

Book review

A. VAN FRENKENHUYZEN & H. STIGTER: Schädliche und nützliche Insekten und Milben an Kern- und Steinobst (Harmful and beneficial insect and mites on core and stone fruit).

Verlag Eugen Ulmer GmbH & Co., Wollgrasweg 41, 70599 Stuttgart (Hohenheim), Germany, 2002. [Dutch original „Schadelijke en nuttige insekten en mijten in fruitgewassen, 2. Auflage, 1992, NFO, Den Haag.“ translated to German and adapted to condition of Central Europe by E. Dickler]. 288 pp., 775 color photographs, 13 tables, 140 schemes of developmental cycles and 35 drawings. ISBN 3-8001-3147-1. Price: 49.90 EUR. More info: e-mail: info@ulmer.de, URL: <http://www.ulmer.de>

Insect and mites play important role in almost all sectors of plant production. They affect amount and quality of plant products from the beginning of agriculture. Harmful species of insect and mites have been studied long time later the scientists and growers started take interseded in beneficial ones too. Authors intended to describe insect and mites related to the most wide-spread fruit plant – core and stone fruit trees.

This work is divided into six main parts: Introduction, Monitoring, Fundamentals of control, Harmful insect and harmful mites, Beneficials, Discriminating marks of larvae, insect and mites. First, second and third part deal with general aspects of plant protection related to insects and mites on the respective fruit species. There are basic principles of monitoring and control of pests. Parts four and five are fundamental parts of this book. Part four - Harmful insect and harmful mites – consists of succesive sections dealing with individual groups of pests: aphids, coccids, cicadas, bugs, butterflies – separately coating and mining species, beetles, mites, leaf-eating hymenopteran species, flies and gall creating dipteras and other pests. Each section starts with the description of the respective pest group and the table of species. This is followed by the brief description of the species, diagrams of their annual life cycle and quality photographs of individual insect and mite species and symptoms of plant injury caused by them. Part five – Beneficial species – deals with various insect and mite species which can control the harmful ones. Species description is in the same form as in the previous part. Part six contains some drawings helpful in discriminating pest groups. There is also explanation of technical terms, list of literature, source of pictures and register of scientific terms at the end of this book.

This book can be very helpful to people dealing with insect and mites, plant protection, agriculture – especially fruit production. Transparent form of this book and good photos can serve in discriminating respective species and study of problems related to them.

M. SUVÁK

Book review

C. L. Elzinga, D. W. Salzer, J. W. Willoughby, J. P. Gibbs: **Monitoring Plant and Animal Populations**

Blackwell Science, Inc., Commerce Place, 350 Main Street, Malden, Massachusetts 02148, USA, 2001. vii + 360 pp. with 15 drawings, 83 figures, 16 tables and 19 boxes of definitions, concepts or examples, soft cover, ISBN 0-632-04442-X. Price: £ 29.95. Telephone orders: 800-215-1000 or 781-388-8250; fax orders: 781-388-8270

Questions of health environment and nature protection are very frequent at the present. Attention is paid to many areas where some of nature elements were disturbed. There are a lot of projects created to improve this situation. Certain measures are taken within this frame but we must have some tools to judge state of environment to determine whether the way of its development is good or not. The authors define monitoring as the collection and analysis of repeated observations or measurements to evaluate changes in condition and progress toward meeting a management objective. It should be an integrated part of adaptive management where monitoring should give data to establish feedback to further steps.

Structure of this book consists of Preface, 15 chapters, 4 appendices, Cited Literature and Index. List of main chapters could be considered as contents of this handbook: 1. Introduction to Monitoring, 2. Monitoring Overview, 3. Selecting Among Priorities, 4. Qualitative Techniques for Monitoring, 5. General Field Techniques, 6. Data Collection and Data Management, 7. Basic Principles of Sampling, 8. Sampling Design, 9. Statistical Analysis, 10. Analysis of Trends, 11. Selecting Random Samples, 12. Field Techniques for Measuring Vegetation, 13. Specialized Sampling Methods and Field Techniques for Animals, 14. Objectives, 15. Communication and Monitoring Plans. Appendices explain some methods and techniques of monitoring in more details and with some examples: I. Monitoring Communities, II. Sample Size Equations, III. Confidence Interval Equations and IV. Sample Size and Confidence Intervals for Complex Sampling Designs.

