

1135-92-2435

Eric T. Funasaki* (eric.funasaki@sulross.edu), Department of Computer Science & Mathematics, Sul Ross State University, P.O. Box C-18, Alpine, TX 79832, and **Shandelle M. Henson** and **James L. Hayward**. *Transient predator-prey cycles in bald eagles and glaucous-winged gulls at Protection Island, Washington.*

Widespread use of DDT in the environment during the 1940s had a catastrophic effect on the survival of bald eagle embryos due to eggshell thinning and cracking. Bald eagle populations began to recover with the banning of DDT in the 1970s. By the 2000s eagle resurgence in the Pacific Northwest was linked with declines in seabird prey such as glaucous-winged gulls. We monitored and mathematically modeled numbers of gull residents as well as bald eagle residents and visitors at Protection Island National Wildlife Refuge during 1993-2005. The transient dynamics are well explained by a Lotka-Volterra-type predator-prey model having logistic growth for each species in the absence of the other. (Received September 26, 2017)