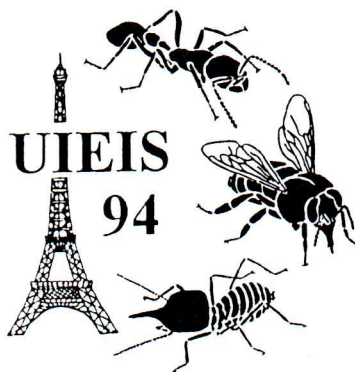


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SEPARATION OF NESTS AND INTRACOLONIAL RECOGNITION IN THE POLYDOMOUS ANT *CATAGLYPHIS IBERICA* (HYMENOPTERA, FORMICIDAE)

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The Iberian ant *Cataglyphis iberica* (Formicinae) is monogynous and polydomous. Numerous exchanges by mutual carrying are observed, especially just after the end of overwinter. These exchanges are carried out by some individuals of the colony forming a specialised subcaste of transporters (Cerda & Retana, 1992). We tested the effect of isolation of nests on intracolony recognition in *Cataglyphis iberica* by isolating individuals of three nests from the same colony during one year. The colony studied was without queen. After this period of isolation, no aggressive behaviour was observed when individuals of the nests were tested in pairs. However mutual investigations were significantly longer when partners were previously isolated, compared to control individuals from the same nest. This difference disappeared when individuals of the nests were reared together for five months. We analysed also cuticular hydrocarbons of workers collected in each nest: before, after isolation and after regroupment. The results showed: (1) that cuticular profiles were similar before and after regroupment of individuals (2) profiles had diverged after one year of isolation. This cuticular divergence seemed to be implicated in behavioural modifications (duration of mutual investigations) when partners met. Our results are in favour of the hypothesis that mutual carrying could permit the maintenance of a common odour among individuals of different nests belonging to the same colony (Cerda *et al.*, in press).

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