1067-39-1634 **Ross A Chiquet*** (rchiquet@louisiana.edu), 217 Maxim D. Doucet Hall, P.O.Box 41010, P.O.Box 41010, Lafayette, LA 70504-1010, and **Azmy S Ackleh**. *Competitive exclusion in a discrete juvenile-adult model with continuous and seasonal reproduction.*

We develop a general 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, i.e. juveniles and adults of either species do not compete. This is typical of amphibians where juveniles (tadpoles) live in water and adults (frogs) live on land. Assuming competition efficiencies of the two species are similar, we analyse the cases where reproduction is either continuous or seasonal. In both cases, we develop conditions on the invasion net reproductive numbers of the two species that will lead to competitive exclusion. We show using numerical simulations that coexistence and bistability are possible outcomes when competition efficiencies of the two species are different. (Received September 21, 2010)