

Analysis of ecological model with Holling type IV functional response

ABSTRACT

In this paper a three-species of predator-prey food chain model with Holling type IV functional response is proposed. The boundedness of the solution of the model is discussed. Stability analysis of the system is carried out. The dynamics of the predator-prey food chain model with simplified Holling type IV functional response is investigated theoretically as well as numerically.

Keyword: Food chain; Bifurcation; Holling Type IV; Periodic; Chaotic