

Abstract

The positive relationship between environmental heterogeneity and species richness has been taken for granted for many years. However, recent studies have revealed possible alternatives to this positive relationship, such as negative or unimodal relationship. There are many possible explanations for these alternative relationships. Increasing spatial heterogeneity of a biotope of a given size inevitably leads to reduction in the effective area available to the organisms inhabiting it. At the same time, increased environmental heterogeneity can lead to fragmentation and isolation of biotope patches, which can have negative consequences for the species richness of the community. Inadequate methodology may be one of the reasons why these alternative relationships have only been discovered in the recent years. Correct information on the relationship between environmental heterogeneity and species richness is essential for decisions on biodiversity conservation. For this reason, it is necessary to discover such alternative relationships in specific ecosystems, which we aim to protect, and to always take them into account, even if they are less common.