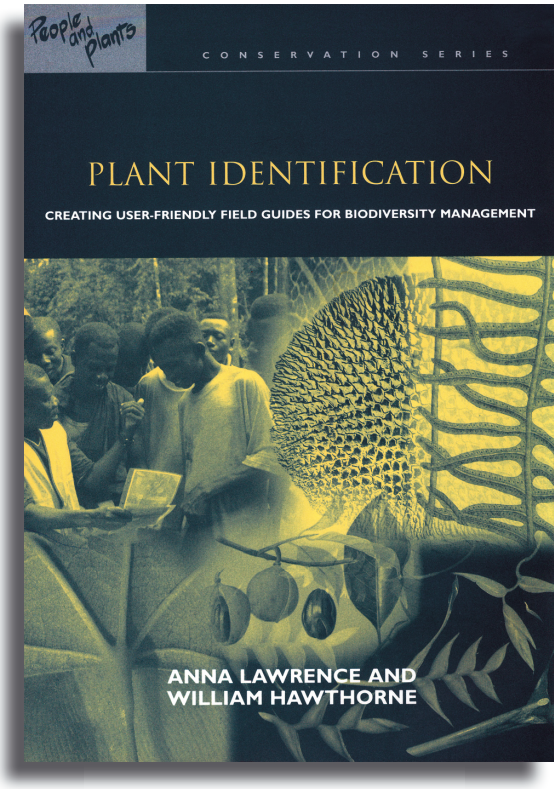
Lawrence, A. & Hawthorne, W. 2006. ***Plant Identification. Creating user-friendly field guides for biodiversity management.***

Earthscan, London & Sterling, VA. 268+xvi pp. Paperback.
ISBN-10: 1-84407-079-4, ISBN-13: 978-1-84407-079-4 .



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Biodiversity management became a burning issue for the 21-st century on the background of global environmental change, loss of biodiversity, ever increasing human population and demands for food and better life. Crucial point in this respect is to maintain healthy ecosystems which function properly, and to be able to do so, we need to know exactly what the species we are dealing with are. Plant (and animal) identification has long been a primary task for botanists (and zoologists) but currently more and more people are interested in recognizing species and strive for user-friendly field guides.

However, do we really need a guide how to produce a guide? Isn't it easy to tell other people in a simple and understandable way how to distinguish one plant species from another? Having read this book, I would strongly recommend it to any one who wishes to produce a plant guide that will serve the targeted audience in the best way. The authors are professional botanists from the Oxford University with extensive experience in producing field guides. The material is well structured, written clearly, and what is especially valuable, well illustrated and supported with plates, figures, tables, information boxes and case studies. The authors involved into the book preparation many other experts who contributed significantly by their own experience from across the tropics.

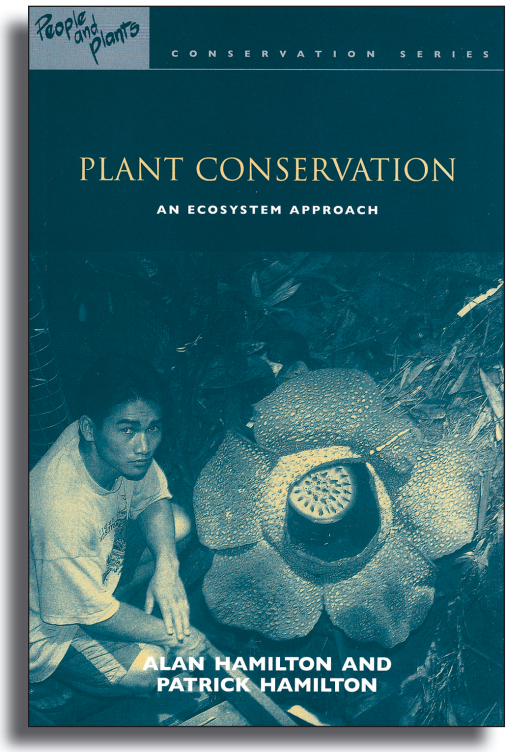
The book provides potential authors of field guides with practical advice about all aspects of producing user-friendly guides. Starting with the guiding principles for a successful field-guide – scientific accuracy, relevance, availability and usability – the authors go through all key steps in the preparation process: defining the purpose of the guide, identifying the stakeholders and consultation with them, seeking funding, elaboration of the field guide design (botanical and other information to be included, illustration, format, materials and construction, page layout), testing of usability, publishing and dissemination. The information is arranged into 10 chapters: *Identifying biodiversity: Why do we need field guides?; Producing a successful guide: Principles, purpose, people and process; Planning and budgeting; Plant names and botanical publication; Identification: Keys and other access methods; Plant characters suitable for field guides; Information: Finding it and presenting it; Illustration; Testing the field guide; Publishing the field guide*. At the end list of the acronyms and abbreviations, references and subject index are supplied.

