METADATA

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Abstract

The book entitled "Structure and dynamics of biocommunities" focuses on the mechanisms governing the organization of biocommunities in space and time, and the important influence of perturbations on their dynamics. Key processes for the organisation of biocommunities are habitat and habitat selection by the species that constitute them, while interspecific relationships (competitive, parasitic, prey-prey) determine the organisation of the biocommunity into food webs. The analysis of the food web can also be carried out by network analysis, where, in addition to the metrics describing the web as a whole, there are metrics describing the importance, centrality, interest of individual nodes (species) of the web. Biocommunities can also be analysed as flow systems when each segment (population) of the system can be described in terms of the energy input to it, its fixation in its biomass and the energy output to other segments of the system. Populations in this perspective are treated as energy transformers. It is this perspective that one of the chapters in the book seeks to analyse. In addition, a significant part of the book focuses on the theory of balanced (classical equilibrium view of nature) and unbalanced biocommunities, with particular emphasis on the mechanisms that organize and ensure the existence of unbalanced communities over time. Furthermore, the concept and characteristics of disturbance are analysed, as well as the response (resilience, rebound) of biocommunities to disturbances. The concept of metapopulation structure is also involved here, which will be analysed in detail. Finally, the phenomenon of primary and secondary succession is discussed and analysed, drawing examples from the field of soil biocommunities.

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