

Xu, Rui; Chaplain, M. A. J.; Davidson, F. A.

Periodic solutions of a discrete nonautonomous Lotka-Volterra predator-prey model with time delays. (English) [Zbl 1116.92072](#)

Discrete Contin. Dyn. Syst., Ser. B 4, No. 3, 823-831 (2004).

Summary: A discrete periodic two-species Lotka-Volterra predator-prey model with time delays is investigated. By using *R. E. Gaines* and *J. L. Mawhin's* [Coincidence degree, and nonlinear differential equations. (1977; [Zbl 0339.47031](#))] continuation theorem of coincidence degree theory, a set of easily verifiable sufficient conditions is derived for the existence of positive periodic solutions of the model.

MSC:

[92D40](#) Ecology

[39A11](#) Stability of difference equations (MSC2000)

[92D25](#) Population dynamics (general)

Cited in **8** Documents

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