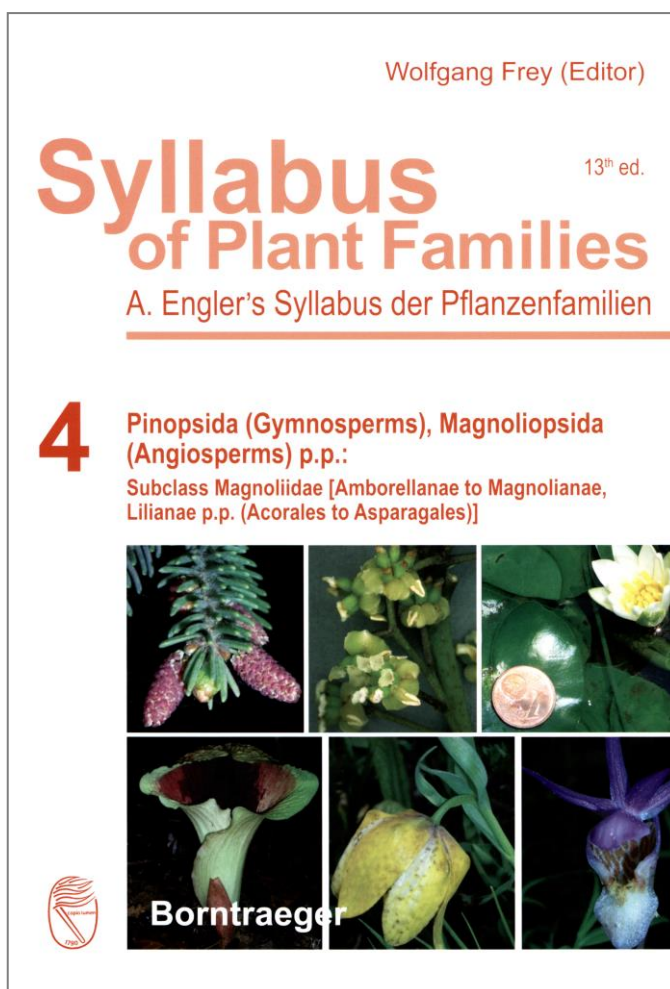


Frey Wolfgang (ed.) (2015): *Syllabus of plant families*. Adolf Engler's *Syllabus der Pflanzenfamilien*. 13th edition. Part 4. Pinopsida (Gymnosperms), Magnoliopsida (Angiosperms) p.p.: Subclass Magnoliidae [Amborellanae to Magnolianae, Liliae p.p. (Acorales to Asparagales)]. Borntraeger Science Publisher, Stuttgart, Germany, xi + 495 pp., 127 colour plates, 1 table, hardcover, size 25 × 17 cm. ISBN 978-3-443-01087-4 (the present volume); ISBN 978-3-443-01060-7 (the whole work). Price: 139 €.

In 1892 Adolf Engler (1844–1930), the eminent German botanist, initiated a new botanical series, *Syllabus der Pflanzenfamilien*, which intended to present an abridged and concise overviews of all higher taxa of plants right down to families and genera of the plant kingdom as a whole, corresponding to the current state of knowledge. Then nobody could assume that it will survive for so long time and will outlive the older for five years series *Die natürlichen Pflanzenfamilien* for which it was to be a supplementary summing up of the systematic acquisitions on all groups of algae, fungi and plants. After the death of Adolf Engler, the founder and many years' editor, the series of *Die natürlichen Pflanzenfamilien* lost its impetus and died a natural death in 1959 when the last volume (dealing with the Myricaceae, together with the supplement to the Canellaceae) was published by J.C.T. Uphof. In contrast, the series of *Syllabuses* survived until now. Up to 1964 twelve editions of this series were published, but it is worth noting that the first of which, that of 1892, had two versions: a smaller ("Kleine Ausgabe") and a larger ("Grosse Ausgabe"). These were one-volume treatments, and only the last edition was a two-volume work (published in 1954 and 1964). In 1983, the 13th edition of *Syllabus der Pflanzenfamilien* was initiated and it was planned to consist of seven volumes, some of which were to comprise several issues. Alas, this ambitious project has never been realised and only one issue, devoted to mosses, was published by Walther (1983).

