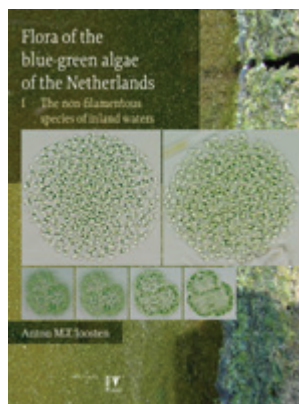


## Book review



**Anton M.T. Joosten** – “Flora of the blue-green algae of the Netherlands. The non-filamentous species of inland waters”

Reviewed by:

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**Author(s):** Joosten, A.M.T.

**Pages:** 240

**Size:** 19.5 x 26 cm

**Year:** 2006

**ISBN:** 978-90-5011-242-0

KNNV Publishing Utrecht has published a new book titled “Flora of the blue-green algae of the Netherlands. The non-filamentous species of inland waters”, in October 2006. The author Anton M.T. Joosten presents *Chroococcales* which exist in the waters of Netherlands. The taxonomy is compatible with that of Anagnostidis and Komarek. This is not “another” book about Cyanoprokaryotes but a very useful key with black and white pictures. The pictures are excellent with very good contrast which makes even the very small species visible so you really know what you should search for in your samples. There is still a big “hunger” for keys to the identification of cyanobacteria despite numerous publications about this group. The keys, which include pictures are very valuable, because everybody can compare what is seen under the microscope. This is very important to collect pictures from the

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different types of water and different part of the world to improve our knowledge about taxonomy, ecology and plasticity about blue-green algae. Correct identification is very important when you take into consideration the problem of toxicity.

The book has 239 pages and is divided into 6 chapters:

1. Preface and acknowledgements – a very short part.
2. Inland waters of The Netherlands as an environment for blue-green algae (F.A.C Kouwets) – short but informative about the geological formation, the Holocene and Pleistocene.
3. Introduction to blue-green algae – this part comprise general description of blue-green algae, their reproduction, pigments, special characters like aerotopes, ecology and distribution, collection and preservation, taxonomic history, nomenclature and species concept.
4. Toxins in the Chroococcales (R. Bijkerk) – there is a lot of information about toxins produced by *Chroococcales*, toxicity of *Microcystis*, safety standards for surface water and at the end, there are two web sites addresses very useful for everybody who is interested in phenomena of toxicity.
5. Systematic part – the largest part with photos and descriptions of blue-green algae. There are described ninety-five species of unicellular or colonial *Chroococcales*. There is a strictly dichotomous key to species identification at the beginning of that chapter.

Taxonomic part describes 4 families: *Synechococcaceae*, *Merismopediaceae*, *Microcystaceae*, *Chroococcaceae*.

I) *Synechococcaceae* includes two subfamilies:

- Aphanothecoideae (genera: Cyanogranis, Cyanocatenua, Cyanocatena, Cyanodictyon, Cyanonephron, Lemmermanniella, Aphanothece, Radiocystis),
- Synechococcoideae (genera: Synechococcus, Rhabdogloea);

II) *Merismopediaceae* includes two subfamilies, also:

- Merismopedioideae (genera: Synechocystis, Aphanocapsa, Merismopedia, Pannus)
- Gomphosphaerioideae (genera: Coelosphaerium, Woronichinia, Snowella, Gomphosphaeria, Siphonosphaera);

III) *Microcystaceae* includes 2 genera: *Microcystis* and *Eucapsis*, and

IV) family *Chroococcaceae* 2 genera: *Chroococcus*, and *Cyanostylon*.

Every genus is described according to the system: type, synonyms, nomenclatures, description, taxonomy, similar genera, references. Descriptions of every species includes the following: description, taxonomy, similar species, occurrence, references.

