

On Testing the Competition-Colonization Trade-Off in a Multispecies Assemblage

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abstract: The competition-colonization trade-off hypothesis predicts that species with high competitive ability will have low dispersal ability, and vice versa. We tested this hypothesis in a multispecies assemblage of annual plants. We measured the competitive ability of 12 species in a field experiment, and their dispersal ability in a separate experiment. We found a strong negative correlation between competitive ability and dispersal ability, supporting the competition-colonization trade-off hypothesis. We also found that species with high competitive ability were more likely to be present in the assemblage, and that species with high dispersal ability were more likely to be absent. These results suggest that the competition-colonization trade-off is an important factor in determining the composition of multispecies assemblages.

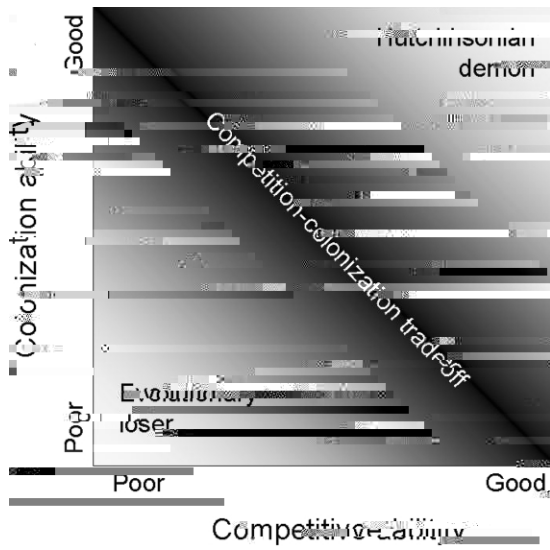


Figure 1. The relationship between colonization and competitive ability. The Hutchinsonian demon is a species with high colonization and low competitive ability. The evolutionary user is a species with low colonization and high competitive ability.

The Hutchinsonian demon is a species with high colonization and low competitive ability. The evolutionary user is a species with low colonization and high competitive ability. The competition-colonization trade-off is a diagonal line that separates the two types of species. The Hutchinsonian demon is located in the top-right quadrant, and the evolutionary user is located in the bottom-left quadrant.

6/ $\{A, B, C\}$ $t P L$

Table 1:

$\{A, B, C\}$	$t P L$	$\{A, B, C\}$	$t P L$
$\{A, B, C\}$	$t P L$	$\{A, B, C\}$	$t P L$

Results

Results

1. *...*

2. *...*

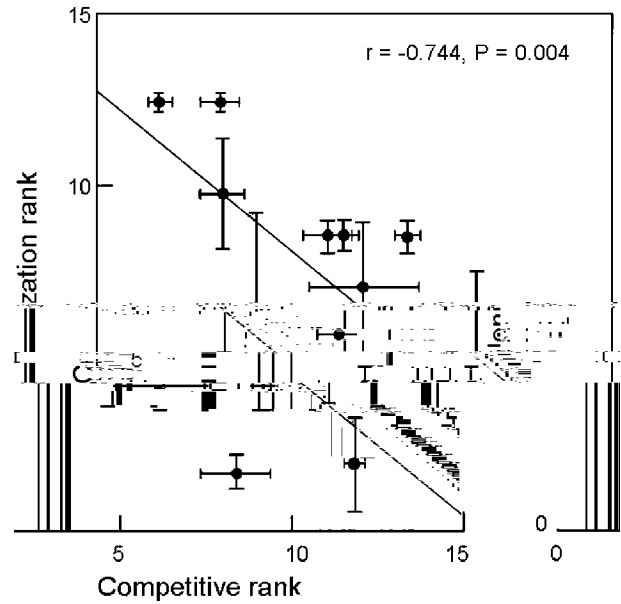


Figure 2: Scatter plot showing the relationship between Competitive rank (x-axis) and Organization rank (y-axis). The correlation coefficient is $r = -0.744$ and the p-value is $P = 0.004$.