This work is intended to be a practical handbook for field biologists responsible for developing monitoring studies. It is designed for USA conditions and some steps of monitoring are influenced by the law of USA and specific environment in this country, examples are selected from this area too. But most of principles, techniques and methods are generally acceptable in all other regions. So this handbook can be useful tool for practical planning, performing and evaluation of monitoring tasks.

M. SUVÁK

Book reviews

R. K. HORST : Westcott's Plant Disease Handbook. 6th edition.

Kluwer Academic Publishers, 101 Philip Drive, Assinippi Park, Norwell, Massachusetts 02061 USA, 6th edition of Cynthia Westcott's plant disease handbook revised by R. Kenneth Horst, hard cover printing 2001, XX + 1008 pp. with 47 bw photos and 31 drawings, 8 plates with 43 cl photographs, ISBN 0-7923-8663-9. Price: 330.00 EUR, 299.95 USD, 210 GBP. Information for North, Central and South America: telephone: (781) 871-6600, fax: (781) 871-6528, e-mail: kluwer@wkap.com. Distributors for all other countries: Kluwer Academic Publishers Group, Distribution Centre, Post Office Box 322, 3300 AH Dordrecht, The Netherlands, telephone: 31 78 6392 392, fax: 31 78 6546 474, e-mail: orderdept@wkap.nl, URL: <http://www.wkap.nl>

People are dealing with damaging factors of plants for aeons. At the beginning of agriculture they created gods for inexplicable events, gradually they found empirical means against some of harmful agents and now many specialists investigate these factors intensively at the present. The amount of knowledge about plant diseases raises rapidly. The first edition of Plant diseases handbook edited by Cynthia Westcott was revised and supplemented as new information on plant diseases raised. This sixth edition of this handbook was edited by R. KENNETH HORST and involves actual information on the discussed problems.

The concept of plant disease is defined as an injurious physiological process, caused by continued irritation of a primary causal factor, exhibited through abnormal cellular activity and expressed in characteristic pathological conditions called symptoms. The causal factors, according to this definition, may be living organisms or environmental conditions. Injury, in contrast to disease, is caused by transient irritation of a causal factor. This work discusses the following causal factors in accordance with previous definition of disease: fungi, bacteria, viruses, viroids, phytoplasmas and nematodes.

The book is composed of Introduction and four chapters: 1. Garden Chemicals and Their Application, 2. Classification of Plant Pathogens, 3. Plant Diseases and Their Pathogens, 4. Host Plants and Their Diseases. Introduction involves basic terms, definitions and principles of plant pathology. Chapter 1 contains list of fungicides, bactericides, virocidicid and nematocides in alphabetical order by common names where possible (by trade names in some cases). Every chemical is described from the viewpoint of target pathogens. This chapter also discusses conditions of right selection, manipulation and use of pesticides. Chapter 2 gives basic information about pathogenic organisms grouped by taxonomic units. Fungi are divided from the phylum and order level to families. There are some schemes of fungi life cycles with description of their characteristic features and possible control in some cases. Other pathogens are generally described in brief with respective lists of systematically classified groups of them (bacteria, viruses, viroids, phytoplasmas and nematodes). Chapter 3 alphabetically

lists 40 types of diseases according to their common names. Diseases in every type are described by causal organisms and remedies are presented if known. Chapter 4 presents host plants in alphabetical order, mostly according to common names. Under the host name the diseases are sorted out according to the types in Chapter 3.

This book primarily serves as a reference manual for people working in plant protection in agriculture or gardening. It can assist in discriminating specific pathogen (or at least disease type) and suggest proper measures. Scientists, teachers and students can find useful data there, too. Well-arranged information on chemicals now commercially available, 1254 host plants and about 3400 diseases in this book gives very helpful tool for everyone who is interested in the problems of plant diseases.

