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Cymra Haskell (chaske11@usc.edu), 3620 Vermont Ave., KAP 108, Los Angeles, CA 90089-2532, and **Robert J. Sacker*** (rsacker@usc.edu), 3620 Vermont Ave., KAP 108, Los Angeles, CA 90089-2532. *The Stochastic Beverton Holt Equation and the M. Neubert Conjecture.*

It is known that the Beverton Holt equation (mapping) with periodic carrying capacity has an asymptotically stable periodic solution and the average over one period of the state variable is strictly less than the average of the carrying capacities. Thus a periodic environment has a deleterious effect on the state variable.

In this work we consider the case where the carrying capacity varies randomly with a density satisfying very mild conditions. We show that the state variable has an asymptotically stable invariant density and the average of the state variable for almost every orbit is strictly less than the average of the carrying capacities. (Received September 27, 2005)