Bernard P Brooks* (bpbsma@rit.edu), 85 Lomb Memorial Dr, Rochester, NY 14623, and M Radin and T Wiandt. Global Stability in a Discrete Competitive Two Harvester System.

A system of coupled difference equations is used to model the interaction between humans and their natural island environment. The two human populations differ in their harvesting and reproductive rates. They compete for a finite natural resource whose growth rate is logistic. Each population can coexist stably with the natural environment in the total absence of the other type of human. Thus there exist two equilibria of the coupled three difference equation system; one with only the high-rate harvesters and one with only the low-rate harvesters. It will be shown that the equilibrium with only high-rate harvesters is stably resistant to invasion from low-rate harvesters whereas the equilibrium with only low-rate harvesters is unstable and susceptible to an invasion of high-rate harvesters. In the end greed wins. (Received September 17, 2014)