Reviews

Polatschek, Adolf in cooperation with Maier, Magdalena & Neuner, Wolfgang. 1997-2001. ***Flora von Nordtirol, Osttirol und Vorarlberg.*** Hardback. Tyroler Landesmuseum Ferdinandeum, Innsbruck.

Vol. 1, 1997, 1024 pp. ISBN 9500278-3-1; Vol. 2, 1999, 1077 pp. ISBN 9500278-3-X; Vol. 3, 2000, 1354 pp. ISBN 9500278-3-8; Vol. 4, 2001, 1081 pp. ISBN 9500278-3-6; Vol. 5, 2001, 664 pp. ISBN 9500278-3-4.

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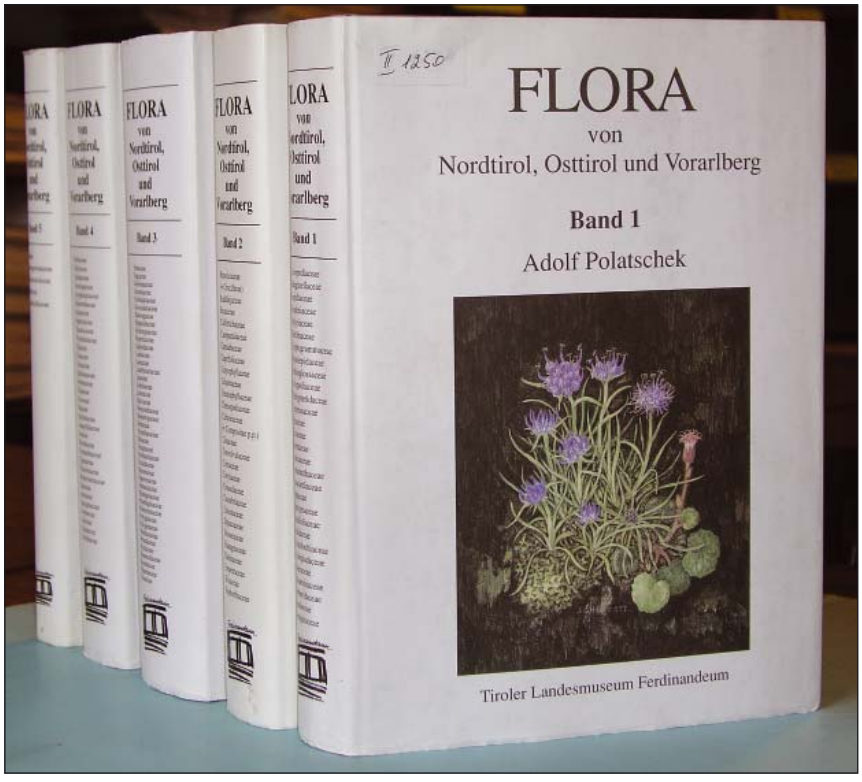

The five-volume monograph *Flora von Nordtirol, Osttirol und Vorarlberg* was brought out in a rather short time period for such type of publication. The first volume was issued in 1997, followed at almost equal intervals by the next four. Volume 5 came out in 2001. It was inspired and authored by Dr. Adolf Polatschek who jointly with Dr. Magdalena Maier and Mag. Wolfgang Neuner have set themselves the task of creating a comprehensive notion about the contemporary composition and distribution of ferns and seed plants on the territory of North Tyrol, East Tyrol and Vorarlberg, a Central European region with rich geological history and plant evolution. The taxonomic structure of the Flora follows the *Liste der Gefäßpflanzen Mitteleuropas* (Ehrendorfer & al. 1973). The vernacular names are given according to Adler & al. (1994). A number of European botanists participate with their works on critical taxonomic groups in the Flora.

The Introduction comprises eight information blocks, each supplemented with a list of reference literature. The first block features the main information sources used during the writing of the *Flora*, including publications from the period 1852-1992 and selected publications until 1996, collections of several Austrian herbaria (W, WU, IBF, IB, GZU, LI & BREG), expedition protocols of the authors, and some so far unpublished diploma works.

