

Lotka Volterra Predator Prey Model

Equations of the Model

$$\begin{aligned}\dot{x}_h &= -x_h + x_h x_p \\ \dot{x}_p &= x_p - x_h x_p\end{aligned}$$

x_h is the hunter in the model

x_p is the prey in the model

More generally,

$$\begin{aligned}\dot{x}_h &= -ax_h + bx_h x_p \\ \dot{x}_p &= cx_p - dx_h x_p\end{aligned}$$

(parameters a , b , c and d are positive.