Journal of the Marine Biological Association of the United Kingdom, 2013, 93(6), 1713–1716.
doi:10.1017/S0025315413000179

BOOK NOTICES

Belgrano, A. and Fowler, C.W. (eds). *Ecosystem-based management for marine fisheries. An evolving perspective*. xvii, 384 pp. Cambridge: Cambridge University Press, 2011. Price £70.00 (US $115.00).

Showing how big-picture patterns can help overcome the failures of conventional management, this book is ideal for students, researchers, and professionals involved with marine fisheries. It explores not only the current practice of the ecosystem approach to fisheries management, but also its critical importance to even larger perspectives. The first section gives an overview of how more and more of the complexity of real-world systems is being recognized and involved in the management of fisheries around the world. The second section then demonstrates how important aspects of real-world systems, involving population dynamics, evolution, and behaviour, remain to be taken into account completely. This section also shows how we must change the way we think about our involvement in, and the complexity of, marine ecosystems. The final chapters consider how, with the use of carefully chosen macroecological patterns, we can take important steps towards more holistic management of marine fisheries.

Bianchi, T.S. and Canuel, E.A. *Chemical biomarkers in aquatic ecosystems*. 396 pp. Princeton, NJ: Princeton University Press, 2011. Price US$95.00.

This textbook provides a unique and thorough look at the application of chemical biomarkers to aquatic ecosystems. Defining a chemical biomarker as a compound that can be linked to particular sources of organic matter identified in the sediment record, the book indicates that the application of these biomarkers for an understanding of aquatic ecosystems consists of a biogeochemical approach that has been quite successful but underused. This book offers a wide-ranging guide to the broad diversity of these chemical biomarkers, is the first to be structured around the compounds themselves, and examines them in a connected and comprehensive way. This timely book is appropriate for advanced undergraduate and graduate students seeking training in this area; researchers in biochemistry, organic geochemistry, and biogeochemistry; researchers working on aspects of organic cycling in aquatic ecosystems; and paleoceanographers, petroleum geologists, and ecologists.

Boykoff, M.T. *Who speaks for the climate? Making sense of media reporting on climate change*. xii, 228 pp. Cambridge: Cambridge University Press, 2011. Price £50.00 (US$85.00) (Hardback); £17.99 (US$29.99) (Paperback).

A dynamic mix of influences shapes what becomes climate 'news' or 'information'. From internal workings of mass media such as journalistic norms, to external political, economic, cultural and social factors, this book helps students, academic researchers and interested members of the public explore how the media portrays influence. Providing a bridge between academic considerations and real-world developments, this book makes sense of media reporting on climate change as it explores *Who Speaks for the Climate* and what effects this may have on the spectrum of possible responses to modern climate challenges.

Castro, P., Davie, P., Ng, P. and de Forges, B.R. (eds). *Studies on Brachyura: a homage to Daniele Guinot*. ix, 366 pp. Leiden: Brill, 2010. (Crustaceana Monographs, vol. 11). Price €142 (US$197.00).

This volume is in honour of Daniele Guinot (Museum National d'Histoire Naturelle, Paris, France) who has helped reawaken interest on the systematics of brachyuran decapods crustaceans, the true crabs. Furthermore, she has significantly helped to redefine the study of the complete evolutionary process in crabs. A total of 35 of her colleagues have contributed to this volume, submitting papers on those aspects of the Brachyura to which Daniele, herself, has significantly contributed—taxonomy, evolution, morphology, palaeontology and general biology of crabs.

Culik, B.M. *Odontocetes. The toothed whales*. 311 pp. Bonn, Germany: UNEP/CMS/ASCOBANS, 2011. (CMS Technical Series No. 24) Price £37.50 (US$50.00).

For 86 per cent of all toothed whale species, entanglement in gill-nets, traps, weirs, purse seines, long-lines and trawls is resulting in an unsustainably high death toll. This is among the findings of a report published by the Convention on the Conservation of Migratory Species of Wild Animals under the UN Environment Programme (UNEP/CMS). The report is an encyclopedia on the 72 species of toothed whales and represents the most recent scientific findings on the distribution, migration, behaviour and threats to this suborder of the cetaceans, which includes sperm whales, beaked whales, porpoises and dolphins which have teeth rather than the baleen of other whales. This reference book is intended for marine biologists, students and conservationists.

