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**Robert Sacker\*** ([rsacker@usc.edu](mailto:rsacker@usc.edu)), University of Southern California, Mathematics Department, KAP 104, Los Angeles, CA 90089-2532, and **Yi Yang**. *Periodic Unimodal Allee Maps, the Semigroup Property and the Discrete  $\lambda$ -Ricker Equation with Allee Effect.*

The discrete  $\lambda$ -Ricker equation has an attracting fixed point at the origin, an unstable fixed point, the Allee threshold and an attracting fixed point, the carrying capacity. Population densities initially below the Allee threshold are driven to the zero fixed point, i.e. extinction while population densities initially above are attracted to the carrying capacity. The  $k$ -periodic  $\lambda$ -Ricker equation is studied and parameter intervals are determined for which there exist a  $k$ -periodic Allee state and a  $k$ -periodic attracting state.

In the management of fisheries, in particular, it is important to know the acceptable level of harvesting in order to stay above the Allee threshold. Knowing the effect of seasonal variation on the Allee threshold is therefore important. (Received September 06, 2013)