

The evolution of dispersal in Random environment

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The heterogeneity of the environment over time and space is considered to be a major factor moulding dispersal patterns. However, due to technical difficulties, models for the evolution of dispersal have in general considered constant environment, i.e. deterministic models. In particular, general sensitivity results in matrix models made it possible to show that evolutionarily stable strategies (ESS) for dispersal were characterized by the equality of reproductive values over sites, weighted possibly by dispersal costs. We develop similar analyses for dispersal in random environment. The approach uses general sensitivity results for random environment models. We propose some numerical illustrations for 2 sites with no age-structure.

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