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Shandelle M. Henson* (henson@andrews.edu), Department of Mathematics, Berrien Springs, MI 49104, and **James L. Hayward, Joseph G. Galusha** and **J. M. Cushing**. *Reproductive Synchrony: An Egg-laying Model for Glaucous-winged Gulls*. Preliminary report.

In 1938 Fraser Darling hypothesized that social stimulation in colonial birds results in reproductive synchrony. He noted that increased reproductive synchrony may confer a selective advantage on colonial birds because of predator satiation. This postulated mechanism for a seasonal reproductive pulse became known as the "Fraser Darling effect". In addition to the seasonal pulse of egg-laying that interested Darling, we have observed higher frequency pulses of egg-laying at 2- to 3-day intervals during the most vigorous egg-laying period. Motivated by these field data, we pose and analyze an egg-laying model for glaucous-winged gulls. (Received September 20, 2007)