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Magic traits, mate choice and speciation

Many theoretical models on sympatric speciation rely on assortative mating functions, in which the probability that two individuals mate decreases with increasing phenotypic difference. We give results on the effect of assortative mating functions in models, where the trait that controls mate choice also determines fitness in ecological selection (so called magic traits). In particular, we concentrate on the deficiencies of these mating functions and contrast the results with mate choice which is also based on indicators of adaptedness. Further, we introduce mate choice that is based on a strategy of sequential search, where the decision to mate depends on the density distribution of the population and the fitness returns to the searcher.

REFERENCES

- [1] E. Kisdi & T. Priklopil, *Evolutionary branching of a magic trait* J. Math. Biol. DOI 10.1007/s00285-010-0377-1