M. SUVÁK

W. D. STEVENS, C. U. ULLOA, A. POLY & O. M. MONTIEL [eds.]: Flora de Nicaragua.

Missouri Botanical Garden Press, St. Louis, U. S. A., 2001, 3 vols., pp. 2 666 + maps, In Spanish, ISBN 0-915279-95-9, (Hard cover). Price: USD 350.00.

The Missouri Botanical Garden Press announces the publication of the Flora de Nicaragua, the first complete flora of a Latin America country published in Spanish. The Flora de Nicaragua describes 5,796 species in 1,699 genera in 225 families of seed plants. There were 178 contributors from 16 countries. The Flora occupies 2,666 pages in three volumes and took about 23 years to complete. The largest family is the *Orchidaceae* with 601 species.

The Flora de Nicaragua is divided into Gymnosperms and Angiosperms, and within those groups taxa are alphabetical. Species treatments include the place of original publication, general synonymy, a brief description, habitat and distribution within the country, vouchers, phenology, general distribution, and some well-established local names.

Flora de Nicaragua is very valuable monograph on the flora of Caribbean region and adjacent territories. To reach full completeness of information some pictures are missing, e. g. pen-and-ink drawings of important taxa, or, as the case may be, drawings of important diagnostic characters, etc. This imperfection is, however, compensated by the possibility to obtain the graphic documentation on web page www.mobot.org/MOBOT/fm.

S. MOCHNACKÝ

G. GURR & S. Wratten: Biological Control: Measures of Success

Kluwer Academic Publishers, P.O. Box 17, 3300 AA Dordrecht, The Netherlands, 2000. 429 pp. With 37 tables, 41 black-white figures and 3 colour plates. ISBN 0-412-84280-7. Price: 179.00 EUR, 193.50 USD, 122.50 GBP.

Using natural enemies of weeds and pests to control these harmful organisms is more and more discussed. Initially marginal account of such measures now increases with the problems of pesticide pollution, resistance of pests against chemicals and the

occurrence of alien pest problems. Using so called integrated pest management becomes more attractive.

This work deals with the forms of biological control that are used this time. International team of 27 leading authors of this book takes different criteria to judge the success of biological control. There are ecological, economic, social and environmental measures of success. Biological control can be an alternative to broad spectrum and persistent pesticides and also to the controversial use of genetically engineered resistance in crops. However, there are possible negative effects of biological control, too – especially when released agents attack non-target organisms. This specific use of selected agents of biological control must be considered in multiple ways

There are 14 chapters and index. Each chapter has list of references at its end. After history of methodological, theoretical and empirical approaches to biological control the authors discuss wide range of organisms associated with biological control of the selected groups of target organisms in the following chapters. The most attention is paid to biological control of arthropods – the theory of agents selection, the models of their use and the measurements of effects. The success in biological control of arthropods by the augmentation of natural enemies and success in conservation biological control of arthropods are appreciated. The authors deal with the biological control of terrestrial molluscs, aquatic weeds, terrestrial weeds, plant pathogen, nematodes, soil-dwelling insects and vertebrate pests with the use of appropriate biological agents such as other arthropods, microorganisms, insect pathogens, parasitical nematodes of insect, pathogens of weeds (including bioherbicides). One chapter is concerned with non-target effects of biological control agents. Last chapter is a synthesis, where the authors consider possible future development of biological control.

Comprehensive information on the problems of biological control in this work which covers all relevant target groups and well explained biological control methods gives very valuable and helpful tool to everyone who is interested in such problems. It is very good summary of actual information on biological control of plant pest and diseases, and can be used as practical guide or resource for study.

M. SUVÁK

D. J. OWEN: The herbal internet companion: herbs and herbal medicine online.

The Haworth Information Press and The Haworth Herbal Press, New York, London, Oxford, 2002, pp. 194 with index. ISBN: 0-7890-1051-8 hard (0-7890-1052-6 soft). Price: \$49.95 hard (\$19.95 soft). More information: The Haworth Press, Inc., 10 Allice Street, Binghamton, New York 13904-1580, USA, Tel.: outside US/Canada: 607 722 5857, US/Canada only: 1 800 429 6784; Fax: outside US/Canada: 607 771 0012, US/Canada only: 1 800 895 0582, e-mail: getinfo@haworthpressinc.com, URL: <http://www.haworthpressinc.com>

A great amount of information available on internet led librarian and information specialist David J. OWEN to write this outstanding guide for anyone seriously interested in herbs and herbal medicine.

