

MECHANISMS OF COOPERATION AND CONFLICT RESOLUTION IN SOCIAL INSECTS

Summary

There are many diverse examples of conflicts and cooperation in social insects. On one hand honeybee queens fight to death in order to inherit a colony; on the other hand workers of *Forelius pusillus* ants preemptively sacrifice their lives to protect their colony. The common feature of those behaviors is their simplicity and lack of central control. Nervous system of insects is relatively uncomplicated and their ability to perceive, remember and analyze information is limited. In those circumstances com-

plicated mechanisms based on central control by single individual could lead to costly errors. A work organization where all colony members repeatedly perform simple tasks using only local information is much more efficient. This kind of work organization is more error proof. Even if some of the repeatedly performed tasks are carried out incorrectly the mechanism remains effective and only its efficiency is lower.