LIMIT CYCLES IN THE HOLLING-TANNER MODEL

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Abstract

This paper deals with the following question: does the asymptotic stability of the positive equilibrium of the Holling-Tanner model imply it is also globally stable? We will show that the answer to this question is negative. The main tool we use is the computation of Poincaré-Lyapunov constants in case a weak focus occurs. In this way we are able to construct an example with two limit cycles.