Categorizing Multispecies Distributional Patterns Using Line Transect Data

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摘要

It is common knowledge that some specific species in an ecological community present aggregate distributions, but this does not necessarily imply that the entire community presents an aggregate distribution. Using the conspecific-encounter index derived from the Markov non-independent sampling model, this talk will introduce a legible definition of community-level distributional aggregation as an interspersed or cluster-like distribution of different species. In practical applications, by utilizing the conspecific-encounter index that accounts for the non-independent sampling of consecutive individuals along line transects, the result reveals that tree assemblages in tropical forest ecosystems can present a strong signal of extensive distributional interspersion. By contrast, for the amphibian assemblages, the conspecific-encounter index was found to be consistently high, implying that amphibian communities tend to be highly aggregate in space.