The geographic regionalisation of North Tyrol, East Tyrol and Vorarlberg is illustrated by a large-scale schematic map, supplemented by description of the geological base, habitats and boundaries of the used subregions. Another schematic map shows the mountain groups within the mountain system of the Alps on the territory of Tyrol and Vorarlberg.

A professional synthesis is made of the main physical and geographical characteristics of the region, its situation, relief and geological base that underlie the proper understanding of the recent composition and structure of the vegetation cover. A large-scale colour geological map is attached (A. Matura).

The meteorological and climatic characteristics of North Tyrol, East Tyrol and Vorarlberg (M. Kuhn) are presented in detail. The temperature and precipitation characteristics are illustrated with data supplied by eight meteorological stations for a period of ten years (1971-1980). The six tables with data on the average monthly temperatures and annual and monthly precipitation, the water balance of some river catchments, accompanied by eight figures of rich graphic material offer ample information and characterize the regional and local climate in different parts and various hypsometric belts in the region of Tyrol and Vorarlberg.

The climatic fluctuations are analysed in brief along with a reconstruction of the pattern of changes in the composition and structure of the vegetation cover and paleoecological conditions in North Tyrol, East Tyrol and Vorarlberg during Later Quaternary (S. Bortenschlager). Analysed are the climatic specificities in relation to the movement of the ice shield and these changes are traced out for the time period 20 000-18 000 B.P., as well as the characteristic tree and shrub formations, dominating mountainous and alpine grassy communities during the Late Glacial (18 000-13 000 B.P.), as well as the subsequent vegetation history in the time period 13 000-10 000 B.P. and later, until the emergence of the recent plant formations of deciduous and coniferous trees and alpine shrub and grassy communities. Attention is also paid to the origin of chestnut and walnut forests in South Tyrol and the changes in the upper timberline related to the human activity and impact on the vegetation cover.

The eighth and last part of the Introduction presents the contents, character of information and parameters of the data base of *Flora von Nordtirol, Osttirol und Vorarlberg* which stores about 325 000 information units: vernacular and current plant names, synonyms, locations, references, 1: 20 000 scale maps, etc. (M. Maier).

The taxonomic and chorological information in the *Flora* is systematically arranged by the large taxonomic units of division, subdivision and class, and within each of these units by families, genera, species and subspecies respectively, including hybrids, all in alphabetical order. It does not contain determination keys and morphological descriptions. It makes the reader familiar with the taxonomic composition, offering detailed data on the ecology, locations and distribution of the species, subspecies and hybrid taxa.

The taxonomic and chorological information is structured by giving the name of the family in the page header. The name of the genus is placed under it, followed by the vernacular name. The name of the species or subspecies with its current name, author and vernacular name are given in a box. Synonyms are given too, if widely used in the earlier literature about the flora of North Tyrol, East Tyrol and Vorarlberg. Each species and subspecies is supplied with a serial number on the map featuring the distribution of the taxon, and chorological information is illustrated by dot-maps attached at the end of each volume.

The ecology of the taxa and their distribution in the adjacent geographic regions (Bavaria, Salisburg, Carinthia, Italy, Switzerland and Liechtenstein) are given under separate headings. The origin of the adventive species is also given. Distribution in North Tyrol, East Tyrol and Vorarlberg is presented by regions and subregions, numbered respectively in the two maps attached to the *Introduction* of the *Flora*. Location data often provide the vertical range of distribution, with higher altitude occasionally preceding the lower altitude so as to show in what hypsometric interval the taxon occurs more frequently. After each location a number in brackets notifies the

herbarium which stores the herbarium exsiccate, or the literary source reporting the taxon.

The systematic section in Volume 1 there is followed by a *Red List of the Threatened Ferns and Flowering Plants* in North Tyrol, East Tyrol and Vorarlberg. Mention deserves the fact that the *List* also contains representatives of the group of the Conifers. Data on the threatened taxa are mainly based on the works of Niklfeld & al. (1986), Grabherr & Polatschek (1986), Polatschek (1989) and on the information from the data base of Tyroler Landesmuseum Ferdinandeum**.** The taxa are arranged alphabetically by genus, species and subspecies. They are divided into six categories: Extinct, Critically Endangered, Endangered, Vulnerable, Potentially Endangered, and Not Threatened. Assessed and presented by histograms is the separate qualitative participation of the various groups of threatened taxa in North Tyrol, East Tyrol and Vorarlberg.

