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# **Frontiers of Biogeography**

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# books noted with interest

# Urban Ecosystems: Understanding the Human Environment

Robert A. Francis & Michael A. Chadwick 2013, Earthscan, 220 pp.

£85.00 (Hardback), £29.99 (Paperback) ISBN: 9780415697958 / 9780415698030

#### http://www.routledge.com

Less than half the terrestrial surface area of the planet remains in a natural or semi-natural state, and urban areas are one of the fastest-growing land-cover classes. Over recent years a growing number of ecologists and environmental scientists have begun to explore the composition and dynamics of the novel ecosystems forming on our doorsteps, and it is time more biogeographers took advantage too. This primer would make an ideal course text for postgraduate or upper-level undergraduate students, and introduces all the key concepts and research questions currently driving the field. That urban biogeography is absent indicates a sizeable gap in the literature!

### The Human Impact on the Natural Environment: Past, Present and Future

Andrew S. Goudie

2013, 7th edition, Wiley-Blackwell, 592 pp. £90.00 (Hardback), £34.95 (Paperback)

ISBN: 9781118576571 / 9781118576588

#### http://wiley.com

Since 1981 successive issues of this standard text have incorporated ever more information and assumed increased importance as we career towards the Anthropocene. There are detailed reviews of the history of our species and its impacts on the global biota, as well as the soil, water and climate. Befitting of a subject of such topicality, a substantial proportion of the text is devoted to the future, particularly the projected impacts of ongoing climate change. As a resource for teachers, students or researchers in need of an assessment of human interactions with the planet, this is unbeatable; some would say essential.

#### **Data Analysis in Vegetation Ecology**

Otto Wildi

2013, 2nd edition, Wiley–Blackwell, 330 pp. £75.00 (Hardback), £39.95 (Paperback) ISBN: 9781118384046 / 9781118384039

#### http://wiley.com

Over the last few years there has been a spate of books on vegetation analysis, so what can this new edition add? Its greatest strength is the conversion to the statistical language R, with worked examples that readers can follow for themselves using a dedicated package. Importantly it also covers use of data from both major traditions, plant ecology and phytosociology, whereas many rival texts are aligned with one or other. Researchers handling multivariate data have many choices of approach; the text proceeds through each in a balanced fashion, making it a suitable resource for self-driven learning by experienced practitioners.

## Ecological Systems: Selected Entries from the Encyclopedia of Sustainability Science and Technology

Rik Leemans (editor) 2013, Springer, 309 pp. £135.00 (Hardback) ISBN 9781461457541

http://springer.com

If you are looking for a definitive guide to the dominant ideas and terminology in ecology, written by acknowledged authorities, aimed at the academic reader and thoroughly backed with key literature sources (up to 2011), then this is certainly it. On one level it's a bargain – the full encyclopedia from which these short reviews are excerpted costs £5,400 in hard copy and spans over 12,000 pages. On the other hand there are student textbooks that provide similar conceptual breadth for less, albeit with reduced depth. It is certainly not comprehensive either: dispersal, macroecology, ecoregions and biogeography don't even make the index.

# Southern Hemisphere Palaeobiogeography of Triassic–Jurassic Marine Bivalves

Susana E. Damborenea, Javier Echevarría & Sonia Ros-Franch 2013, Springer, 139 pp.

£44.99 (Paperback)
ISBN: 978940075982
http://springer.com

Having read the rather specific title, you probably already know whether this is the book for you. In justifying such a precise focus, the authors point out that bivalves have an excellent fossil record, the southern hemisphere receives disproportionately less attention, and the period is critical for understanding major alterations in the distribution of our planet's land masses, hence also its oceans and their currents, and the climate as a whole. It was a time of rapid diversification which generated the basic biogeographical regions of today. Its implications therefore go far beyond the narrow scope that the cover suggests.

# The Howard and Moore Complete Checklist of the Birds of the World Vol. 1: Non-passerines

E.C. Dickinson & J.V. Remsen, Jr. (editors) 2013, 4th edition, Aves Press, 576 pp. £60.00 (Hardback + CD-ROM) ISBN 9780956861108

#### http://www.avespress.com

Originally intended as a manual for birders, the purview of this text has increased over subsequent editions, becoming of ever broader academic appeal. As a definitive taxonomic guide, collating information on over 4000 non-passerine species and their distribution, this will be an indispensible reference to anyone working on bird diversity. The CD-ROM of appendices includes a gazetteer. The second of the two volumes, covering the more than 5000 passerine species, will appear later this year and can be pre-ordered already. Future updates are promised. Few taxonomic groups have such a wealth of data available, and at such an affordable price.

#### **History of Life**

Richard Cowen

2013, 5<sup>th</sup> edition, Wiley–Blackwell, 302 pp. £75.00 (Hardback), £39.95 (Paperback) ISBN: 9780470671733 / 9780470671726

#### http://www.wiley.com

Only a brave author would aim to tackle the development of life on earth, from beginning to the present, in around 300 pages, whilst keeping it both accessible and up-to-date. This edition follows an intuitive progression that could easily be broken down into a lecture series, while the text is readable and peppered with full-colour illustrations. A tendency to emphasise vertebrates is probably a necessary compromise to better engage with an intended audience of undergraduates. Though biogeographical patterns take a backseat to the grand narrative of descent, as an entry-level textbook this is hard to surpass.

#### Atlas of Benthic Foraminifera

Ann Holbourn, Andrew S. Henderson & Norman Macleod

2013, Wiley-Blackwell, 654 pp.

£149.95 (Hardback) ISBN: 9781118389805

#### http://wiley.com

Connoisseurs know that the big questions in palaeobiology don't involve dinosaurs but foraminifera. These are the most ancient deep-sea organisms, with a cosmopolitan distribution and excellent fossil record. Their powers of dispersal and rapid recolonization of vacant habitats, in contrast to most benthic organisms, ensure that their distribution is largely controlled by environmental parameters (including a latitudinal diversity gradient). Most of the 60,000 recognized species are benthic and their taxonomy is notoriously complicated. This covers 300 key species in detail, with notes on their biogeography, bathymetry and chronostratigraphy, and is of exclusive interest to researchers in palaeobathymetry, palaeooceanography and palaeoclimatology.

#### Australian Rainforest Fruits: A Field Guide

Wendy Cooper & William T. Cooper 2013, CSIRO Publishing, 273 pp. AU\$59.95 (Paperback)

ISBN: 9780643107847

http://www.publish.csiro.au

In 2004 the authors published one of the most desirable books in the botanical literature, a comprehensive guide to the fruits of 2,436 forest species with stunning illustrations. It is also prohibitively expensive and too large for the field. This abbreviated, portable version takes 504 species but the same exquisite presentation, including taxonomic characters and distribution maps. Purists may dislike its organization by fruit colour, and the lack of dichotomous keys, but for the sake of efficiency in the field it is a sensible compromise, and the complete checklist aids in identifying additional species. Every tropical region needs a book like this.

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