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Shandelle M. Henson* (henson@andrews.edu), Department of Mathematics, Andrews University, Berrien Springs, MI 49104, and **James L. Hayward**. *Discrete-time model of diurnal seabird distribution with environmental forcing*. Preliminary report.

Seabirds move between habitat patches throughout the day as they engage in various behaviors. The transitions between habitats are functions of environmental variables such as tide height and time of day, as well as weather conditions. Data from a colony of glaucous-winged gulls are used to construct a nonautonomous matrix model of movement between habitats. We analyze a simplified version of the model, and also compare simulations of a stochastic version to data. (Received September 18, 2005)