EFECTO MUTACIONES

Certain evolutionary features – for example, historical contingencies between sequentially acquired mutations.

To incorporate mutational structure and processes, the equation for each subpopulation (ni):

Imagen que contiene Texto

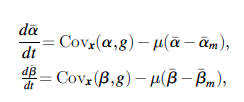
Descripción generada automáticamente

M: mutation rate

Mji: probability strain j mutates to strain i, given that there is a mutation in strain j.

Matrix formed by the parameters mji 🡪 mutation matrix: contains info about allowed mutational trajectories linking different phenotypes

The Price equation for the mean scaling parameters:



am and bm: mean trait values in all mutants that arise

Texto, Carta

Descripción generada automáticamente

Mutation matrix simple structure: effects of mutation will be similar to those of selection. Example: mutations uniform probability between ancestral strain and each mutant, the evolutionary dynamics are qualitatively similar to absence of mutation.

Certain mutational structures can lead to new behavior. Example: model four phenotypes defined by the level of resistance (sensitive, S, or resistant, R) to one of two drugs.

Phenotypes: a b

SS 1 1

RS 1/5 1

SR 1 1/5

RR 1/5 1/5