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Lauren M. Taylor* (taylor21m@dukes.jmu.edu) and **Jennifer E. Roth**
(roth2je@dukes.jmu.edu). *Optimal Strategies for Arrival and Departure of Male Onthophagus taurus*. Preliminary report.

Onthophagus taurus is a species of dung beetle that displays a characteristic male dimorphism in the presence or absence of horns. Major males (with horns) exhibit a defensive mating strategy, while minor males (without horns) exhibit a sneaking mating strategy. Since dung pads are suitable for use during a short time interval, arrival and departure times are key in determining reproductive success. Using a simplified probability model, we mathematically analyzed dispersal strategies to determine an optimal strategy. (Received September 25, 2012)