Consider the interaction of two species whose populations after *n* years are represented by the numbers *xn* and *yn*. Consider the following model:

*xn+1* = 0.8*xn* + 0.002*xnyn*

*yn+1* = 0.9y*n* + 0.001*xnyn*

*x0* = 50

*y0* = 100

Iterate the system. Can the two species coexist? Is there an equilibrium value?