



Book Review

Forest dynamics from an environmental history perspective

Metamorfoses florestais: culturas, ecologias e as transformações históricas da Mata Atlântica, D.C. Cabral, A.G. Bustamante. Editora Prismas, Curitiba (2016). 460 pp., ISBN: 978-85-5507-296-3

Forest fragmentation dynamics have been studied using remote sensing and aerial photography taken at the end of the 20th century. However, in the tropics, particularly in the Brazilian Atlantic Forest, forest cover changes have occurred, mainly affected by different land uses, for over a few centuries. A historical approach and methodology may be invaluable tools to improve quantitative and qualitative assessments of forest fragmentation dynamics. For instance, the extinction debt (Tilman et al., 1994) due to deforestation or forest fragmentation could be calculated considering a longer time period. In addition, as pointed out by Bissonette and Storch (2007), time is a relevant dimension that landscape ecology has been overlooking.

The book *Metamorfoses Florestais: Culturas, Ecologias e as Transformações Históricas da Mata Atlântica* (Forest metamorphoses: Cultures, Ecologies and the Historical Transformations of the Atlantic Forest), edited by Diogo C. Cabral and Ana G. Bustamante, considers a long-term view of landscape dynamics experienced by the Brazilian Atlantic Forest. Diogo C. Cabral is a geographer who has been studying the environmental history of the Brazilian Atlantic Forest for more than a decade. Ana G. Bustamante is a journalist, has a PhD in community Psycho-Sociology and Social Ecology, and has been working in multidisciplinary projects on cultural heritage and protected areas. Both book editors come from a Human Sciences perspective, which is not so common but quite helpful in understanding landscape dynamics, in particular, drivers of deforestation and forest fragmentation and their different social actors over the centuries. Usually, landscape dynamics of a tropical forest consider changes in forest cover over time (usually several decades) and which land uses affect more forest loss or gain. Social actors rarely are taking in account these landscape changes. Thus, this book shows forest dynamics over a longer period of time than usual and regards the social aspects of the drivers of deforestation.

The book is divided into five sections: (1) Ecological and conceptual emergencies; (2) Paleoindigenous worlds; (3) Encounters and colonial regimes; (4) Anthropocene; and, (5) Current scenarios and future perspectives. “Ecological and conceptual emergencies” includes one chapter, by Vivian Jeske-Pieruschka & Marie-Pierre Ledru, describing the Brazilian Atlantic Forest at the end of Quaternary period, and another, by Leonardo Castro, on different representations of the Atlantic Forest including province and biome. “Paleoindigenous worlds” reports on how pre-colonial

inhabitants use their territory in the northeast (by Carlos Etchvarne), southeast (by Astolfo G. M. Araújo) and south (by Deisi D. Eloy de Farias and others) of Brazil. “Colonial encounters and regimes” reports on cultural exchanges between Brazilians, Europeans and Africans in the colonial period and their relations with nature in the context of the Atlantic Forest. This section has 5 chapters: (1) one on Pau-Brasil exploration in Bahia, by Marcelo H. Dias; (2) another called “Porcos do Alentejo, malaguetas da Bahia” (“Pork from Alentejo, peppers from Bahia”), by Christian F. Moraes and others; (3) another on socio-ecological transformations of African descendants on the coast of Bahia, by Case Watkins & Robert Voeks; (4) one about gold mining in Minas Gerais and its impacts on water and lumber, by Carolina M. Capanema; and, (5) the last chapter debates how botanists and naturalists influenced the policy of lumber extraction in the end of the 18th century, by Rodrigo O. Pereira. “Anthropocene” shows landscape changes in more recent centuries in the Brazilian Atlantic Forest, in more detail than discussed by the classical book “With Broadax and Firebrand” (“A Ferro e Fogo”) by Warren Dean. “Anthropocene” has seven chapters: (1) one about sugar cane and deforestation in the northeast, by Cristiane G. Barreto & José Augusto Drummond; (2) one on archaeological records of deforestation in the Paraíba Valley in the southeast, by Alex U. G. Peggia; (3) another on socio-ecological transformations in an urban forest in Rio de Janeiro, called “Maciço da Pedra Branca”, by Gabriel P. S. Sales and others; (4) another on the lumber economy in the western São Paulo State and northern Paraná State from 1920 to 1960, by Christian Brannstrom; (5) one about changes in the Araucária forest, by Eunice S. Nodari; (6) another on extractivism and transformation on the southern region of the Brazilian Atlantic Forest, including the use of mate herb (“erva-mate”, *Ilex paraguariensis*), endemic to the southern region of the Atlantic Forest, by Marcos Gerhardt; and, (7) the last on the wood industry and deforestation of Araucária forest in a region of Paraná State, by Miguel M. X. Carvalho. “Current scenarios and future perspectives” brings a view from today to future and has two chapters: (1) one about forest transition in São Paulo, by Juliana S. Farinaci and others; and, (2) another reports the situation of the last ten years of conservationist policies and actions in the Brazilian Atlantic Forest, indicating 10 trends to support predictions, by José Maria C. Da Silva and others.

This book can contribute in understanding Brazilian Atlantic Forest history considering social actors, regional aspects, different time periods, and thus, increasing the complexity of the landscape dynamics debate, which could improve predictions using future scenarios. Restoration projects should include this kind of knowledge to propose forest restoration plans more similar to the original forest, if it is the goal of that plan (Rodrigues, 2013). Researches on forest ecology and conservation biology also needs a social and historical perspective to improve its predictions, and in this regard, this book could be useful.

References

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