Doughty, R.W. and Carmichael, V. *The albatross and the fish. Linked lives in the open seas*. xxiv, 302 pp. Austin, TX: University of Texas Press, 2011. Price £19.99.

The albatross family is currently the most threatened bird group in the world. In this extensively researched book, an alarm is sounded over the potentially catastrophic extinction process that has gone largely unremarked by governments and fishing interests around the globe. The authors establish that the albatross's fate is linked to the fate of two of the highest-value table fish, bluefin tuna and Patagonian toothfish, which are threatened by unregulated commercial harvesting. The authors tell us that commercial fishing techniques are annually killing tens of thousands of albatrosses and the breeding biology of albatrosses makes them unable to replenish their numbers at the rate they are being depleted. The albatross's fate is set in the larger context of threats facing the ocean commons, ranging from industrial overfishing to our habit of dumping chemicals, solid waste, and plastic rubbish into the open seas.

Fish, J.D. and Fish, S. *A student's guide to the seashore*. 3rd edition. xii, 527 pp. Cambridge: Cambridge University Press, 2011. Price £35.00 (US$60.00).

This concise and beautifully illustrated guide allows students to identify over 650 of the common, widespread animals and seaweeds of the shore. User-friendly dichotomous keys are supported by details of diagnostic features and biology of each species. Now enhanced with 32 pages of colour, this much-acclaimed guide is invaluable to students of marine biology at any level. Questions such as: 'How does the species reproduce? What is its life cycle?

How does it feed?' are answered in the notes accompanying each species to give an insight into the diversity and complexity of life on the shore. The test is supported by an extensive glossary of scientific terms, and a comprehensive bibliography is included to aid further study.

Gattuso, J.-P. and Hansson, L. (eds). *Ocean acidification*. xix, 326 pp. Oxford: Oxford University Press, 2011. Price £75.00 (Hardback); £37.50 (Paperback).

The consequences of the process known as 'ocean acidification' are raising concerns for the biological, ecological, and biogeochemical health of the world's oceans, as well as for the potential societal implications. This research level text is the first to synthesize the very latest understanding of the consequences of ocean acidification, with the intention of informing both future research agendas and marine management policy. A prestigious list of authors has been assembled, among them the coordinators of major national and international projects on ocean acidification. *Ocean Acidification* is suitable for graduate level students as well as professional researchers in oceanography and marine biology. It will also be of relevance and use to a more general audience of marine scientists and managers interested in the effects and potential impacts of ocean acidification.

Hester, R.E. and Harrison, R.M. (eds). *Marine pollution and human health*. xiv, 168 pp. London: Royal Society of Chemistry, 2011. (Issues in Environmental Science and Technology, vol. 33). Price £65.00.

In this book, a group of experts from a range of backgrounds review the key aspects of the marine environment in relation to human health. An initial overview explains the need for integrating a range of disciplines, from physical oceanography and marine biology to molecular biology and epidemiology. This approach endeavours to predict the consequences of environmental change and exploitation of natural resources upon our coastal ecosystems and, ultimately, on society and human health. Subsequent chapters then focus on more specialized topics. Firstly, waterborne pathogens are reviewed in detail and the microbial measures and policy implications important for protecting humans from exposure are described. Next, the consumption of contaminated seafood is considered along with its implications regarding the growth of aquaculture. Priority pollutants, emerging contaminants, and plastics are investigated as are the effects of climate change on pollution. The book concludes by proposing a holistic systems approach such as Integrated Coastal Zone Management.

Hilborn, R. and Hilborn, U. *Overfishing. What everyone needs to know*. xviii, 150 pp. Oxford: Oxford University Press, 2012. Price £10.99.

