1060-37-19   **Sarah Day*** (`sday@math.wm.edu`), College of William and Mary, Department of Mathematics, P.O. Box 8795, Williamsburg, VA 23188, and **Benjamin Holman** (`brholman@wm.edu`) and **Sebastian Schreiber** (`sschreiber@ucdavis.edu`), Department of Evolution and Ecology, One Shields Ave, University of California, Davis, CA 95616. *Quantifying Patterns in a Coupled-Patch Population Model.* Preliminary report.

Coupled patch models of population dynamics combine local dynamics on patches with rules for dispersal of the population between patches. When an appropriate threshold is applied, population values give rise to patterns (in space) and may evolve in a complicated manner in time. I will discuss joint work with Benjamin Holman and Sebastian Schreiber in which we study coupled Ricker maps and the complicated patterns they produce. We use computational homology, and in particular the computation of Betti numbers, to measure the patterns and their evolution in time. (Received January 20, 2010)