

ELIAS LANDOLT [ed.]

THE FAMILY OF LEMNACEAE - A MONOGRAPHIC STUDY - VOL.1
BIOSYSTEMATIC INVESTIGATIONS IN THE FAMILY OF DUCKWEEDS (LEMNACEAE) (VOL. 2)

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When Landolt published his two major monographs on *Lemnaceae* (*Physiologische und ökologische Untersuchungen an Lemnaceae* - 1957, and *Biosystematische Untersuchungen in der Familie der Wasserlinsen (Lemnaceae)* - 1980) hydrobotanists believed that the veil of mystery had been lifted from the family *Lemnaceae*.

In the first volume, the author has grouped his material under these headlines: morphological characteristics, karyology, habitat demands and ecological behaviour, position within the ecosystem, geographical distribution and distributional pattern, systematic position, taxonomy and nomenclature, description of *Lemnaceae* (genera and species), key to a determination of species. All this knowledge is necessary to obtain a better understanding of these extremely small angiosperms. The family *Lemnaceae* consists of 4 genera: *Spirodela* (3 species), *Lemna* (13 species), *Wolffiella* (9), *Wolffia* (9) altogether just 34 species, all well distributed throughout the world. Landolt does not repeat the data on the habitat of the separate species contained in his earlier monographs (1957, 1980). A brief survey is given of morphological characteristics, and there are many new chapters. Using scanning electronmicroscopy, he gives a detailed description of seed structure. In karyology, the author refers to the results obtained by his collaborators Mrs. Urbanska-Worytkiewicz who investigated more than 1500 clones of 30 species.

Maps showing the distribution of the individual species are represented in a different way for different geographical areas. The author regards this meticulous care as very important, because many geographical data given by Daub in his monograph are incomplete.

Landolt described these species as new: *L. turionifera* (1975); *Wolffiella rotunda* (1980); *W. neotropica* (1980); *Wolffia elongata* (1980); *W. angusta* (1980).

A new synthesis is given in the chapter about the systematic position, taxonomic relationships, nomenclature, with an extensive synopsis of invalid names and keys to the identification of species.

New and original is the chapter about plant communities emerging from Landolt's long-term investigations in the field. This made him aware of the fact that the suffix -etum cannot be added to all very rich combinations of communities.

Volume one, published single-handed by Elias Landolt, is a great monument to a scientist, bearing witness to his great experience, knowledge and patience.

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