1041-35-3   **Mark Lewis***, University of Alberta. *Population spread and the dynamics of biological invasions.* Classical models for the growth and spread of introduced species track the front of an expanding wave of population density. Underlying equations are typically parabolic partial differential equations and related integral formulations. One method to infer the speed of the expanding wave is to equate the speed of spread of the nonlinear system with the speed of spread of a related linear system. When these two speeds coincide we say that the spread rate is linearly predictable. In this talk I will discuss linear predictability in multispecies models. In particular I will show how some competitive models are not linearly predictable. In the talk I will the connect spread rates analysis to classical ideas in travelling wave theory. Lastly I will apply some of the results to real biological problems, including species competition, spread of disease and population dynamics of stream ecosystems. (Received April 11, 2007)