

1016-92-152

**Andrea L Moore\*** ([andream@andrews.edu](mailto:andream@andrews.edu)), Department of Mathematics, Andrews University, Berrien Springs, MI 49104. *The Dynamics of Loafing, Thermoregulation, and Territory Abundance in a Seabird Colony.*

The diurnal distribution and abundance dynamics of loafing Glaucous-winged Gulls (*Larus glaucescens*) were examined at Protection Island National Wildlife Refuge, Strait of Juan de Fuca, Washington. Asynchronous movement of gulls among three habitat patches (colony, jetty, and marina) dedicated to loafing was modeled as a function of environmental variables using differential equations. Multiple time scale analysis led to the derivation of models for habitat patch occupancy dynamics. Models that predict the dynamics of organism distribution and abundance enhance understanding of the temporal and spatial organization of ecological systems, as well as the decision-making process in natural resource management. (Received February 09, 2006)