1023-92-1255 **Robert J. Sacker*** (rsacker@usc.edu) and **Hubertus F. von Bremen**. *Dynamic Reduction, the Periodic Ricker Map and Genetically Altered Mosquitos.*

Dynamic Reduction is a problem dependent algorithm (much akin to linearization) whereby some of the dependent variables in the right side of a difference equation
(or ODE or PDE) are replaced by functions from a certain class $\mathcal{C}$ in such a way that the resulting system is solvable and such the solution lies in $\mathcal{C}$. This gives a map $\mathcal{T} : \mathcal{C} \to \mathcal{C}$ whose fixed point is a solution to the original problem. This is applied, along with *ratio dynamics* to establish the existence of a periodic solution to a coupled periodic system of Ricatti/Ricker type arising in the study of genetically altered mosquitos.

New results giving a globally asymptotically stable periodic solution of a periodic Ricker equation will also be presented. (Received September 25, 2006)