Abstract

The relationship between local abundance and regional distribution is a widespread ecological pattern. It is frequently reported to be positive, however exceptions have been evidenced. But the explanation is not clear at all. There are many of mechanisms explaining this relationship, from those related to statistical issues, those explaining it by metapopulation dynamics, to rates of ecological specialization, which are the most frequently considered. But it is likely that certain mechanisms work together. One of the principal hypotheses is the resource breadth hypothesis, which claims that generalists tend to be more abundant and widespread whereas specialists occur in small range and less abundant. There are two ecological relationships linked to ecological specialization. It is a niche breadth-range size relationship and niche breadth-abundance relationship. While the former is well documented, the information about latter is rather scarce. This thesis sums up existing studies about distribution-abundance relationship with a special focus on importance of ecological specialization.

Key words: geographical distribution, local density, niche breadth, ecological specialization