1056-92-1016   **Azmy S. Ackleh*** (`ackleh@louisiana.edu`), Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504-1010, and **Ross A. Chiquet**, Department of Mathematics, University of Louisiana at Lafayette, Lafayette, LA 70504-1010. *Competitive Exclusion in a Juvenile-Adult Model with Continuous and Seasonal Reproduction.*

We develop and analyze a discrete juvenile-adult population model that describes two competing species. We consider species in which the juveniles only compete with other juveniles, and the adults only compete with other adults. This is typical of amphibians where juveniles (tadpoles) live in water and adults (frogs) live on land. The cases of continuous and seasonal reproduction for the two species are considered. In both cases, we develop conditions on the invasion reproductive numbers of the two species that will lead to competitive exclusion. (Received September 20, 2009)