

New books received

(edited by R. Brutovská)

F. A. STAFLEU & E. A. MENNEGA [eds.]: Taxonomic literature, Supplement II.: Be-Bo.
Koeltz Scientific Books, D-61453, Königstein, Germany, 1993, ISBN 3-87429-360-2

T. F. STUESSY: Case Studies in Plant Taxonomy.
Columbia University Press, 562 West 113th Street New York, New York 10025, USA, 1994, ISBN 0-231-07611-8

E. OBERDORFER [ed.]: Süddeutsche Pflanzengesellschaften, Teil I.: Fels- und Mauergesellschaften, alpine Fluren, Wasser-, Verlandungs- und Moorgesellschaften, 3. Auflage.
Gustav Fischer Verlag, Stuttgart, 1992, ISBN 3-334-60416-0

E. OBERDORFER [ed.]: Süddeutsche Pflanzengesellschaften, Teil IV.: Wälder und Gebüsche, 2. stark bearbeitete Auflage, Tabellenband und Textband.
Gustav Fischer Verlag, Stuttgart, 1992, ISBN 3-334-60375

W. TÜRK [ed.]: Pflanzengesellschaften und Vegetationsmosaiken im nördlichen Oberfranken.
Verlagsbuchhandlung, Johannesstr. 3A, D-70176 Stuttgart, Price: 150 DM, ISBN 3-443-64119-9

From the serie **Index Holmiensis:**

IV. H. TRALAU: Dicotyledoneae A-B, The Scientific Publishers Ltd. Zürich, 1974

V. H. TRALAU: Dicotyledoneae C, Swedish Natural Science Research Council, Sweden, 1981

VI. J. LUNDGVIST & B. NORDENSTAM: Dicotyledoneae D-F, Swedish Museum of Natural History, Dept. of Phanerogamic Botany, Sweden, 1988

VII. J. LUNDGVIST: Dicotyledoneae G-J, Swedish Museum of Natural History, Dept. of Phanerogamic Botany, Sweden, 1992

New books received

(edited by R. Brutovská)

G. E. G. RUSSELL, L. WATSON, M. KOEKEMOER, L. SMOOK, N. P. BARKER, H. M. ANDERSON & M. J. DALLWITZ [eds.]: Grasses of Southern Africa.

National Botanical Institute, The National Herbarium, 2 Cussonia Avenue, Brummeria, Pretoria, 0001, RSA, 1991, ISBN 0-620-14846-2

This manual for grass identification is the long-awaited successor to L. K. A. CHIPPINDALL'S "A guide to the identification of grasses in South Africa". In southern Africa extensive field study of grasses in recent years has resulted in a more complete list of known species, in better records of species distributions and in a better understanding of the relationships of many species.

T. OSADA [ed.]: Illustrated Grasses of Japan.

Heibonsha Ltd. Publishers, 5 Sanbancho, Chiyodaku, Tokyo 102, 1989, ISBN not given

This book is intended to illustrate the Japanese grasses excluding bamboos, with descriptions both in Japanese and English. The species and infraspecific taxa dealt with amount approximately to 330 in number, including not only native Japanese grasses but also many naturalized ones. The areas covered in this study include Hokkaido, Honshu, Shikoku and Kyushu in Japan, excepting Boniu, Amami and Ryukyu Islands.

R. J. HNATIUK [ed.]: Census of Australian Vascular Plants. (Australian Flora and Fauna Series. Number 11.)

AGPS Press, Australian Government Publishing Service, Canberra 1990, ISBN 0-644-11606-4

The AF&FS comprises occasional publications designed to make available as widely as possible the results of biogeographical activities and projects undertaken by, or on behalf of, the Bureau of Flora and Fauna.

The vascular plants of Australia in this book include all the seed-bearing plants, the ferns and fern allies. For each taxon, the family, genus, species and intraspecific taxa (if present) and the author(s) are listed along with an indication of the distribution in Australia.

New books received

(edited by R. Brutovská)

P. STOUTJESDIJK & J. J. BARKMAN [eds.]: Microclimate, Vegetation and Fauna.

OPULUS Press AB, Box 127, 741 23 Knivsta, Sweden, 1992, ISBN 971-622-2-1

This book is an extended and updated version of the Dutch text "Mikroklimaat, Vegetatie en Fauna". The aim of the book is to consider microclimate from an ecological point of view. The authors stressed the great physical diversity of natural and semi-natural habitats, a diversity which is created by biological forces and at the same time is a condition which maintains biological diversity.