The book groups the Web sites to 16 chapters, providing you with the ways to quickly access information about identification, online indexes and databases, cultivation and conservation of plants, traditional medicine, ethnobotany, laws, regulations and standards, criteria for assessing the quality of health information on the internet, patient

needs, internet resources in specialized health areas such as cancer and AIDS, mailing lists, chat rooms, and newsgroups providing herbal information and much more. The chapters are not just single lists of links, but every chapter begins with a short introductory section, followed by an alphabetical listing of the selected Web sites and resources, along with the URL, description and guide to the type of information to be found.

The herbal internet companion is a practical guidebook.

V. MRÁZOVÁ

I. M. BRODO, S. D. SHARNOFF & S. SHARNOFF: Lichens of North America

Yale University Press, P.O. Box 209040, New Haven, CT 06520-9040828, USA; 2001, pp. 821 b/w + 927 color illus., 9^{1/2} x 11, Cloth, ISBN 0-300-08249-5, \$69.95. More info: <http://www.yale.edu/yup/books/082495.htm>.

This is a large and spectacular book on lichens, with all the text written by ERNIE BRODO. The volume is first of all a beautifully illustrated introduction to the study of lichenized fungi, with fourteen chapters covering basic organization, structure, chemistry, physiology, ecology and relationship to humans. Basically this part covers most of the same ground as an earlier book, *Biology of Lichens*, by MASON E. HALE (1967, 1974, 1983) but it does so using lavish photographs taken by the Sharnoffs, accomplished nature photographers. The second part of the book, more than 80% of it, includes keys as well as species descriptions of the more common North American lichens and is also richly illustrated with in situ photographs. The photos are all good-sized, usually two to three per page and interposed with species descriptions, although several appear singly on 23 x 28 cm pages. In every case the detail is exquisite and the colors brilliant. There is not much doubt that BRODO et al. sets new standards for identification manuals generally.

While essentially all North American lichenologists and undoubtedly many others will want to own a copy, it is not only for the converted. The book has already inspired previously uncommitted persons to appreciate lichens. One quantitative ecologist unexpectedly decided he would like to teach a course on lichens using *Lichens of North America* as a textbook. After a day of reading the introductory chapters of a borrowed Brodo et al., a retired geologist ordered his own copy and set out to study saxicolous species. Later a naturalist appeared in our laboratory, asking for a little "PD" for color tests. Clearly it is a volume that appeals to amateurs, as well as professionals and students.

This book is reasonably priced, considering its size and quality of reproduction; the dust jacket could be framed. Most of the first edition was sold within a few weeks. It will probably be considered a classic in years to come.

D. FAHSELT

A. KRATOCHWIL & A. SCHWABE: Ökologie der Lebensgemeinschaften. Biozönologie. Ecology of Societies. Biocoenology.

Verlag Eugen Ulmer GmbH & Co., Wollgrasweg 41, 70599 Stuttgart (Hohenheim), Germany, 2001. 756 pp. with 286 black-white figures – drawings, 168 tables and 68 boxes of definitions of some subjects or concepts. ISBN 3-8252-8199-X. E-mail: info@ulmer.de, URL: <http://www.ulmer.de>

Characteristics of plant and animal populations depend on various factors and their relations are very complex. Biocoenology is dealing with plant and animal communities of specified areas but related comprehensive works are very sporadic. The authors try to resume recent information on this discipline.

Simple generalisation of all existing features and relations in the communities of living organisms is not possible. We still do not know enough about it and examined phenomena are too complex. The research of these problems needs an interdisciplinary approach. This book is intended as a guide-book of known biocoenological terms and general relations with many particular examples of the studied cases, especially from European area.

