

On a sexual model of phenotypic evolution

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We present an individual based model of phenotypic evolution which includes random and assortative mating process of individuals with or without self-fertilization phenomena. By increasing the number of individuals to infinity we obtain a nonlinear transport equation, which describes the evolution of distribution densities of phenotypic trait. Existence of one-dimensional attractor is proved and the formula for the density of phenotypic trait in the limiting (asymptotic) population is derived in some particular case. The talk is based on a manuscript:

References

- [1] R. Rudnicki and P. Zwoleński, *Model of phenotypic evolution in hermaphroditic populations*, J. Math. Biol. 2014.