6. Appendix – this part includes species with new names, new combinations, and validations of names published without indication of type: *Aphanocapsa elegans* (E.J. Lemmermann) A.M.T. Joosten stat. & comb. nov., *A. stagnalis* (E.J. Lemmermann) A.M.T. Joosten comb. nov., *Aphanothece pseudoglebulenta* A.M.T. Joosten sp. nov., *Chroococcus aphanocapsoides* H.L. Skuja ex A.M.T. Joosten, *C. batavus* A.M.T. Joosten sp. nov., *C. reeuwijkanus* A.M.T. Joosten sp. nov., *Cyanocatena imperfecta* (G.A. Cronberg & C. Weibull) A.M.T. Joosten comb. nov., *Cyanocatenua* A.M.T. Joosten gen. nov., *Cyanocatenua calyptrata* A.M.T. Joosten sp. nov., *Cyanodictyon intermedium* A.M.T. Joosten sp. nov., *Cyanogranis ferruginea* (F. Wawrik) F. Hindak ex F. Hindak, *C. irregularis* A.M.T. Joosten sp. nov., *Cyanonephron elegans* A.M.T. Joosten sp. nov., *Merismopedia messikommeri* A.M.T. Joosten sp. nov., *M. minutissima* A.M.T. Joosten sp. nov., *M. sphagnicola* A.M.T. Joosten sp. nov., *M. vangoorii* A.M.T. Joosten sp. nov., *Microcystis dimorpha* A.M.T. Joosten sp. nov., *M. microcystiformis* (F. Hindak) A.M.T. Joosten comb. nov., *M. novacekii* (J. Komarek) P. Compere ex J. Komarek, *M. wesenbergii* (J. Komarek) J. Komarek ex J. Komarek, *Pannus punctiferus* (J. Komarek & J. Komarkova-Legnerova) A.M.T. Joosten comb. nov., *Rhabdogloea gorskii* (J. Wołoszyńska) A.M.T. Joosten comb. nov., *Synechococcus endophyticus* (W. West & G.S. West) A.M.T. Joosten comb. nov., *S. mucicolus* A.M.T. Joosten sp. nov., *Synechocystis endophytica* (G.M. Smith) A.M.T. Joosten comb. nov., *S. skujae* A.M.T. Joosten sp. nov., *Woronichinia botrys* (H.L. Skuja) J. Komarek & F. Hindak ex J. Komarek & F. Hindak, *W. delicatula* (H.L. Skuja) J. Komarek & F. Hindak ex J. Komarek & F. Hindak, *W. meiocystis* (H.L. Skuja) ex A.M.T. Joosten, *W. microcystoides* (J. Komarek) A.M.T. Joosten comb. nov., *W. obtusa* A.M.T. Joosten sp. nov., *W. pusilla* (A.C.J. van Goor) A.M.T. Joosten comb. nov., *W. robusta* (H.L. Skuja) J. Komarek & F. Hindak ex J. Komarek & F. Hindak, *W. tenera* (H.L. Skuja) J. Komarek & F. Hindak ex J. Komarek & F. Hindak, *W. tropicalis* (P.A.C. Senna, A.C. Peres & J. Komarek) A.M.T. Joosten comb. nov., *W. problematica* A.M.T. Joosten sp. nov., *W. vestita* (J. Komarek) A.M.T. Joosten comb. nov.

The last part of the book includes a ‘Glossary’, ‘Literature’ and ‘Taxonomic index’.

The book contains a brief taxonomy at the top of each page, so you don't need go back to check family, subfamily, genus etc. A very good idea is to point out the similar genera or species. Unfortunately, there is only some ecological information, and a lack of information about chemical parameters which would be very interesting when we think about the phenotypic plasticity which might

be exhibited by many species including blue-green algae. Anyway, it is a very good book which comprises a lot of general information about Cyanoprokaryotes and which broadens our knowledge about this group. I commend this book to all who are interested in blue-green algae: taxonomists, ecologists, beginners and advanced researchers in phycological and hydrobiological studies. The english is very clear. And the book reads like a novel!

*About the Reviewer*

**Dr Elżbieta Wilk-Woźniak** – “I have finished Jagiellonian University in Kraków some years ago. Next I finished my PhD at the A. Mickiewicz University in Poznań. Currently I work at the Department of Freshwater Biology, Institute of Nature Conservation PAS in Kraków. I have worked at the Department for 15 years. I am interested in freshwater algae, phytoplankton in stagnat waters, and particularly in the study of algae in dam reservoirs, lakes and oxbow lakes. The most interesting algae for me are the cyanoprokaryota and green-algae. I am interested in: blooms created by cyanoprokaryotes, taxonomy and ecology of cyanoprokaryotes and green-algae, relationships between cyanoprokaryotes, green algae and zooplankton, long term investigation of phytoplankton dynamics, functional groups of algae, phenotypic plasticity. I like work together with another people and share the ideas each other. I have worked during the short-term fellowships in the laboratories in the UK and US. I also participated in the many International Ecological Summer School helded in Poznan by Hydrobiological Department A. Mickiewicz University. Among the Great Professor which conducted the Summer Schools I met two who have devoted their life to cyanoprokaryotes and green-algae: Frantisek Hindak and Jiri Komarek.”