The book is written for ecologically interested vegetation scientists, plant and animal ecologists, biogeographers, foresters and agriculturists. Biologically interested climatologists, geographers, environmental scientists, landscape planners and amateur naturalists with some physical background may find something useful in it as well.

M. THULIN [ed.]: Flora of Somalia, Volume One

Royal Botanic Garden, Kew, Richmond, Surrey TW9 3AB, United Kingdom, 1993, ISBN 0-947643-55-9

The aim of the book is to cover all vascular plants known to occur in Somalia. This first volume covers 72 families and a total of 1092 species of which 136 have been described as new as part of the Flora of Somalia project.

The Somali flora is very rich in comparison with other arid areas in Africa. Several hundred species are found nowhere else in the World and constitute a unique genetic resource, in many cases of great potential value for arid countries in general. Of particular scientific interest are the relict occurrences of many apparently ancient arid elements.

The population of Somalia is largely nomadic, and people's dependence on a large number of plant species for various aspects of life is very obvious. Practically every herd, shrub or tree species in the country is used in one way or another, for grazing, food, medicine, gum, fibre, etc.

P. F. STEVENS [ed.]: The Development of Biological Systematics.

Columbia University Press, New York, 1994, ISBN 0-231-06440-3

The Development of Biological Systematics discusses the formative years of the so-called natural system of classification in the eighteenth and nineteenth centuries, focusing particularly on the theory and practice of Antoine-Laurent de Jussieu, the founder of the natural system in botany and a major influence on the young Georges Cuvier.

Stevens shows how Jussieu's systematic theory and practice are related to his general view of the living world, that it was a gapless continuum of form. The author demonstrates how this system came to be treated as convention, though it was not linked to clearly articulated theory.

E. S. EDDEES & A. NEWTON [eds.]: Brambles of the British Isles.

The Ray Society, Natural History Museum, Cromwell Rd., London SW7 5BD, 1988, ISBN 0-903874-20-2

This book presents a systematic account of over 300 validly named *Rubus* species and microspecies which form the currently accepted list for the British Isles.

Introductory chapters on the history of British and Irish botany, and on aspects of bramble geography are provided. A classification structure and keys for identification preface full descriptions for each species, together with synonymy, citation of types, ecological and geographical data. Short vignettes of the distinctive features of each species are included. Dot maps reveal the known distribution in the British Isles of most microspecies on a 10 km basis, photographs illustrating the features of a representative range of taxa and a glossary and bibliography conclude the work.

L. BRAKO & J. L. ZARUCCHI [eds.]: Catalogue of the Flowering Plants and Gymnosperms of Peru. Monograph in Systematic Botany from the Missouri Botanical Garden, Number 45.

Missouri Botanical Garden Scientific Publications, P.O. Box 299, St. Louis, Missouri 63166-0299, 1993, Price: \$ 60, ISBN 0-915279-19-3

The catalogue provides an annotated listing of the 17 143 species of flowering plants and gymnosperms in 2 458 genera and 224 families known to occur in Peru. The catalogue accounts for all plants reported in the published volumes of the Flora of Peru, as well as specimen-based records gathered from the collections of the Missouri Botanical Garden, the Field Museum of Natural History in Chicago, the Universidad Nacional Mayor de San Marcos, and other herbaria as noted. Nearly 2 800 literature references were consulted and are cited in this work.

Plant families are presented alphabetically first within the gymnosperms then within the angiosperms. This publication is part of an effort by the Missouri Botanical Garden to establish and maintain an on-line continually improving database of information on the plants of Peru.

L. BRAKO & J. L. ZARUCCHI [eds.]: Catalogue of the Flowering Plants and Gymnosperms of Peru. (Monograph in Systematic Botany from the Missouri Botanical Garden, Number 45.)

Missouri Botanical Garden Scientific Publications, P.O. Box 299, St. Louis, Missouri 63166-0299, 1993, Price: US\$ 60, ISBN 0-915279-19-3

The catalogue provides an annotated listing of the 17 143 species of flowering plants and gymnosperms in 2 458 genera and 224 families known to occur in Peru. The catalogue accounts for all plants reported in the published volumes of the Flora of Peru, as well as specimen-based records gathered from the collections of the Missouri Botanical Garden, the Field Museum of Natural History in Chicago, the Universidad Nacional Mayor de San Marcos, and other herbaria as noted. Nearly 2 800 literature references were consulted and are cited in this work.