A balanced explanation of the broad issues associated with overfishing is provided by this book. Guiding readers through the scientific, political, economic, and ethical issues associated with harvesting fish from the ocean, it will provide answers to questions about which fisheries are sustainably managed and which are not. The authors address topics including historical overfishing, high seas fisheries, recreational fisheries, illegal fishing, climate and fisheries, trawling, economic and biological overfishing, and marine protected areas. In order to illustrate the effects of each of these issues, case studies of different species of fish are incorporated.

Hinrichsen, D. *The atlas of coasts and oceans. Ecosystems, threatened resources, marine conservation*. 128 pp. Chicago, IL: University of Chicago Press, 2011. Price £14.00 (US$22.00).

Fully illustrated throughout with global and regional maps—from the Arabian Gulf to the Great Barrier Reef—this atlas shows how urbanization, climate change, offshore oil drilling, shipping routes, global tourism, and maritime conflict have had a profound impact on the world's oceans and coasts. It addresses the ecological, environmental, and economic importance of marine phenomena—such as coral reefs, eroding shorelines, hurricanes, and fish populations—as well as the global challenges we face to manage common waters and their resources.

Holland, G. and Pugh, D. (eds). *Troubled waters. Ocean science and governance*. xiv, 316 pp. Cambridge: Cambridge University Press, 2010. Price £34.99.

This volume has been compiled to commemorate the 50th anniversary of the Intergovernmental Oceanographic Commission of UNESCO, which for half a century has been the UN organization responsible for fostering intergovernmental cooperation on global ocean science. It draws on the experience of 30 international experts to look at how governments use science to establish ocean policies, with chapters ranging from the history of ocean management to current advances in marine science, observation and management applications, and the international agencies that coordinate this work. With a focus on key topical issues such as marine pollution, exploitation and hazards, *Troubled Waters* reflects on past successes and failures in ocean management and emphasizes the need for knowledge and effective government action to direct decisions that will ensure a sustainable future for this precious resource. Illustrated with dramatic, full-colour images, it is essential reading for researchers, students, policy makers and managers of the marine environment, and also provides an attractive and accessible overview for anyone concerned about the future stewardship of our oceans.

Kirchman, D.L. *Processes in microbial ecology*. xiii, 312 pp. Oxford: Oxford University Press, 2012. Price £32.50.

The major processes carried out by viruses, bacteria, fungi, protozoa and other protists—the microbes—in freshwater, marine, and terrestrial ecosystems are discussed in this textbook. It focuses on biogeochemical processes, starting with primary production and the initial fixation of carbon into cellular biomass before exploring how that carbon is degraded in both oxygen-rich and oxygen-deficient environments. These biogeochemical processes are affected by ecological interactions, including competition for limiting nutrients, viral lysis, and predation by various protists in soils and aquatic habitats. Processes occurring at the micron scale are connected to events happening at the global scale, including the carbon cycle and its connection to climate change issues. A final chapter is devoted to symbiosis and other relationships between microbes and larger organisms. The textbook is primarily aimed at advanced undergraduates and graduate students taking courses in microbial ecology and environmental biology. It will also serve as a resource for researchers in related fields.

Kreiser, L., Sirisom, J., Ashiabor, H. and Milne, J.E. (eds). *Environmental taxation and climate change. Achieving environmental sustainability through fiscal policy*. xviii, 236 pp. Cheltenham: Edward Elgar, 2011. (Critical Issues in Environmental Taxation, vol. 10). Price £65.00.

Written by distinguished environmental taxation scholars from around the world, this timely volume covers a range of hotly debated subjects including carbon related taxation on OECD countries, implications of environmental tax reforms, innovative environmental taxation and behavioural strategies, as well as many other relevant topics. This book will appeal to

policymakers in government as well as students, researchers and academics in environmental law and other academic disciplines.

Link, J.S. *Ecosystem-based fisheries management. Confronting tradeoffs*. xiv, 207 pp. Cambridge: Cambridge University Press, 2010. Price £45.00 (US$72.00).