The *Red List* published in Volume 1 (1997) is duly updated with the latest information on the species and amendments to the normative documents and regulations and attached to Volume 5 of *Flora von Nordtirol, Osttirol und Vorarlberg* (Neuner & Polatschek). It is followed by a list of the protected natural territories with maps of North Tyrol and East Tyrol and Vorarlberg.

All volumes end with an Index of the names of the taxa in German and Latin, supplied by the number of their distribution map in Italic.

Distribution of the divisions, subdivisions and families by volumes

Volume 1 of the *Flora von Nordtirol, Osttirol und Vorarlberg* comprises the division *Lycopodiophyta* with two families in it, division *Sphenophyta* with *Equisetaceae* and *Filicophyta* (= *Polypodiophyta*) with nine families, and subdivision *Conipherophytina* (= *Pinophytina*) with three families. The Volume ends with the first part of the class *Dicotyledonopsida* (= *Magnoliopsida*). It contains 15 families: from *Aceraceae* to *Boraginaceae*, including family *Asteraceae* (= *Compositae* excl. *Cichoriaceae*). Mention deserves the fact that the two subfamilies of the Compositae family are considered as independent families here.

Volume 2 comprises 26 families (from *Brassicaceae* to *Euphorbiaceae*), Volume 3 includes 41 families (from *Fabaceae* to *Rosaceae*), and Volume 4 contains the last 17 families of the Dycotyledons (from *Rubiaceae* to *Vitaceae*). Family *Vitaceae* is followed immediately by the class *Monocotyledonopsida* (= *Liliidae*), with 15 families in this volume, in alphabetical order (from *Alysmataceae* to *Orchidaceae*). The remaining five families of the Monocots (from *Poaceae* to *Zannicheliaceae*) are included in Volume 5.

The systematic section of Volume 5 is followed by an independent section presenting a pleiad of botanists and natural history scholars of several generations who have investigated and distributed knowledge about the flora of North Tyrol, East Tyrol and Vorarlberg (Gärtner & Neuner). Each biographic entry contains an original photograph. In this portrait gallery, along with our contemporaries, one finds such prominent names as those of K.W.von Dalla Torre, H. Gams, H. von Handel-Mazzetti, H. Merxmüller, A. Neumann, J. Braun-Blanquet, and many others.

The graphic layout of *Flora von Nordtirol, Osttirol und Vorarlberg* is flawless. The highly professional structuring of the text, along with the multifunctional links between the different information blocks and the supplemented taxon distribution maps, red lists, and reference sources (herbaria and literature), indexes of the current and vernacular names, etc., facilitates the use of each volume and makes it easy.

Fischer, Manfred A.; Adler, Wolfgang & Oswald, Karl. 2005. *Exkursionsflora für Österreich, Liechtenstein und Südtirol.*

ed. 2. Linz: Land Oberösterreich, Biologiezentrum der Oberösterr. Landesmuseen. 1392 pp. Hardback.
ISBN 3-85474-140-5. Price 45 euro. Publ. date 8 October 2005.