Plant families are presented alphabetically first within the gymnosperms then within the angiosperms. This publication is part of an effort by the Missouri Botanical Garden to establish and maintain an on-line continually improving database of information on the plants of Peru.

M. VIDA KOVIC [ed.]: Conifers: Morphology and variation.

CAB International, Wallingford, Oxon OX10 8DE, UK, 1992, Price: \$123.50, ISBN 0-85198-807-5

This comprehensive work is based on the author's belief that conifers should be considered in terms of their evolution and variation, conditioned by genetics, the natural environment and man's activities that lead to the development of new types, races, cultivars and hybrids. The book covers over 2150 species, lower taxa, cultivars and hybrids, presented alphabetically by genera from *Abies* to *Widdringtonia*. In addition to morphology, anatomical and physiological traits are analysed. Distribution ranges are described for each species, while range maps are provided for over 100 species. Morphological characteristics are illustrated with over 450 drawings and photographs, many of them in colour.

J. P. PERRY, Jr. [ed.]: The Pines of Mexico and Central America.

Timber Press, 10 Market Street, Swavesey, Cambridge CB4 5QG, UK, 1991, ISBN 0-88192-174-2

Mexico has the greatest number of pine species of any country in the world. Occurring between latitudes 12 and 32 north, the pines of Mexico and Central America might be thought to be tropical, but because of the predominantly mountainous topography, the climates range from humid tropical on the narrow coastal plains of the south to cold temperate on the high mountains of the north to boreal on the high snow-capped peaks. The genus *Pinus* includes the most important species of trees that occur in Mexico and Central America, the primary source of wood for construction timbers, for the manufacture of pulp and paper, and for the production of turpentine and other naval stores.

In the book, author brings together information from his own collecting trips, laboratory research, studies of herbarium specimens, and information published by botanists and foresters. All species and varieties are fully described: a particular feature is the very detailed directions to sites in the region where each species and variety may be found. There are distribution maps and more than 200 photographs of trees, leaves, and cones.

M. W. SKINNER & B. M. PAVLIK [eds.]: CNPS Inventory of Rare and Endangered Vascular Plants of California.

California Native Plants Society, 1722 J. Street, Suite 17, Sacramento, CA 95814, 1994, Price: \$22.95, ISBN 0-943460-18-2

This 5th edition presents information on distribution, rarity, endangerment, legal status, habitat, plant growth form, blooming time, and literature sources for over 1 700 species, subspecies and varieties of California's increasingly endangered flora. This book is an indispensable reference for conservationists, biological consultants, planners and resource managers.

A. SEITZ & V. LOESCHCKE [eds.]: Species Conservation: A Population-Biological Approach.

Birkhäuser Verlag AG, Klosterberg 23, CH-4010 Basel, 1991, Price: 118 DM, ISBN 3-7643-2493-7

This book is a concise collection of contributions which focuses on the global decline of animal and plant species. Scientists from the various disciplines of biology mainly explore how environmental alterations affect the structure of populations and interactions between populations. Topics comprise aspects of population genetics, dynamics, demography and evolution, which are carefully summarized and discussed. The given data is based on experimental field and laboratory work on animals and plants as well as theoretical research.

Book review

J. M. SMITH & E. SZATHMÁRY [eds.]: The Major Transition in the Evolution.

W. H. Freeman Spektrum, 20 Beaumont Street, Oxford OX1 2NQ, UK., 1995, ISBN 0-7167-4525-9

This book is about the origin of life, of the genetic code, of cells, of sex, of multicellular organisms, of societies, and of language. Such a book is inevitably speculative because it is an account of series of unique events that happened a long time ago. But these are matters on which we must speculate.

The major transitions in evolution are:

Replicating molecules	→	Populations of molecules in compartments
Independent replicators	→	Chromosomes
RNA as gene and enzyme	→	DNA + protein (genetic code)
Prokaryotes	→	Eukaryotes
Asexual clones	→	Sexual populations
Protist	→	Animals, plants, fungi (cell differentiation)
Solitary individuals	→	Colonies (non-reproductive castes)
Primate societies	→	Human societies (language)

The book is divided into 17 chapters. The first part (1., 2. and 3. chapter) is devoted to question of live origin and chemical evolution. Experimental investigation of Haldane-Oparin idea of primitive soup has shown that wide range of compounds can be produced by very simple means. But difficulties remain, particularly in the formation of ribose and pyrimidines, and in polymerization in aqueous solution. The idea of surface metabolism offers a possible solution to these problems. The need now is for experimental studies of surface metabolism, similar to the earlier studies of the Haldane-Oparine hypothesis.

