Dr. Mingkwan Nipitwattanaphon

Genetics of social behavior


http://www.learners.in.th/blogs/posts/345770


http://wingedpuff.wordpress.com/2012/01/13/colony-of-weaver-ants/

Ants are among the most successful insects in the world, which occupy about 30% of the biomass. A colony of ants contains hundreds or thousands individual workers which are daughter of one or a few mothers, namely "queens". Their social structure is highly organized and this makes ants and other social insects like wasps, bees, and termites most successful compared to other insects. To understand the biology and ecology of ants, at least for two focal species, weaver ants and fire ants, we need to know **whether a colony is headed by a single fertile queens or multiple queens**.

http://www.visualphotos.com/image/1x9092241/fire_ant_solenopsis_geminata_colony_with_queen_ant
962613 [RM] © www.visualphotos.com

Why would one queen or multiple queens matter?

Because there are several ecological factor associated with different types of social forms which will be applied to:

1. Weaver ants: to increase colony production in agriculture.
3. Fire ants: to find basic ecological information for pest control and get some insights into the basic research on sex determination in ants.

How to find the answer?

Molecular techniques will be used and some analysis on population genetics and colony relatedness will be applied.

Department of Genetics

Contact: mingkwann@gmail.com