



BOOK REVIEW

IGAPÓ (BLACK-WATER FLOODED FORESTS) OF THE AMAZON BASIN.

**Randall W. Myster (ed.). 2018. Springer International Publishing. 311 pp.
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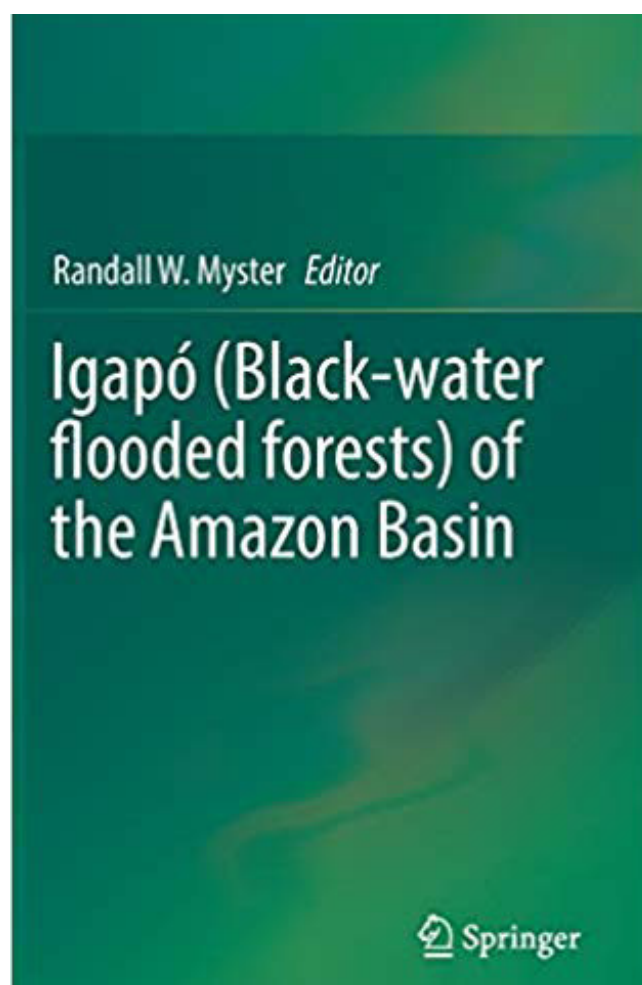
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The mighty Amazon River is fringed by vast areas of igapó forests. These particular floodplain forests are characterized by black intransparent waters and are the home to innumerable endemic species of plants and animals. Much of my own research has been focussed on flooded forests and therefore I am pleased to see a book specifically dedicated to this type of habitat.

Randall W. Myster edited and partly wrote the book "Igapó (Black-water flooded forests) of the Amazon Basin". As claimed by the publisher Springer, it is in fact the first volume exclusively dedicated to igapó forests. Such a book, covering all aspects of the biology and ecology of Amazonian black water forests, has been missing so far. Therefore, this book is timely and highly welcome.

The editor is an expert on igapó forests, as evidenced by his record of publications. He gathered a team of international experts from around the world who review single themes or present their own data. They outline what is known about their specific part of the igapó ecosystem, which research they have done, and where the major gaps in knowledge exist. The list of contributors comprises 60 names from six countries of affiliations (mostly Brazil, but also Australia, Colombia, Ecuador, Peru, USA). To my mind, some major experts as defined by the scientific community and running projects could have included. I had been invited by Myster to contribute and would have loved to write about my own igapó studies, but a lack of time impeded this.

The book is organized into seven parts with 16 chapters: (1) Igapó over space and time, (2) Water and light, (3) Soil and the carbon cycle, (4) Litter, fungi and invertebrates, (5) Vertebrates, (6) Plants, and (7) Human impacts and management. It starts with an Introduction by R.W. Myster and ends with his Conclusions, Synthesis and Future Directions.



The book includes some species lists, e.g. for arachnids, turtles or trees. It contains graphs and tables which give an overview of some selected subjects. Many graphs, and also photographs, are in colour and of good quality. There is no appendix with complete species lists, distributions or



comparisons which would have been nice in a book that reviews the igapó ecosystem.

Some chapters contain a few misspellings, but this is a minor problem linked to the editorial process which can be found in nearly every written piece. It does not affect the scientific value of the book.

Given the scientific level and the focus on specific subjects, I guess that the book was written for scientific professionals and not for the general public who might be interested in Amazonian flooded forests.

After a foreword by Paul Beaver, Myster writes a great short preface about the true life of a scientist, killing every aspect of a romantic view that old travel reports or paintings may have installed in people's minds.

In general, this book provides detailed and valuable information on the ecology of a tropical floodplain forest type – the igapó forests. Biologists and conservationists need to gain a better understanding of this important ecosystem and so data are needed. Reviews are very valuable as they place the cited data into a larger context. However, this book succeeds only partially to this respect.

The weakness is that – instead of a full wide overview of all important ecological features of this ecosystem which is promised by the title – the chapters present a rather aleatory choice of case studies. The contents of the single chapters overarch only a tiny part of what the chapter titles promise. Each of them is interesting and important, but there is a lack of detailed overviews before going into depth of the single case studies.

As an example, Part 2 on water and light made me expect an overview of what we know about these two important parameters as related to igapó forests. However, the chapter consists merely of a case study on mercury in black-waters of the Amazon without even introducing the

most important knowledge we have to date about non polluted water. The same is true for example in Part 5 on vertebrates, where Chapter 11 on turtles relates to the turtles' susceptibility to mercury uptake.

Myster outlines some new concepts but remains mostly at the surface. I expected much from the Chapter dedicated to "30 years past Goulding" on fishes but the high expectations are not met. The chapter is just a summary of selected species and case studies but does not give an overarching update of the knowledge that Michael Goulding delivered 30 years ago and which was the reference until today in terms of fishes related to the forest.

In the last chapter, the conclusions and future directions are interesting but the author mostly cites his own work when so much more has been written on restoration and sustainable management in the past decades.

My general impression is that this is an interesting book which will be highly cited, but many parts are lacking and it is not delivering the continuity one would expect by reading the title. Few selected species were picked and described in autecological analyses. This way, it is not the promised all-embracing new reference book for igapó forest but mostly a sum of case studies. The chapters are reviews of the specific research of a scientist or a group without delivering the overarching knowledge. Basic information is missing, e.g. about new calculations of areas, or complete lists of plant or animal species. As a result it does not represent a new standard work to refer to when citing general characteristics of the igapó forests. However, it is still very worthy for everybody who studies Amazonian floodplain ecosystems.

And now that I hold it in my hands I wish I had had the time to accept R.W. Myster's invitation to contribute a chapter.