In the second part (4. and 5. chapter) authors discuss the origin and early evolution of genetic replication, the nature of replication and problem "chicken or egg", which came first, nucleic acids or proteins. They draw a distinction between simple replicators, limited hereditary replicators and indefinite hereditary replicators. Continued evolution requires indefinite hereditary replicators: it seems that such replicators depend on some form of template reproduction. There is an error threshold for accuracy of replication: for a given total quantity of genetic information there is an upper limit on the error, rate of replication. If the error rate rises above this limit, natural selection cannot maintain the information. This leads to what they have called Eigen's paradox. In this part authors discuss possible solution to this paradox.

Third part is devoted to perhaps the most perplexing problem in evolutionary biology, to the origin of translation and the genetic code. Authors discuss changes known to have occurred in the code since its origin. Although these changes are minor, they do shed some light on how the code may have evolved in its very early days. They ask, what can be deduced from the present assignment of codons to amino acids, from the phylogeny of tRNAs, and how did a specific association between particular amino acids and particular codons first come into existence.

In the fourth part authors attend to enquiries of the origin of Protocells, Eukaryotes and sex, and nature of species. Tenth chapter is about intragenomic conflict, conflict between two different genetic elements, e.g. between chromosomal and mitochondrial genes, which are present in the same cell. Next chapter is devoted to symbiosis. Symbiosis is used to include all cases in which two or more different kinds of organism live in close association: thus it extends from parasitism to mutualism. Mutualism has been defined as a relationship from which both partners benefit. In the 12. chapter authors take interest in the development in simple organisms and complex multicellular organisms, whose bodies consist of differential cells of many kinds. The development of multicellular organisms requires three problems to be solved: 1. gene regulation, 2. cell heredity and the dual inheritance system, and 3. spatial patterns. Next three chapter are devoted to these problems. Topic of the last two chapters is the origin of societies and language.

P. KUŠNIRIKOVÁ

K. LINDSEY [ed.]: Plant Tissue Culture Manual. Supplement 5.

Kluwer Academic Publishers Group, P.O.Box 322, 3300 AH Dordrecht, The Netherlands, ISBN 0-7923-3319-5

Plant tissue culture, a research tool for study of different aspects of plant physiology, biochemistry and genetics, developed about a hundred years ago. Since then many advanced techniques were worked out which are applicable to different plant research areas.

The book is divided into eight sections devoted to basic techniques, transformation of crop species, propagation and conservation of germplasm, direct gene transfer and protoplast fusion, reproductive tissues, mutant selection, secondary metabolites and techniques for fundamental studies. Each part comprises an introductory review of the respective topic, an experimental

protocol and practical footnotes. There are protocols for such sophisticated methods like the gene transfer by particle bombardment, RFLP analysis, PCR, *in situ* hybridization to plant metaphase chromosomes, flow-cytometry analysis and sorting of protoplasts, etc. On the other hands, novices can find here practical advices for the establishment of plant tissue culture laboratories.

The manual offers all of the basic as well as up-to-date plant tissue culture experimental methods. It is written in a form which is understandable not only to experienced researchers but even to undergraduate students. Very practical for laboratory usage is the plastic cover and ring-bound format. These make the book an useful laboratory textbook.

In the end, I would like to recommend the book both to the university teachers and researchers in plant tissue culture, genetics and molecular biology.

R. BRUTOVSKA

D. S. INGRAM & A. Hudson [eds.]: Shape and Form in Plants and Fungi (Linnean Society Symposium Series , Number 16).

Academic Press Limited, 24/ 28 Oval Road, London NW1 7DX, 1994, 380 pp., ISBN 0-12-371035-9.

The causes and mechanisms which determine shape and form in living organisms have fascinated scientists for centuries and still we are far from their real understanding. This book includes contributions presented at the Linnean Society Regional Symposium Meeting on Shape and Form in Plants and Fungi held in September 1992 in Edinburgh.

The authors discuss the problem from different points of view and on various model objects. The book is divided into: Part I - Plants (Chapter 1-14) and Part II - Fungi (Chapter 15-20).

Each chapter deals with specific aspect of the shape and form problem, e.g. morphogenesis (in *Acetabularia acetabulum*), summary of branching process in plants, the representation of shape and form by computer , the contribution of cell divisions in meristems, study of chimeras, influence of auxin and cytokinin to plant morphogenesis and organogenesis, the regulation of shape and form by cytosolic calcium, genes controlling flower development (in *Antirrhinum*).

