

Abstract

Ecological specialization based on co-existence patterns is new methodology used for niche breadth measurement using co-existing community with occupancy data. It results in generalist-specialist continuum according to value of specialization index. The aim of this thesis was testing index stability at spatial and temporal scale, compare this specialization index with other specialization indices and study changes in specialization with time changes in occupancy. Specialization was quantified using data of breeding birds atlases in the Czech Republic and Europe using two selected indices Theta and Simpson.

Methodology seems to be sensitive to spatial scale. Instability appears at small scale for birds, stability and correlation between indices increase with greater scale. Problems with using point counts corresponds to their unsuitability encompass birds' habitats, especially for water dependent birds. Correlations between different time periods are stronger at greater spatial scale. Specialization based on co-existence patterns correlates with specialization according to experts' opinions. Results from comparing changes in specialization with changes in occupancy suggest, that most of species tend to leave more diverse sites with occupancy decline.