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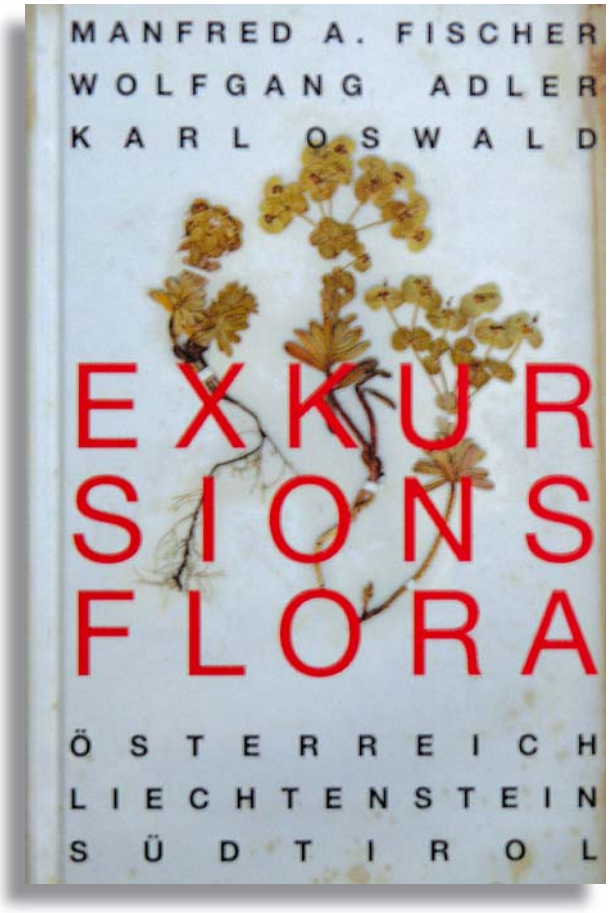
The *Excursion Flora of Austria, Liechtenstein and South Tyrol (N Italy)* was recently published. A Red-letter day for those who have followed the initiation, development and gestation period with interest and affectionate good wishes! An amazing eleven years have passed since the publication of the [first] edition titled "*Exkursionsflora von Österreich*" mainly authored by W. Adler, K. Oswald and R. Fischer. This new version is a much more extensive work, catering not only for Austria but also including Liechtenstein and South Tyrol. The authors and compilers of this substantial field flora are eminently suited for their task as they have at their fingertips great field experience and knowledge of the Austrian and Central European flora. Chief organizer and patient co-ordinator is Manfred A. Fischer, based at the plant systematic department at the University of Vienna. His exact and critical editing can be seen as one leafs through the pages. The user will judge if it sets a new standard for a modern Excursion Flora.



The main part of the text comprises identification keys for all native and naturalized species and subspecies including the more frequently encountered hardy cultivated plants. A brief summary of the contents: Taxonomy and nomenclature (24 pp.), morphology and phytography (50 pp.), ecomorphology (11 pp.), chorology, habitats and vegetation ecology, brief history of botanical exploration in Austria, guidelines for identification, overview of the plant system, keys (1017 pp.), bibliographical references (45 pp.), glossary (52 pp., most useful as botanical usage of terms varies greatly in different floras), etymology of some common species epithets and an index to the Latin and German names adopted, including all synonyms mentioned in text. 152 families are included. Not only are the main distinguishing characters provided in the keys but additional complementary characters are detailed

to help the reader arrive at the correct determination. The current and valid Latin name for each species and subspecies is provided without citation of authority (a trait particularly beloved by Manfred Fischer). Also provided are the German name (including in some cases Austrian vernacular, i.e., dialect name), plant height, life span, life form (following Raunkiaer), flowering period, habitat, altitude, distribution, threat status (according to the Red List of Austria), ethnobotanical information, endemism and other taxonomic notes. The contents are condensed in small font and abbreviated text-form into a voluminous 1374 pages printed on flimsy-thin but strong 'bible' paper. Some 800 figures illustrating key characters are a welcome and valuable aid to plant identification. The cover is reminiscent of antique parchment or faded vellum; with its peculiar spaced capital lettering there is a strong similarity to a signboard for testing eyesight.

More than 25 persons have contributed to the work; some taxonomically complex groups such as the *Ranunculus auricomus* group and *Hieracium* have been treated by Elvira Hörandl and Franz Schuhwerk with Günter Gottschlich respectively. As the Department is headquarters to the plant systematic journal TAXON it comes as no surprise to see taxonomy, nomenclature and keys quite up-to-date – the most recent edition of Strasburger's *Lehrbuch der Botanik* (2002), *Plant Systematics*: *a phylogenetic approach* (Judd & al. 2002) and the *Angiosperm Phylogeny Group* (2003) have been followed.

This field flora will not only be useful to professional and amateur botanists interested in the flora of the region but also serve as a useful source of information for all working outside the area. In one handy little volume and at less than 20 × 12 cm, strongly bound, it is not too hefty a volume for the rucksack. Buy it while stocks last!