Although intended mainly for potential authors of field guides for the tropical areas (and therefore, all case studies are from these regions), the book can serve any enthusiast from any other part of the world. It was published within the Conservation series of the People and Plants Initiative, a partnership program of WWF, UNESCO and the Royal Botanic Gardens, Kew. Let us hope it will stimulate more experts to produce user-friendly guides for these regions of the world where such tools are needed. This will enable more and more people to identify plants for the purposes of conservation, sustainable use, monitoring, or simply for greater appreciation of plant diversity. If you, the reader, are one of those potential authors, make some efforts to find and read this book! It will save you a lot of energy, time and money while preparing your own field guide.

For more information, see: www.earthscan.co.uk.

Hamilton, A. & Hamilton, P. 2006. *Plant Conservation. An ecosystem approach.*

Earthscan, London & Sterling, VA. 324+xxvi pp. ISBN-10: 1-84407-083-2. Paperback. 1-84407-082-4. Hardback. ISBN-13: 978-1-84407-083-1. Paperback. 978-1-84407-082-4. Hardback.



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Plant Conservation is one of the last books to be produced within the People and Plants Initiative. For 14 years (1992-2005) this partnership program of WWF, UNESCO and the Royal Botanic Gardens, Kew, has contributed much to increasing the capacity worldwide for community-based plant conservation, and thus, to integrating the applied ethnobotany within conservation. It is not surprising then that the coordinator of the program, Alan Hamilton, together with his son, prepared this book. The book draws on the projects, data gathered and lessons learned during the lifespan of the program, as well as on the personal experience of the authors. Currently, Alan Hamilton is Manager of the Plant Conservation and Livelihoods Programme at Plantlife International and Patrick Hamilton is a researcher at the University of Exeter.

The book is a practical manual for plant conservationists. The text reads well and grasps the reader's attention from the very beginning, explaining why plant conservation matters and what the major threats to plants are (Chapters: *1. Perspectives on Plant Conservation*; *2. Threats to Plants*). The reader is convinced by numerous examples and case studies from across the world. Next chapters express the authors' opinion on the roles that plant conservationists with different backgrounds may play and how vital the knowledge and research on plants are (Chapters *3. Actors and Stages*; *4. Information, Knowledge, Learning and Research*). Also, the key plant and vegetation features and patterns of significance for conservation are discussed (Chapters: *5. Plant Life*; *8. The Patterns of Plants*). Furthermore, the book presents methods, approaches, techniques and case studies of plant management, *in-situ* and *ex-situ* conservation, involvement of local communities and setting of priorities for conservation (Chapters: *6. The Management of Plants and Land*; *7. Meanings, Values and Uses of Plants*; *9. Plants and Places: Choices, Priorities and Standards*; *10. Possession, Property and Protection*; *11. Approaches to in situ Conservation*; *12. Projects with Communities*; *13. Ex situ Conservation*; *14. Plant Trade*). The use of the book is facilitated by *List of figures, tables and boxes*, *Acronyms and abbreviations*, *References*, *Index of scientific names of plant species, genera and families,* and *General index*, supplied separately.

