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Sarah Day* (sday@math.wm.edu), Department of Mathematics, College of William and Mary, P.O.Box 8795, Williamsburg, VA 23187, and **Benjamin Holman** (bholman@math.arizona.edu), Program in Applied Mathematics, University of Arizona, 617 N. Santa Rita Ave., P.O.Box 210089, Tucson, AZ 85721. *Quantifying Patterns in a Coupled-Patch Population Model.*

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 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 September 19, 2011)