

1113-39-141

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*Extinction, periodicity and multistability in a planar Ricker model of stage-structured populations.*

We study the dynamics of a second-order difference equation that is derived from a planar Ricker model of two-stage biological populations. We obtain general results for boundedness and convergence to zero (extinction) in the case when the equation is nonautonomous. We then analyze a special case for the autonomous equation that exhibits multistable periodic and non-periodic behavior in the positive quadrant of the plane. (Received August 18, 2015)