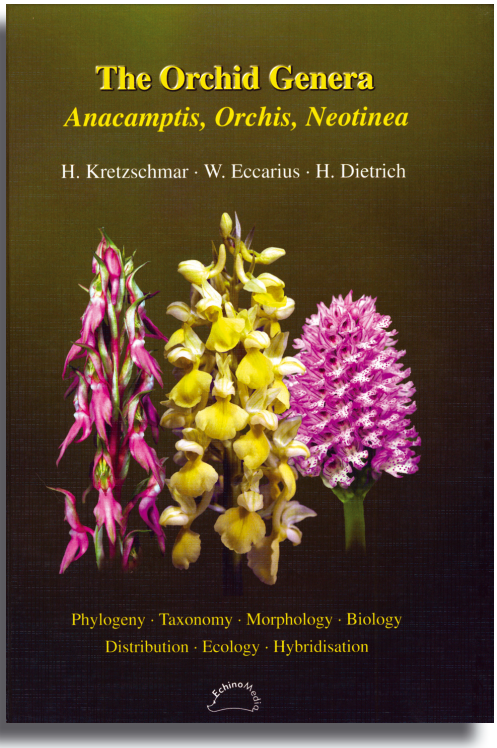
The book is intended for plant conservationists – botanists, foresters, conservation practitioners, students, any professional or amateur dedicated to protection of plants. Written with deep concern about plants, it conveys a very clear message that only involvement of local people will make conservation efforts successful! Conservation is seen not only as a crisis discipline but also as a part of the everyday normal life of people and only when it is promoted as a culture, the biodiversity on Earth will be safely protected.

This is not just a book to read and refer to: it appeals for action. Action now! It calls on everyone to play their part in plant conservation and to contribute at least in a small way to facing this vital challenge of the present times. Obtain and read a copy of the book and the time spent will be fully rewarded!

For more information, see: www.earthscan.co.uk.

Kretzschmar, H., Eccarius, W. & Dietrich, H. 2007. **The Orchid Genera *Anacamptis, Orchis* and *Neotinea*.**

Ed. 2 (English translation). EchinoMedia Verlag, Bürgel, 17 × 24 cm, 544 pp. Hardcover. ISBN 978-3-937107-12-7. Price: 98 €u



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A new and fundamental work on three familiar European orchid genera was published early this year with a charming announcement on the second page of the English edition, "ready for delivery [on] 31.01.2007" and …… it made it! It is an excellent updated classification of 36 species and 38 subspecies, almost monographic in detail, based on the diligent and exhaustive research of three eminent European orchid-experts over several decades. These authors have incorporated the results of new knowledge on systematics and nomenclature stemming from the evaluation of DNA sequences and using the evidence presented from molecular phylogenetic trees as their main framework. As Prof. Richard Bateman from the Natural History Museum, London comments, "this book sets a new standard for studies of the European orchid flora".

The introduction begins with a broad historical survey of the classical genus *Orchis sensu lato* starting with Theophrastus (371–285 B.C.) and ending with present-day modern discoveries. The successive chapters deal with systematics, generic and species concepts and explain the modern investigation methods utilized for providing molecular and palynological data and also information from seed morphology.

In the main part of the text, dichotomous keys for the identification of taxa at all levels (genera, species and subspecies) are provided. For each taxon the following information is given: name and bibliographic reference, notes on nomenclature and typification (including Latin diagnoses of new taxa and photographs of type material), synonyms, full description, etymology, distribution (including maps of areas) together with information on cytology, ecology, phenology, morphology and variation. Affinities and the 'threat status' are all discussed. Approximately 1000 photographs, of excellent quality and many in gorgeous colour, are included. Scanning Electron Micrographs (SEM) of pollinaria and seeds are provided for nearly all species for the first time; they indicate a remarkable attempt of the authors to provide additional taxonomic characters. There is also a long literature list and comprehensive indexing including one to nomenclatural novelties and one to scientific plant names. As explained in the text, the latter was prepared for the German edition and thus slight pagination differences can be found in the English edition one.

An extensive chapter is devoted to a discussion of hybridisation and hybrid taxa. All known intergeneric and interspecific hybrids are carefully described and illustrated in more than 250 photographs for the first time. Some dubious hybrids reported in literature are excluded when found to be highly unlikely and a list of these is appended. What is absolutely apparent in this chapter as elsewhere in the book is the immense and incomparable field knowledge of the authors.

