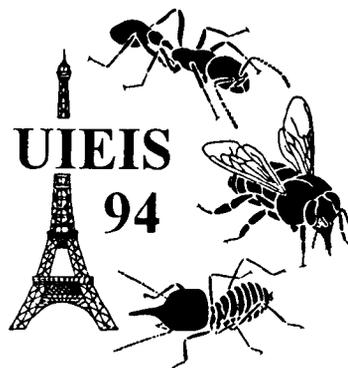


# LES INSECTES SOCIAUX



*12<sup>ème</sup> Congrès de l'Union Internationale pour l'Etude  
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**DOMINANCE BEHAVIOUR AND THE RESOLUTION OF INTRA-COLONIAL CONFLICTS IN THE PRIMITIVELY EUSOCIAL WASP, *ROPALIDIA MARGINATA***

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*Ropalidia marginata* is a primitively eusocial polistine wasp restricted to the old world tropics and sub-tropics. New colonies are initiated by one or a group of wasps throughout the year. During colony initiation, strong dominance-subordinate relationships, characteristic of polistine wasps are the means by which one individual establishes herself as the sole reproductive, while the others serve as workers. By about the time of the hatching of the eggs into larvae and throughout the colony cycle from then on (except during queen replacements), dominance behaviour appears to take on a rather different meaning. Firstly, dominance behaviours are now restricted to only a milder subset of the repertoire seen during colony initiation. Secondly, most of the dominance behaviour is shown by the workers while the queen, who continues to enjoy exclusive reproductive rights becomes a rather quiet individual and shows little dominance behaviour or any other kind of behavioral interaction with the workers. Loss or experimental removal of the queen at this stage makes no difference to worker activity levels, including, foraging, bringing food and feeding larvae but it results in one individual among the workers becoming extremely aggressive and dominant. This "potential queen" goes on to become the next queen if the original queen does not return. There is good evidence that in such established colonies, workers regulate their own levels of activity through a process of mutual interaction and the queen merely regulates worker reproduction, not by any overt behavioural means but perhaps by a chemical means. Thus, intra-colony conflicts with reference to reproductive division of labour appear to be resolved by apparently different proximate mechanisms during colony founding as compared to in well established colonies and also differently with reference to reproductive division of labour and worker activity regulation in established colonies.