1125-39-1636 **H Sedaghat***, Department of Mathematics, Richmond, VA 23284-2014, and **N Lazaryan**.
Implications of inter-stage interactions for extinction and the Allee region in an age-structured population model.

In an age-structured population (e.g. adults and juveniles) with a Ricker fitness function and time-dependent vital rates, we examine conditions for the convergence of orbits to the origin (extinction) in the presence of the Allee effect. When stages (or generations) interact, we find that extinction need not occur in the absence of positive fixed points, a situation that is impossible without inter-stage interactions. We also examine the shift in the Allee equilibrium caused by the occurrence of interactions between stages. We find that this shift away from the origin leads to an expected enlargement of the extinction region but surprisingly the enlargement is not the maximum possible allowed by the shift. (Received September 18, 2016)