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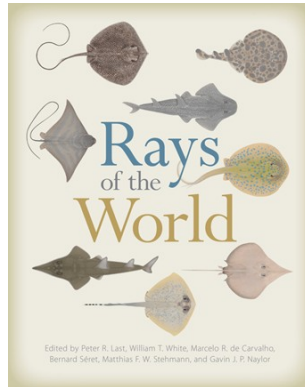


BOOK REVIEW

Noted with interest

Rays of the World

Peter R. Last, William T. White, Marcelo R. de Carvalho, Bernard Séret, Matthias F. W. Stehmann & Gavin J. P. Naylor (editors), 2016, CSIRO Publishing, 800 pp. AU\$200 (Hardback; also available in digital formats) ISBN 9780643109131;



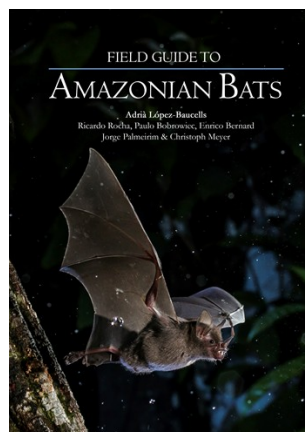
<http://publish.csiro.au>

The first global, pictorial guide to the world's 633 recognised species of rays, an ancient and morphologically-diverse group with members in marine and freshwater habitats around the world. More diverse than their better-known cousins the sharks, their taxonomy has recently been overhauled using molecular data. Most species have limited distributions, and perhaps their predominantly benthic habit predisposes them to greater rates of speciation than in the largely pelagic sharks. Keys to genera are provided, and each species is listed with high-quality illustrations and a distribution map. This fascinating, landmark work should form the foundation for novel biogeographical investigations. Highly recommended.

Field Guide to Amazonian Bats

Adrià López-Baucells, Ricardo Rocha, Paulo Bobrowiec, Enrico Bernard, Jorge Palmeirim & Christoph Meyer, 2016, Editora INPA, 168 pp. Free PDF, ISBN 978-85-211-0158-1;

http://tropicalconservation.net/?page_id=10

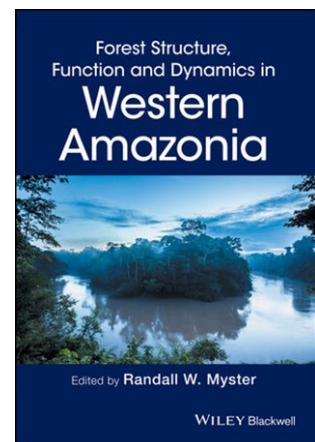


One in ten bat species occur in the neotropics, comprising the most diverse bat assemblage on Earth. Over 200 species are currently recognised, largely made up of New World leaf-nosed bats (Phyllostomidae), while alpha diversity exceeds 100 species in some locations. Studying them is therefore challenging. This guide arose from work at the Biological Dynamics of Forest Fragments Project, and provides a key to both morphological features, with excellent line diagrams and photographs throughout, and echolocation, to aid in acoustic sampling. The authors must be commended for making the product of much careful work freely available, enabling further field studies.

Forest Structure, Function and Dynamics in Western Amazonia

Randall M. Myster (editor), 2017, Wiley-Blackwell, 206 pp. £110 (Hardback) / £99.99 (e-book) ISBN: 978-1-119-09066-3;

<http://eu.wiley.com>



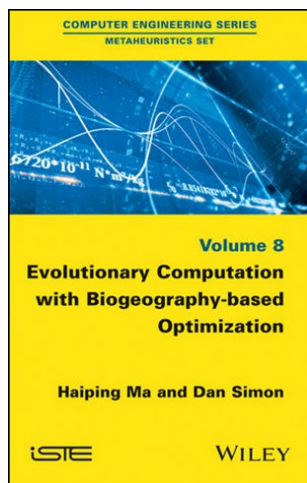
The Amazon rain forest holds a special place in the public imagination, one fully deserved given its diversity and role in regulating regional climates. There is no faulting the stellar list of contributors to this volume, but its eight data chapters, book-ended by an introduction and summary, necessarily cover only a limited set of taxonomically and regionally-focussed issues. Most contributing authors take advantage of the greater breathing space afforded by book chapters, but little beyond geographical propinquity connects the studies they report, and there is a risk of their contents being overlooked, especially given the high price of this volume.

Evolutionary Computation with Biogeography-based Optimization

Haiping Ma & Dan Simon, 2017, ISTE/Wiley, 327 pp. £108 (Hardback) ISBN: 978-1-84821-807-9;

www.iste.co.uk

We are familiar with developments in computing inspiring advances in biogeographical methods; here the traffic has been in the other direction. Evolutionary algorithms provide powerful optimisation tools in computation. They can be extended by incorporating elements of island biogeography, in



particular the ability of elements to disperse between modules. The book describes the mathematics behind the approach and its ability to handle continuous domain and combinatorial problems. The authors are shaky on core biogeographical theory, leaving much scope for further development and refinement. Is it too much to hope that computer scientists might one day come asking biogeographers for advice?

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Edited by Michael N Dawson