The authors present the up-to-date state of research in this field and put many stimulating questions. The text is easy to read, with many figures and tables in nearly each chapter.

The strength of the book lies in its diversity of approach and it seems to be very valuable for plant scientists, ecologists, as well as evolutionary biologists at all levels.

Z. JASENČÁKOVA

R. B. PRIMACK: Essentials of Conservation Biology

Sinauer Associates, Inc. Publishers Sunderland, Massachusetts 01375, USA, 1993, ISBN 0-87893-722-6

Conservation biology has emerged during the last ten years as a major new synthetic discipline addressing the alarming loss of biological diversity throughout the world.

There has been no suitable textbook that covers the breadth of subjects included in modern conservation biology. It was invited "Finally, an introductory textbook!" by an reviewer in *Conservation Biology* journal (Volume 7, No. 4, 1993). Finally, Richard Primack has written an introductory textbook that fills a real need in introductory courses in conservation biology that have emerged in recent years.

The book consists four parts and 22 chapters. Appendix with selected environmental organisations and sources of informations and activities. Bibliography and Index are added in the end of the book. Very illustrative figures and black.and-white photos, summaries, suggested readings ended each of the chapters.

Part I includes three chapters dealing with major issues that define the discipline tasks of the conservation biology "What is conservation biology?", "What is biological diversity?" and "Where is biological diversity found?".

Part II is called titled "Threats to Biological Diversity". It deals with loss of biological diversity, vulnerability to extinction, habitat destruction, fragmentation and degradation, exotic species introductions, disease and overexploitation.

Part II "The Value of Biological Diversity" explains direct and indirect economic values of diversity and ethical value of biological diversity.

Part IV contains two chapters dealing with conservation at the population level: problems of small populations and population biology of endangered species.

Part V. Six chapters on practical applications could be considered as a core of the book. They deals with establishing, designing and managing protected areas, activities outside protected areas (working with people and restoring the environment), ex situ conservation strategies and establishing new populations.

Last part (VI) "Conservation and Human Societies" is related to society activities to preserved biological diversity. Local and national conservation legislation, international agreements, international funding and agenda for the future.

This book was writing by the author to provide a modern, up-to-date textbook of the basics of conservation biology for use by university undergraduates, beginning graduate students, and others wanting to know more about the subject. The text is easy to read and students, as the reviewer reported, have so far given the book very high marks. Essentials in conservation biology is really excellent introductory textbook.

P. ELIÁŠ

L. J. SOLTZBERG: The Dynamic Environment

University Science Books, 55D Gate Five Road Sausalito, CA 94965, USA, 1996, ISBN 0-935702-37-7

The publication represents a demonstration handbook of environmental software of the society "Consider a Spherical Cow". The publication comprises 208 pages of text and 2 demo floppy disks 3.5" for PC486 which can be installed under Windows ver. 3.1. or higher. It requires 8 MB RAM and 5 MB of HD. It can be installed also in the environment of MACINTOSH.

The handbook provides information on the program "Dynamic Environment". STELLA II is a program system suitable for creation of interactive models. The reader gets acquainted with the system STELLA II, which allows the modelling of ecological systems.

Computer models STELLA II work with models without the necessity of deeper knowledge of the calculus. They allow studying of dynamic behaviour of environmental systems and realizing of experiments under different conditions.

After a short description of dynamic systems the author pays attention to the models STELLA II, which are divided into seven problem groups. The first one is devoted to the problems of immissions. Further groups are related to thermodynamic problems and energy transfer, problems of biogeochemistry and climatology. The block of problems is closed by models of population survival. Appendix in the end deals with dynamism of behaviour of environmental systems.

For information, particular model ecosystems are presented, e.g. water regime, concentration of SO₂, fly-ash fall problems with concrete models of aluminium in Himalyas and further interesting examples. The results of particular models are represented on graphic output.

Because of active creative work with ecological models it is necessary to have the complete software of the system STELLA II. It refers to the popular book of John Hart, which is not cited in the publication. Information on the software presented are available in High Performance System Inc., 45 Lyne Road, Suite 300, Hanover, NH 03755, tel.: (603)643-9636, fax: (603)643-9502, e-mail: support@hps-inc.com.