Announcements

Vladimir Vladimirov & Ana Petrova

Dimitrov, D., Gussev, C., Kimenov, G & Bosseva, Y. 2005. *Botanical Characteristics of the Vrana Park.* Troud Publishing House, Sofia. 91 pp., colour photographs. Hardback. ISBN 954-528-518-4 (in Bulgarian with English summary).

Content: Introduction, Physical and geographical characteristics and ecology of the Vrana Park, Vrana Park as a cultural monument, Vrana Park as a protected area, History of Vrana Park, Botanical characteristics of the Vrana Park (including a lists of higher plants in the different sections), Taxonomic and biological structure of the flora, Phytogeographycal analysis, Plants of conservation value, Conclusions and recommendations, and References.

The book is intended for tourists, plant and park-art lovers, and presents the current state of the Vrana Park. The latter was created by the Bulgarian Kings Ferdinand and Boris III and has a century-long history as well as great cultural and environmental significance. Situated *c.* 11 km eastwards of the Sofia city center, it covers an area of 99.3 ha with variable microrelief and soil conditions, suitable for the development of different vegetation types. A total of 831 species of vascular plants belonging to 453 genera and 118 families have been identified in the park. Richest in species are the open areas, which have offered the easiest access to the species of the surrounding spontaneous flora for invasion. The Park may serve as an *ex situ* collection intended for protection of floristic diversity and as a center for successful plant introductions. It is recommended to restore the Park and to use it as a Center for Biodiversity Interpretation.

Gussev, C., Dimitrova, D. & Tzoneva, S. 2005. *Natura 2000 – European Ecological Network in the Vitosha Mountain.* Sofia. 80 pp., colour photographs and map (1:40000). Paperback. ISBN 954-91790-1-X (in Bulgarian and English).

Content: Instructions for use, Introduction, Physics and geography of Mt Vitosha, Plants and animals, Nature protection in Mt Vitosha, Cultural and historical heritage, Habitat diversity in the Vitosha Nature Park, the Management plan of the Vitosha Nature Park and NATURA 2000, Glossary, Habitat types of Community interest in the Vitosha Nature Park, and References.

The book is a guide with a map to the natural habitat types of European Community interest in Mt Vitosha. It includes a total of 27 habitats. Each habitat is described with the typical plant species, European significance, distribution in Bulgaria, code according to the Directive 92/43/EEC, and code according to the Palearctic Classification of Habitats. The text for each habitat is supplemented by colour photographs of the habitat itself and of some habitat-specific plant species.

Kavrukova, V., Dimova, D., Dimitrov, M., Tsonev, R. & Belev, T. (eds). 2005. *Guide for Identification of Habitats of European Community Interest in Bulgaria*. Sofia. 128 pp., colour photographs. Paperback. ISBN 954-9433-03-X (in Bulgarian).

Content: Introduction, Instructions for use of the guide, Glossary of the used terms, Habitats (Coastal and halophytic, Coastal sand dunes and inland dunes, Freshwater, Temperate heath and scrub & Sclerophyllous scrub, Natural and semi-natural grassland formations, Raised bogs, mires and fens, Rocky habitats and caves, Forests), and References.

The book is intended in support of the development of the NATURA 2000 network in Bulgaria. It includes information on 88 habitats (73 from Annex I of the Directive 92/43/EEC and 15 that are expected to be included in this Directive). Each habitat is presented with the NATURA 2000 code, Bulgarian name, colour photographs, Palearctic Classification (1995) Code, definition, characteristic plant species, distribution in Bulgaria, related habitats, relevance to Bulgarian classifications of habitats, and references.

Meshinev, T., Apostolova, I., Georgiev, V., Dimitrov, V, Petrova, A. & Veen, P. 2005. *Grasslands of Bulgaria. Final Report on the National Grasslands Inventory Project – Bulgaria*, 2001-2004 (PINMATRA/2001/020). Dragon 2003 Ltd., Sofia, 103 pp. Paperback. ISBN 954-9746-11-9.

Content: General introduction to semi-natural grasslands mapping projects, Introduction, Application of international legislation in the activities related to conservation and sustainable use of grasslands in Bulgaria, National legislation, Working methods, Results, State evaluation, Assessment of the species diversity and their conservation value, Strategy for conservation of grasslands in Bulgaria, References, and Annexes.

