Vlajko L. Kocic* (vkocic@xula.edu), Xavier University of Louisiana, Mathematics Department, New Orleans, LA 70125. Global asymptotic behavior of certain class of nonlinear nonautonomous difference equations.

In this paper we study the global asymptotic behavior of positive solutions of the nonlinear nonautonomous difference equation of the form

\[ x_{n+1} = a_n x_n f(x_{n-k}), \quad n = 0, 1, \ldots \]

with positive initial conditions where the sequence \(a_n\) is positive and periodic with period \(p\), and the function \(f\) satisfies some additional conditions. Results are applied to some periodically forced classical population models. (Received September 06, 2017)