Ecography

Supplementary material

Appendix 1

Table A1. DoE sensitivity analysis of landscape parameters. SSi, first order sensitivity index (variability explained by fixed effect) SSf, second order sensitivity index (variability explained by fixed effect plus interactions). Response variable- change in species equivalents in the seed availability-seed rain transition.

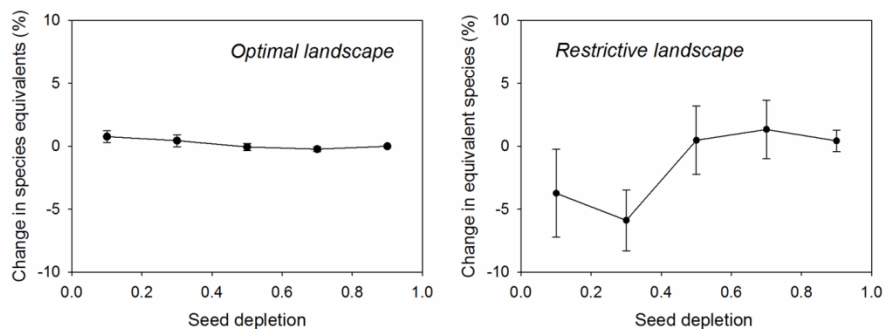| Landscape parameter	Levels	SSi	SSt	Sign
Number of plants	500, 2000	0.14	0.11	+
Scale of clustering	20, No clustering	0.29	0.28	+
Autocorrelation	0, 1	0.33	0.35	-
Evenness	0.5, 0.85	0.00	0.01	+
Plant:Bird ratio	0.01, 0.10	0.23	0.25	+

