

# ABSTRACTS



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THE EVOLUTION OF ERGATOID QUEENS IN THE ANT GENUS *CATAGLYPHIS*: THE ROLE OF NATURAL SELECTION  
AND CASTE FATE CONFLICTS

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Colony fission or Dependent colony founding (DCF) is a form of parental investment by which workers of a social insect colony accompany young queens during the foundation of a new nest. In ants, DCF is thought to have evolved from Independent colony founding by which queens fly away from their natal nest to found new colonies alone. In the genus *Cataglyphis*, this transition has induced a major loss of queen morphological specialization. Hence, the participation of apterous workers in the propagules of *C. floricola* increases foundation success but constrains dispersal distance with respect *C. emmae*, the closest known ancestor of *C. floricola* which disperse by ICF. This transition has selected for brachypterous queens (short wings) that are incapable of flying. We discovered that in addition to brachypters, *C. floricola* has a second completely wingless queen morph that is very similar to workers. These ergatoid queens are produced in excess before colony fission, but many of them are eliminated by workers upon emergence. We suggest that, contrarily to brachypters, ergatoids derive from selfish totipotent larvae that escape worker control by developing into small queens instead of workers at the cost of the mother colony.