R. HONČARIV

G. K. MEFFE & C. R. CARROLL: Principles of Conservation Biology

Sinauer Associates, Inc. Publishers Sunderland, Massachusetts 01375, USA, 1994, ISBN 0-87893-519-3

The book consists of four chapters which are further divided to subchapters and essays. In the first chapter philosophic, ethic and biological questions arising in the solution of problems of conservation biology are discussed. The questions of species and biodiversity protection are

discussed. The second chapter deals with the protection from the point of view of genetics and population dynamism in nature environment. The third chapter is aimed at the problems of ecology of community and projects of conservation in nature reserves. Fourth chapter deals with the problems of management and its suitable applications, with prognoses, possible impact of human activities on environment and proposes solutions for future.

The book belongs to basic workpieces in conservation biology. It contains many illustrations (photographs, graphs, schemes, tables), and wide list of literature, which make it not only an excellent scientific publication from the point of view of its contents, but an interesting and attractive publication as well. I can recommend the book to research workers, teachers, students and workers in the field of environment formation and protection.

S. MOCHNACKÝ

R. GALUNDER, E. PATZKE & U. NEUMANN: Flora des Obergischen Kreiss

Verlag Gronenberg, 1990, ISBN 3-88265-156-3

The publication fills the gap in systematic research of Oberberg region in Germany. It is a result of intensive mapping and ecological research in the course of 7 years. On the basis of extant floristic literature (more than 100 references are given) and herbarium collection of A. SCHUMACHER the list of 963 species of higher plants is given - it comprises indigenous, alien, naturalized species and neophytes (including frequently planted trees).

Introductory chapters characterize the state and the need of flora and fauna protection in the territory studied. Brief geological, pedological and climatic characteristics of the region are given, phytogeographical and phytocenological conditions of the region are described. A separate chapter gives the reasons for phenological completion of species diagnosis besides conventional morphology.

The main part of the book is represented by systematic survey of pteridophytes and spermatophytes illustrated by about 80 high quality photos (8 of them are wholepage ones). For particular species data on the abundance of the occurrence, locality description, literature data, actual data on the locality, and, as the case may be, endangerment degree in Red List are present. For each of the plants a distribution map is given in appendix, which shows, for example, that from the overall number of recorded species 97 were not confirmed in recent mapping.

The aim of this book is to contribute to better knowledge of the flora of Oberberg region because of active protection of its nature. It is realised in such form, which besides its scientific value attracts wider public.

K. REPČÁKOVÁ

P. Skelton (ed.): Evolution. A Biological and Paleontological Approach.

Addison-Wesley Publishing Company in association with the Open University. Wokingham, England, 1993, ISBN 0-201-54423-7

This book was written by a team of teachers and scientists (11 authors) from the Open University, chaired by Peter Skelton, for the Open University's third level Science Course S 365 Evolution. This book is dedicated to Catherine Baker, a member of the Course Team who died in the final stages of production.

"Evolution" is designated as interdisciplinary introduction to evolution concentrates upon the principles of evolutionary science. The text is structured into four parts dealing with evolution within species, or microevolution (Part I), evolution of species (Part II), evolution beyond the species level, or macroevolution (Part III), and two case studies (Part IV).

Part I called *Microevolution* consists eight chapters, including brief introduction to evolution, discusses adaptation in organisms (Chapter 2), the sources of variation between individuals (Chapter 3: Heredity and variation), role of natural selection in fashioning adaptation from such variation (Chapter 4) and patterns of reproduction (Chapter 5). Chapter 6 (The Focus of selection) discusses the problem "on what does selection act?". Next chapters (7, 8) deal with sexual selection, mating systems and evolutionary ecology.

Part II (What is a species?) concentrates on species, speciation and extinction, and investigates the fossil records of evolution in species (microevolution).

Part III called *Macroevolution* consists five chapters (Evolutionary relationships and history, Fossilization and the record of past life, Geography and macroevolution, The evolution of form and Phylogenetic patterns). The chapters deal with patterns of change in form and diversity within whole groups of species.

Part IV, *Case studies*, presents studies of particular episodes in evolutionary history, illustrating many of the principles discussed earlier. Chapter 16 (Origin) discusses origins and early evolution of life. Chapter 17 (Human factors in evolution) explores the influence of human on the evolution of other species as well as ourselves.

The book is comprehensive and modern introduction to evolutionary science, suitable for undergraduates with a basic grounding in biology and/or paleontology. Written clearly and accessibly with a student-centred approach, it provides an excellent undergraduate introductory course on Evolution.

It emphasizes the basic information, intellectual and data-handling skills involved in generating and testing evolutionary hypotheses. Objectives are listed for each chapter, and tested by self-assessment (SAQs) answered at the back. Those, together with a glossary, enable the book to be used either as a classroom text or as a self-tutorial.

P. ELIÁŠ