

Convergence and historical effects in harvester ant assemblages of Australia, North America, and South America

Medel, Rodrigo G.

In this paper I examine the extent to which contemporary ecological patterns in 42 harvester ant assemblages of three continents can be explained as a result of present-day environments or from differences in the history of each ant biota. The contribution of each factor to the overall variability of six community characters was evaluated by the ANOVA procedure. The method revealed absence of convergence in three-continent and pairwise-continent analyses in almost every community attribute that was measured. Significant convergence was detected only in the foraging score for the North America-South America comparison. This implies that the foraging mode used by ants for searching seeds is more similar within similar environments in the two continents than between different environments in the same continent. Significant historical effects were much more prevalent than convergence both in three-continent and pairwise-continent comparisons. Abundance at baits, body size, and foraging dis