

$$A = \begin{bmatrix} P_j & F_a \\ G_j & P_a \end{bmatrix}$$

where:

G_j = Probability of a juvenile growing into the adult class

P_j = Probability of a juvenile survival without transitioning into adulthood

and:

$$G_j = S_j \times \gamma_j$$

$$P_j = S_j \times (1 - \gamma_j)$$

$$\gamma_j = \frac{\left(\frac{S_j}{\lambda}\right)^2}{1 + \left(\frac{S_j}{\lambda}\right) + \left(\frac{S_j}{\lambda}\right)^2}$$

where:

λ = Dominant eigenvalue for the Leslie matrix defined above

γ_j = Proportion of surviving juveniles transitioning into adulthood