

1163-65-1225

M Chapwanya* (m.chapwanya@up.ac.za), University of Pretoria, Department of Mathematics & Applied Mathematics, Pretoria, Gauteng 0002, South Africa, and **H Banda**. *Pattern formation in the Holling-Tanner predator-prey model with prey-taxis.*

The pioneering work on the Lotka-Volterra model gave rise to rich literature on the interaction of two or more species. In this paper, the pattern formation in the Holling-Tanner predator-prey model with prey-taxis is investigated. We construct a dynamically consistent nonstandard finite difference scheme for the proposed model. Numerical simulations are provided to support our findings. (Received September 15, 2020)