Fig. A1 Seed depletion effects on changes in effective number of species throughout the seed availability-seed rain transition in (A) an optimal landscape high bird mobility and well-mixed) and (B) a restrictive landscape (fragmented and with low local heterogeneity).
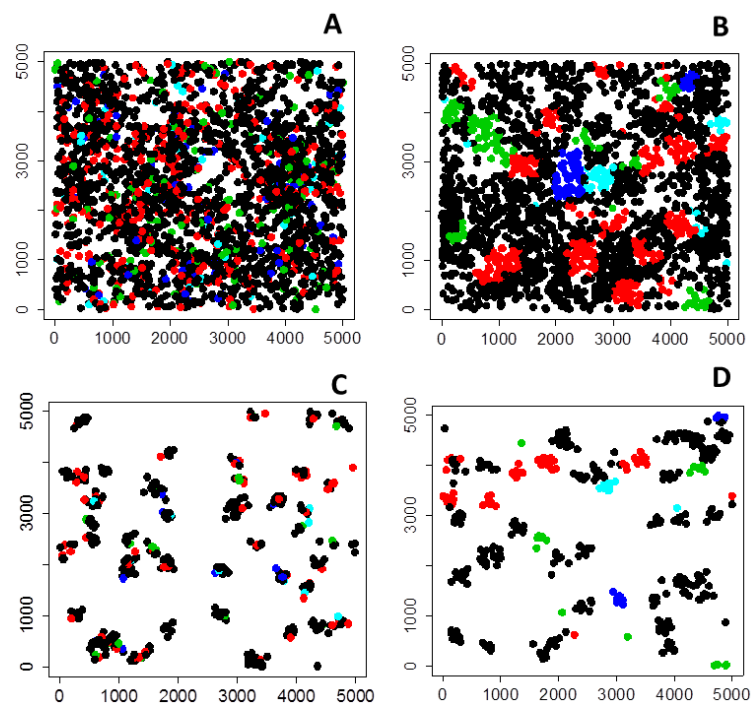
Fig. A2. Examples of simulated landscapes perceived as (A) continuous and heterogeneous (B) continuous and homogeneous (C) fragmented and heterogeneous (D) fragmented and homogeneous.
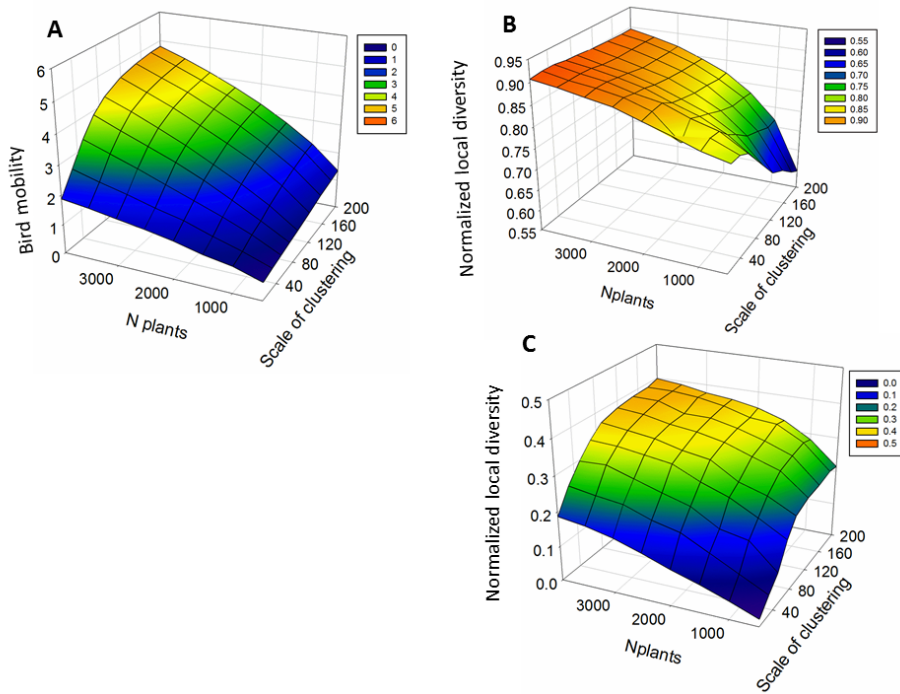
Fig. A3 Plant density and aggregation effects on (A) Bird mobility (bird decision radius/ average distance among clusters of plants) and (B-C) normalized local diversity (neighborhood diversity / landscape diversity) in (B) well-mixed and (C) auto-correlated landscapes. All landscape variables were measured at the scale of bird decision radius 200 m.
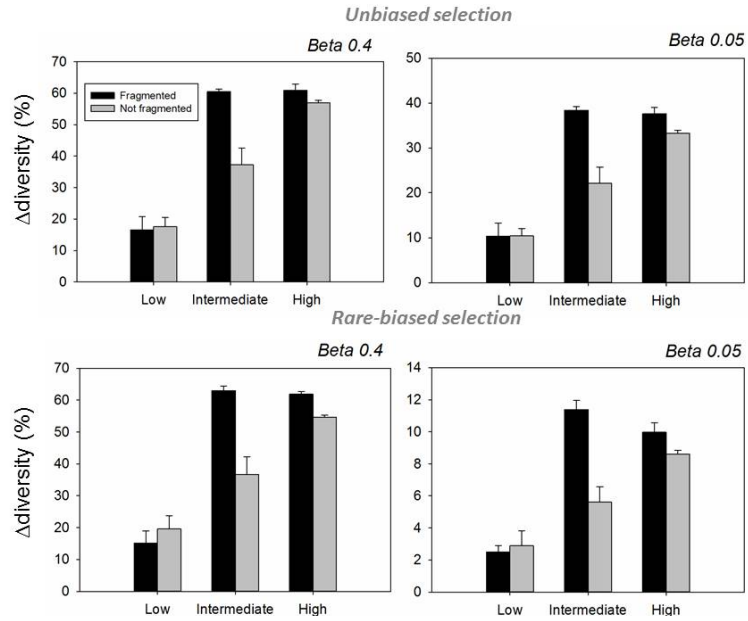
Fig. A4.Change in diversity in the seedling transition under different values of beta, which dictates the strength of density-dependent mortality in post-dispersal survival.