Following the new phylogenetic concept some members of the genus *Orchis* are reassigned to the redefined genera *Anacamptis* or *Neotinea*, thus resulting in numerous nomenclatural recombinations which are, however, sensibly relegated to infraspecific rank.

This commendably reveals the authors' understanding of diversity and relationships in their "natural" groups. The genus *Aceras* is included withim *Orchis*.

In any major work carried out by a relatively small team working under pressure of a strict time schedule, some errors inevitably creep in and a few small ones are listed:

– In the identification key (p. 52) the statement for *Anacamptis coriophora*, "side lobes rounded, no serrations" contradicts that presented in the species description (p. 74), "side lobes diamond-shaped in outline and more or less notched along the edges". In the German edition, the contradictory statements for *A. sancta* and *A. coriophora* in the key and descriptions are, "Sporneingang ohne erhabene Leisten" and "Sporn so lang oder länger als der Fruchtknoten".

– The description of *Orchis patens* subsp. *canariensis* from the Canary Islands (p. 399) has excluded some known ecological observations. As noted by Biel, the plants in the dry habitats at La Gomera (flats) and at El Hierro (south-facing slopes) are 35–60 cm tall; thus they are not smaller than the typical subspecies which is usually 25–40 cm.

– The reference to controversial opinions of the individual authors in some of their approaches (p. 10) is not interpreted as indicating disharmony. Nevertheless, it is of interest to know how these different independent treatments were tackled and eventually resolved. The authors would do well to remember that "in general, readers are selfish. If you do not explain it correctly to them, then they will interpret for themselves, and ten to one, they'll get it all wrong".

All these criticisms are mere peccadillos of course. Our general and most favourable opinion is that this book, in a much-appreciated strong binding, represents a first in orchid systematics and an absolute must for all European orchidologists and orchid-lovers, whether amateur or professional. Orchids have been and will continue to be "objects of intense interest in science, horticulture, art and literature" because of their diversity, floral biology or rarity. There is some welcome news afoot for the same orchidophiles: a publication on the large and difficult genus *Ophrys* is now in preparation by the same three authors. We await its appearance with interest as there exists a recently published account by Pedersen & Faurholdt (2007). This second volume by Kretzschmar *et al.* will, it is hoped, be as worthy a companion and as much-consulted as the present bookshelf occupant *Anacamptis, Orchis* and *Neotinea*.

Book announcements

Dolezel, J., Greilhuber, J. & Suda, J. (eds). 2007. *Flow Cytometry with Plant Cells.* WILEY-VCH Verlag GmbH & Co. KGaA, Weinheim. 454 pp. Hardback. ISBN: 978-3-527-31487-4

Content: Preface; List of Contributors; Cytometry and Cytometers: Development and Growth; Principles of Flow Cytometry; Flow Cytometry with Plants: an Overview; Nuclear DNA Content Measurement; Flow Cytometry and Ploidy: Applications in Plant Systematics, Ecology and Evolutionary Biology; Reproduction Mode Screening; Genome Size and its Uses: the Impact of Flow Cytometry; DNA Base Composition of Plant Genomes; Detection and Viability Assessment of Plant Pathogenic Microorganisms using Flow Cytometry; Protoplast Analysis using Flow Cytometry and Sorting; Flow Cytometry of Chloroplasts; DNA Flow Cytometry in Non-Vascular Plants; Phytoplancton and their Analysis by Flow Cytometry; Cell Cycle Analysis in Plants; Endopolyploidy in Plants and its Analysis by Flow Cytometry; Chromosome Analysis and Sorting; Analysis of Plant Gene Expression Using Flow Cytometry and Sorting; FLOWer: A Plant DNA Flow Cytometry Database; Index.

The book explains both to beginners and experienced users the principles and development of the flow cytometry (FCM) and its various applications and benefits in plant sciences: plant genetics, genomics, physiology, pathology, breeding, biosystematics, population biology, etc. Whenever appropriate, the methodology is explained and potential sources of errors are highlighted. It is a comprehensive work about FCM, providing first-hand practical hints for plant scientist.