

Notes on migration

Symbols used

| Symbol | Definition |
|--------|---|
| N | number of individuals in the population (= 100) |
| N_m | number of migrants into the populations (= 10) |
| p | allele frequency in the population (= 0.2) |
| p_m | allele frequency in the migrants (= 0.9) |
| m | migration rate |

Calculations

$$\begin{aligned}m &= \frac{10}{100} \\ &= 0.1 \\ p' &= (1 - m)p + mp_m \\ &= (0.9)(0.2) + (0.1)(0.9) \\ &= 0.27\end{aligned}$$