

OR142*Altruistic worker policing in honeybees, a multi-level approach***Claire Narraway**, Peter Nonacs

Kin selection is the dominant paradigm to explain the evolution of cooperation and, worker policing is one of its most convincing examples. Here, workers aggress upon laying workers or consume their eggs to increase overall colony relatedness and therefore, a workers inclusive fitness benefits. However, examples of worker policing when the queen is monogamous or when workers reproduce thelytokously do not fit the predictions of kin selection. As such, other levels of selection may be important. Here, we present results from a simulation model that examine how three different levels of selection interact under varying starting conditions. The levels of selection are the individual level, colony level, and intragenomic level. Preliminary results suggest that conflict between the two portions of a workers genome may play a much more significant role than previously thought.