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**Mykhaylo M Malakhov\*** (mykhaylo@andrews.edu), **Benjamin MacDonald**, **Shandelle M Henson** and **J M Cushing**. *Backward Bifurcations in a Periodic Matrix Model of Seabird Population Dynamics*. Preliminary report.

Rising sea surface temperatures (SSTs) are associated with food resource reductions for seabirds in the Pacific Northwest and have been correlated with a number of behavioral changes, including increased egg cannibalism and egg-laying synchrony. We study the effect of these changes on the long-term survival and dynamics of the population by considering a simplified, discrete-time proof-of-concept model that tracks the population across multiple breeding seasons. We show that cannibalism and synchrony can lead to backward bifurcations and strong Allee effects, allowing the population to survive at lower resource levels than would be possible otherwise. (Received September 18, 2017)