This book is divided into 9 main chapters: 1. Introduction, 2. Basic Principles of Coexistence of Organisms, 3. Basic Concepts of Biocoenology in its Historical Development. 4. Excurcus: Individual Historical Aspects of Scientific Development of Biocoenology. 5. Methodical Concepts and Problems in Scientific Treatment of Biocoenoses. 6. Coincidence and Incoincidence: Selected Animal Groups and Habitat/Vegetation Marks, 7. Partial Aspects of Biocoenology: Structure, Relations, Substances, Dynamics, Chronology, 8. Man and his Influence on Biocoenoses, 9. Landscape Ecology and Nature Conservation in the other Sense: Basic Terms and Concepts of Evaluation. There are also the List of Literature, the List of Boxes and the Register at the end of this book.

The main chapters are divided, there are several inferior levels. The problems explained are documented with transparent pictures, schemes, graphs and tables of research results on related thema. Substantial concepts or definitions are explained separately in boxes with grey background. Particular boxes are referenced in other text by their numbers.

Chapter 1 features main structure of ecosphere, subject of biocoenology and conventional principles of this book. Chapter 2 introduces basic principles and definitions of coexistence of various plant and animal species on common area. Generalized types of intra- and interspecific relations and influence of abiotic factors are supplemented with appropriate examples. Chapter 3 deals with general ecological concepts from the viewpoint of the development of our understanding the discussed phenomena. These concepts are related to geographical distribution, structure, appearance, development and interactions of living systems. Short Chapter 4 shows different approach in study of living organisms. There are differences between the biology of individual species and the biology of societies (symbiology) and differences between autecology and synecology. Chapter 5 discusses the methods and the problems of community examinations. Data finding and processing are closely related to the subject and the objective of the examination. Chapter 6 is concerned with the relations between selected mark of community element and the other factors. That means correlation related to the occurrence of some species or concrete manifestation of this species and characteristics of other species or abiotic factors of the selected habitat. Most of the examples document linkage of the selected animal species of various taxonomic groups to plant communities or populations of some plant species. Chapter 7, as its name hints,

presents the selected features of biocoenology: structural classification, functional relations, contents and flow of substances, dynamics and long-time development. Structural aspects are the frequency and the abundance of individual species, their spacial distribution, relation to levels of biotop classification, general texture of community, phenology, species diversity. Close links between the examined species are described as functional relations with many examples of such impacts, mostly on food basis. The cycle of important elements and the flow of substances are mentioned too. Changes in biocoenoses and factors of alternations are discussed, special attention is paid to successions and fluctuations. Long-time development of biocoenoses and some aspects of chorology are described separately. Chapter 8 focuses on the influence of human activity on biocoenoses and accents requirement of plant protection. 66 pages of the List of literature give many information sources to persons interested in the study of ecological disciplines. The List of Boxes refers respective boxes in the text of this book. Register consists of three parts: systematic register, register of plant communities and register of organisms.

This book contains very much information on the problems of biocoenology. Though it can not be regarded as all-embracing encyclopedy, everyone working in this area or studiiing these questions will appreciate it.

M. SUVÁK

E. Russo: Handbook of psychotropic herbs: A scientific Analysis of Herbal Remedies for Psychiatric Conditions

The Haworth Herbal Press, an imprint of The Haworth Press, Inc., 10 Alice Street, Binghamton, NY 13904-1580 USA, 2001, 352 pp. Includes bibliographical references and index. ISBN 0-7890-0718-5 (hard. \$69.95) – ISBN 0-7890-1088-7 (soft. \$29.95).

Psychical diseases follow humanity from the beginning of time. The author provides a clear review of specific psychiatric conditions with potential herbal treatment.

The book is devided into three main parts (1. Introductory material, 2. Psychiatric condition and herbs employed in their treatment, 3. Clinical case studies). In the first part Dr. Russo presents the herb material and resarch metodology. The main part of the book includes description of psychiatric diseases (e.g. depresion, insomnia, auxiety) and the chance to treat them using medical plants. Also a nonspecialist can understand his book, because the autor uses synonyms of plant names. Understanding and neat presentation results in the systematic structure (botany, phytochemistry, history of use, preparation of extract, studies, toxicity and side effects etc.) for every herb. In the last part Dr. Russo presents nine clinical case studies. The book ends with glossary for better orientation in this field.

Recently, the employment of herbs has returned to the medicine, so this handbook is useful source of information.

A. PASTÍROVÁ