Responsible fisheries management is of increasing interest to the scientific community, resource managers, policy makers, stakeholders, and the general public. Focusing solely on managing one species of fish stock at a time has become less of a viable option for many reasons. Incorporating more holistic considerations into fisheries management by addressing the tradeoffs among the range of issues involved, such as ecological principles, legal mandates, and the interests of stakeholders, will hopefully challenge and shift the perception that ecosystem-based fisheries management (EBFM) is unfeasible. Demonstrating that EBFM is, in fact, feasible will have widespread impact, both in US and international waters. Using case studies, examining underlying philosophies, and exploring analytical approaches, this book brings together a range of interdisciplinary topics surrounding EBFM and considers these simultaneously, with the aim of providing tools for successful implementation and of furthering the debate on EBFM, ultimately hoping to foster enhanced living marine resource management.

McCormack, R.B. *A guide to Australia's spiny freshwater crayfish*. viii, 235 pp. Melbourne: CSIRO Publishing, 2012. Price £56.50.

This publication describes Australia's *Euastacus* crayfish, the largest of the ten genera of Australian freshwater crayfish. The full 50 *Euastacus* species found in Australia are covered from the iconic giant Murray lobsters (*Euastacus armatus*), which are recreationally fished, to the exceedingly rare tiny species, like *Euastacus maidae* from the New South Wales–Queensland coastal border region. The Australian Crayfish Project (ACP) was conceived in 2005 to increase knowledge of all Australian crayfish species and to promote the conservation and protection of these crayfish and their fragile habitats. This book provides the most up-to-date information on the species, their identification, biology and distributions that the ACP has collected. Many of these species are in desperate need of protection and conservation management.

Munn, C. *Marine microbiology. Ecology and applications*. 2nd edition. xvii, 364 pp. + plates. New York: Garland Science, Taylor & Francis Group, 2011. Price £44.00.

Marine Microbiology brings together microbial biology and ecology to create an integrated approach that addresses environmental management, human health, and economic concerns. The second edition takes into account many new discoveries in the field including the role of microbes in ocean processes and nutrient cycles, the importance of viruses, the beneficial role of marine microbes in biotechnology, biofuels, metagenomics and synthetic biology, and new research on the impact of climate change and ocean acidification.

Naylor, P. *Great British marine animals*. 3rd edition. 320 pp. Plymouth: Sound Diving Publications, 2011. Price £15.99.

Great British Marine Animals uses high quality underwater photographs to both aid identification of a wide range of common animals, and to give an insight into their lives. It is written for anyone who loves the sea, wildlife or exploring our coast.

Sayer, S. *Seal secrets: Cornwall and the Isles of Scilly*. 80 pp. Penzance: Alison Hodge, 2012. Price £5.00.

Cornwall's most iconic marine mammal, the grey seal is also its most reliable and frequently spotted, despite being one of the rarest seal species in the world. Cornish grey seals are part of a genetically distinct sub-population that is globally significant. *Seal Secrets* provides a glimpse of the hidden and secret world of grey seals around the coasts of Cornwall and the Isles of Scilly, from 'cradle to grave'. It includes real stories about individual wild seals.

Schram, F.R. and von Vaupel Klein, J.C. (eds). *The Crustacea. Complementary to the volumes of the Traite de Zoologie. Treatise on zoology – anatomy, taxonomy, biology*. Vol. 9, Part A. *Eucarida: Euphausiacea, Amphionidacea, and Decapoda (partim)*. 560 pp. Leidens: Koninklijke Brill NV, 2010. Price €210 (US$298.00).

The texts of the famous *Traite de Zoologie* have not only been translated from the French and updated as required, but, with this volume 9 part A, are also expanded to include the systematics of the Decapoda. The chapters herein have thus been conceived anew, especially for this series, and present the current state-of-the-art in decapod taxonomy and biology. The series is now planned to comprise a total of nine volumes, some of which in more than one fascicle, of approximately 400–600 pp. each. This fascicle A of the ninth volume of the *Treatise on Zoology* contains chapters on Order Euphausiacea, Order Amphionidacea, Suborder Dendrobranchiata, Infraorder Caridea, Infraorder Stenopodidea, Infraorder Astacidea p.p.: freshwater crayfish, Infraorder Palinura. All chapters have been carefully composed and edited and the total of primary texts is supplemented by two comprehensive indices, i.e. a taxonomic index and a subject index.