The book summarizes the results of the field studies into the basic grassland communities in Bulgaria carried out by mapping experts, GIS, Validation & Nature Protection Groups. It presents a classification of the grassland communities, including the mesophytic and xeromesophytic (high mountain, middle and lower mountain belts grasslands, grasslands of the lowlands and hilly regions), xerophytic (xerophytic grasslands with steppe elements and such with southern elements), halophytic grasslands and grasslands on long-abandoned lands as well as description of the vegetation units. A total of 2008 species (51.5% of the Bulgarian flora) have been recorded during the field inventories in 2244 polygons. Of these species, 198 are of conservation concern.

It is hoped that the results will encourage the Governmental authorities and different research institutions to undertake an integral inventory and mapping of the grasslands in the country.

Stoeva, M., Stoychev, G., Mladenov, R., Grozeva, N., Stoeva-Hristova, K., Velichkova, K., Georgieva, M. & Vulkova, M. 2004. *Biological Diversity of the Sinite Kamuni Nature Park*. Contrast Publishing House, Bogomilovo. Paperback, 218 pp., colour photographs. ISBN 954-9887-53-7 (in Bulgarian).

Content: Introduction, Flora of the Sinite Kamuni Nature Park (including vascular plants, bryophytes, algae and lichens), Macromycetes, Vegetation & habitats in the Park, Factors with negative impact on the flora and vegetation, Recommendations for

future investigations and biodiversity conservation in the Park, Terms usage, and References.

The Sinite Kamuni Nature Park is situated on the southern slopes of the Eastern Balkan Range, above the town of Sliven and covers an area of 11308.8 ha. The book presents the results of the investigations into the plant, fungal and habitat diversity of the Park as a background for preparation of a Management Plan of the territory. Assessed is the present state of the populations of 79 species of conservation value, endemics and relicts. A total of 958 species and 27 subspecies of vascular plants (listed in the book) have been recorded, belonging to 422 genera and 94 families. Of these species, 336 are medicinal, 115 fodder plants, 195 olegainous, 192 melliferous, 24 industrial, 52 anthropophytes, 14 Bulgarian and 36 Balkan endemics, and 42 of national and international conservation importance.

Uzunova, S. & Uzunov, S. 2005.
***The Plants in the Strandzha Nature Park*.**
National Department of Forests. Technoingenering ABC, Bourgas. Paperback, 133 p., colour photographs. IBSN 954-90304-6-6 (in Bulgarian).

Content: Introductory text on Mt Strandzha and the book, Family symbols, Data on the species included, Illustrated morphological terms, Index of the Latin names of the plants, Legend of the symbols and abbreviations.

The book presents a good deal of the vascular plant diversity of conservation concern in the Strandzha Nature Park: endemic, relict, rare, endangered and protected species as well as the more common medicinal plants. There are 242 included species belonging to 46 families. Each species is presented with a brief morphological description, information on its habitats and distribution in Bulgaria and in Mt Strandzha, floristic element, blossoming period, conservation and endemic status, and utilization.

Zhelev, P. & Gladkov, V. 2004.
The Green Treasure of the Central Balkan National Park. Panparks, Geosoft, Sofia. Paperback, 120 p., colour photographs (in Bulgarian).

Content: Introduction, Green treasure of the Central Balkan National Park, Illustrated glossary of terms, Index of the Bulgarian vernacular names of plants, Index of the Latin names of plants, Index of the English vernacular names, References, Species descriptions.

The book presents the diversity of vascular plants of the Central Balkan National Park. Information and colour photographs of 96 species are included. Both common species, characteristic of the Park and rare and endemic species are presented. The main morphological characters, means of reproduction, habitats, distribution in Bulgaria and worldwide, and conservation status of each species are given. Intended for non-professional plant-lovers as well, the book is written in a more popular style and the basic specialized terms are illustrated and explained. The plants are arranged in the following order: coniferous trees and shrubs (7 species), deciduous trees and species (15 species), herbaceous plants (74 species). The species are listed alphabetically within each group.