The idea of Engler's *Syllabus der Pflanzenfamilien* was not forgotten, and the project was revived in 2009 when the first part of the new 13th edition was published under the editorship of W. Frey, emeritus professor of the Free University of Berlin (Frey, 2009). This part was nominally the third one and comprised bryophytes and seedless vascular plants. In contrast to all earlier editions which were available only in German, the present edition is the first published in English and therefore should have a much wider circulation in the botanical community. It is divided into five parts consisting the following groups of organisms: blue-green algae, myxomycetes, fungi and lichens – part 1, eukaryotic algae – part 2, bryophytes and seedless vascular plants – part 3, and seed plants – parts 4 and 5. Moreover, the first part will consist of two and the second part three volumes. In total, the 13th edition is planned to consist of eight volumes. So far, the progress in the publication of this edition of *Engler's Syllabus* is satisfactory because in 2012 the first volume of part 1 was published and in 2015 there have been released two next issues, namely the first volume of part 2 and part 4. Thus, within six years half planned volumes of this series was published. The volume under review is prepared by E. Fischer, professor of botany in the Koblenz-Landau University, in collaboration of W. Frey on the Pinopsida and I. Theisen on the Orchidaceae.

The wide application of molecular techniques in modern phylogenetic studies, based on sequencing DNA, have thrown a new light on the relationships between various groups of algae, fungi and plants, as well as on



their origin and evolution. It resulted in numerous and often revolutionary changes in the classification of the organisms which were traditionally a subject of botanical studies. It is difficult to follow all these classificational novelties because the vast publicational output in this field is widely scattered in hundreds of specialistic journals. Therefore summaries of the problems dealing with taxonomy, phylogeny and distribution of all taxa are valuable and sometimes also saving syntheses of the current knowledge on particular groups of organisms which, additionally, are supplemented by complete and comprehensive list of the relevant references.

The style of the presentation of taxa is the same as in earlier editions of the *Syllabus*. The two classes, Pinopsida and Magnoliopsida, are briefly described morphologically and their ecological preferences and geographical distribution are provided. Additionally, many species representing various genera are illustrated with fine colourful photographs. The treatment of the gymnosperms includes the extinct and extant diversity of this class and it provides the first synthesis of this class combining traditional morphological and anatomical characters and modern molecular data. Moreover, numerous palaeobotanical data are considered, with a particular reference to new discoveries of fossil gymnosperms made in the last decade in China. Extinct gymnosperms constitute the separate artificial subclass "Pteridospermatidae", 14 orders of the Cycadidae, Ginkgoideae and Pinidae and four families within Ginkgoales and Cupressales. The class Pinopsida is subdivided into five subclasses, 29 orders and three groups of taxa of uncertain affinities and 62 families. In total, the extant gymnosperms consist of about 1041 species, of which about 615 represents the subclass Pinidae and 325 belongs to the subclass Cycadidae.

The classification of the Magnoliopsida is more complex because the angiosperms exhibit the greatest diversity of all plants, forming almost 95% of the global vegetation. In the present *Syllabus* the most recent phylogenetic system of APG (2009) is adopted and actually it is the first comprehensive and fully revised survey covering all families and genera of angiosperms. The Magnoliopsida are divided into two large subclasses, Magnoliidae and Rosidae, which consist of 12 superorders. Part 4 of *Syllabus* deals with all families and genera of Magnoliid superorders (Amborellanae, Nymphaeanae, Austrobaileyanae and Magnolianae) and seven orders of the monocotyledonous plants belonging to the superorder Liliales. These are the orders Acorales and Alismatales and all groups of Liliid orders and families, including Petrosaviales, Dioscoreales, Pandanales, Liliales and Asparagales. In total, the angiosperms treated in Part 4 are classified into 89 families. The remaining monocotyledon groups, the superorder Ceratophyllanae and the subclass Rosidae consisting the core eudicotyledons will be dealt with in Part 5 of the *Syllabus of Plant Families*.

The present volume is a modern treatise of all currently recognised and accepted genera and suprageneric taxa of gymnosperms and part of angiosperms and it is a valuable source of information on the latest concepts and trends in their classification. It fills a severe gap in the botanical literature and as a valuable reference book it is a 'must-have' item in the working library of any botanist, student and academic teacher.

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