**Monday, December 10, 2007**
**D0081**

## Division of labor in the little fire ant *Wasmannia auropuntata*

**Rafael Fernández-Casas**, ralphf1104@hotmail.com and Bert Rivera-Marchand, brivera@bc.inter.edu. Inter American University of Puerto Rico, Natural Sciences and Mathematics, 500 John Will Harris Rd, Bayamón, PR

Division of labor in ants may be related to different morphologies or differences in ages of the worker castes. Division of labor in monomorphic ants is known to be age related. Younger workers perform tasks inside the colony and older workers perform tasks outside. Behavioral plasticity within division of labor has been found in some species of ant, as well as honey bees, where older individuals can perform tasks of younger individuals and younger workers can precociously perform tasks of the older. We performed two experiments to determine division of labor and behavioral plasticity on the little fire ant Wasmannia auropuntata an invasive species from the tropics. Although the little fire ant is considered monomorphic we found differences in coloration, where lighter colored ants preformed nursing tasks and darker ants foraged. In the first experiment we removed foragers to determine if the younger ants would forage precociously. In the second experiment we removed foragers to determine if they would revert to nursing duties. After removing foragers the nurses did not forage precociously, instead they cannibalized larvae and pupae. After removal of nurses the foragers assumed the role of nurses, forgoing foraging. The seemingly lack of precocious foraging in these ants may be an important adaptation to tropics. In the tropics large and intermediate disturbances are frequent. A nest that looses its foragers due to a stochastic event decreases the risk of loosing all workers by retaining them within the nest.

**Species 1:** Hymenoptera Formicidae *Wasmannia auropunctata* (little fire ant)

See more of C, Session Cb. Apiculture and Social Insects
See more of Student Competition Poster

See more of The 2007 ESA Annual Meeting, December 9-12, 2007