Seminoff, J.A. and Wallace, B.P. (eds). *Sea turtles of the Eastern Pacific. Advances in research and conservation*. xxiii, 376 pp. Tucson, AZ: The University of Arizona Press, 2012. Price US$75.00.

The East Pacific Ocean is home to some of the most dynamic marine ecosystems, and the most unique sea turtles. Marine biodiversity within this massive ocean region abounds in mangrove estuaries, sea grass pastures, coral reefs, the open ocean, and many other habitats, with sea turtles often the most conspicuous species present. The distinctive traits of the Eastern Pacific have resulted in the smallest leatherbacks, a singular morph of the green turtle, dark and steeply domed olive ridleys, and the most cryptic hawksbills on the planet. However, the oceanographic conditions that make this an epicentre of sea turtle activity also promote massive artisanal and industrial fishing efforts that, coupled with illegal harvesting of eggs and turtles, have led to declines of several turtle populations in the region. The essays and stories in this book describe for the first time the history of this exploitation, as well as recent sea turtle conservation initiatives and scientific research in the region. The book considers the biology of the turtles, current ecological management challenges, marine policy related to turtle conservation and stories of conservation success.

Stebbing, T. *A cybernetic view of biological growth. The Maia hypothesis*. xvi, 442 pp. Cambridge: Cambridge University Press, 2011. Price £65.00.

Maia is the story of an idea, and its development into a working hypothesis, that provides a cybernetic interpretation of how growth is controlled. Growth at the lowest level is controlled by regulating the rate of growth. Access to the output of control mechanisms is provided by perturbing the growing organism, and then filtering out the consequences to growth rate. The output of the growth control mechanism is then accessible for

interpretation and modelling. Perturbation experiments have been used to provide interpretations of hormesis, the neutralization of inhibitory load and acquired tolerance to toxic inhibition, and catch-up growth. The account begins with an introduction to cybernetics, covering the regulation of growth and population increase in animals and man, and describes this new approach to access the control of growth processes. This book is suitable for postgraduate students of biological cybernetics and researchers of biological growth, endocrinology, population ecology and toxicology.

Swanson, K. *Microscopic worlds. Bugs of the ocean*. xii, 95 pp. Melbourne: CSIRO Publishing, 2012. Price £40.50.

In this series of three books, the author presents often complex scientific ideas in a style that is lively and easily understood. Together with stunning 3-D images, taken using one of the most modern and powerful scanning electron microscopes available, the books present a unique portrait of the biosphere. Volume 1 showcases the complexity and beauty of microscopic organisms that inhabit the oceans—from surface waters to the sea-floor. A huge variety of small planktonic species make up the 'grass' of the oceans: these not only represent the 'fuel' on which all other marine species depend, they have also had a significant impact on the evolution of the biosphere. This is the starting point for a lively discussion and systematic portrait of ocean biology at the microscopic level. Some of the small organisms living on the sea-floor have adapted to living at extreme depths, an environment characterized by darkness, cold and high pressure. All, however, depend on the activities of plankton living in sunlit waters often many thousands of metres above.

United States. National Research Council, Committee on Nutrient Requirements of Fish and Shrimp. *Nutrient requirements of fish and shrimp*. xvi, 376 pp. Washington, DC: National Academies Press, 2011. Price £99.00.

This report was designed to be a comprehensive summary of extant knowledge on nutrient requirements of fish and shrimp and also to be forward-looking by including information to explain the nutritional science that underpins nutrient requirements. This approach allows the reader to understand better both the strengths and weaknesses of current information, and thus use it appropriately. The reader will also understand the importance of nutrient requirements to the production of efficient, economical, and sustainable feeds for use in aquaculture.

https://doi.org/10.1017/S0025315413000179 Published online by Cambridge University Press