recessives, though fitter in other respects, should be liable to a severe epidemic disease when their frequency reaches a certain threshold. This threshold would not, of course, be definite, but in such a case large oscillations might occur. If, again, one form was a mimic, it is conceivable that the advantage of mimicry might fall off very rapidly when the ratio of mimics to models reached a critical level. Such a critical level would presumably depend on the details of learning or conditioning in a predator, and it is very unlikely that the critical ratio would be the same for different species of predators, or even for all members of a species.

Nevertheless in any consideration of equilibria of this kind, it is worth discussing the stability, and if possible, verifying it. It is likely that once such an equilibrium is approximately established, further selection will occur of modifiers which increases the fitness of the heterozygotes, and hence the equilibrium will be still further stabilized. It would of course be interesting to treat the hypotheses here considered stochastically, taking account of the finite number of a population. But it does not seem that this would greatly effect the conclusions.

SUMMARY

Polymorphism may be due to the fact that the fitness of a phenotype diminishes as its numbers increase. The stability of the equilibrium is discussed, and it is shown that under natural conditions instability is unlikely.

Addendum to

"Polymorphism due to selection depending on the composition of a population" by J. B. S. Haldane and S. D. Jayakar, *Journal of Genetics*, **58** (3), 318-323.

R. C. Lewontin (1958, *Genetics*, **43**, 419) had, unknown to us already proved that "stable equilibria may exist despite an inferiority of the heterozygote, provided that the adaptive values of the genotypes change properly with gene frequency", and for some of our conclusions we acknowledge his priority.

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