1086-92-1471 **Jim M Cushing*** (cushing@math.arizona.edu), Department of Mathematics, 617 N Santa Rita Av, University of Arizona, Tucson, AZ 85721, and **Jarred T. Hudson**. *A basic model for the evolutionarily adaptive dynamics of a population subject to a strong Allee effect.*

Population dynamic models that incorporate nonlinear density effects on fitness typically assume deleterious effects due to increased population numbers or density. This negative feedback feature (as exemplified by the famous logistic equation) was overwhelmingly the assumption built into models for population and ecological dynamics during the last century and, for the most part, remains so today. During the last decade there has been an upsurge in interest in positive density (Allee) effects that can occur at low population densities. This interest has been motivated primarily by conservation issues and concerns about the extinction of endangered species. A "strong" Allee effect is one that results in a threshold below which a population will (deterministically) go extinct. In this talk I consider a basic, prototype ODE model for a strong Allee effect when placed in an evolutionary setting, so as to model a population able to adapt evolutionarily. I'll give a complete analysis of the global asymptotic dynamics of the model. I'll also give some toy examples designed to illustrate the results and to draw some ecological punch lines about the interplay between Allee effects and evolutionary adaptation. (Received September 22, 2012)