1035-92-430 **Horst R Thieme*** (`thieme@math.asu.edu`), Department of Mathematics and Statistics, Arizona State University, Tempe, AZ 85287-1804. *Species disappearance: a combination of infectious disease and Allee effect?*

It is well-known that infectious diseases with standard (alias frequency-dependent) incidence can drive populations into extinction. A very simple model shows that extinction can also occur under mass action (alias density-dependent) incidence if the host population is subject to an Allee effect. If a suitable disease parameter is moved around, there is a transition from a bistable scenario with a stable extinction equilibrium and a stable disease-free equilibrium to a scenario where the extinction equilibrium is globally stable. This transition is mediated by the emergence of an endemic equilibrium which undergoes a Hopf bifurcation. Depending on a parameter in the host growth function, the Hopf bifurcation can be either supercritical or subcritical. This affects the disease parameter region where the extinction equilibrium is globally stable. (Received September 06, 2007)