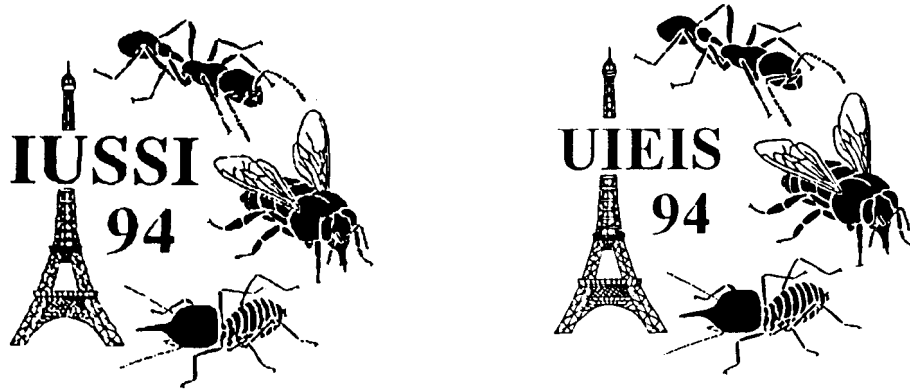


# LES INSECTES SOCIAUX



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## IS *BOMBUS TERRESTRIS* (L.) COLONY FOUNDATION FACILITATED BY THE PRESENCE OF VOLE (*MICROTUS ARVALIS* (PALLAS)) LITTER?

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Bumblebees are known to establish their colonies in old micromammals nests (Sladen, 1912). This observation has been confirmed by numerous authors (Alford, 1975, Heinrich, 1979). However, the underlying mechanisms of such a behaviour are unknown. Is that a more or less random choice, as suggested by Hobbs et al (1960)? Do the queen choose vole nests for size or microclimatic reasons, as suggested by Fye & Medler (1954)? Or are their choices ruled by pheromonal interactions with the rodents? This last hypothesis has been tested on *Bombus terrestris* (L.) and *Microtus arvalis* system. Founding queens have been installed in an air-conditioned room and submitted either to paper that had been previously used as vole litter or to an inert substratum only. After a few hours, the queens were observed to tear the soiled paper to pieces and use it to shield their first egg batch. Such a behaviour was never observed when the queens had inert substratum at their disposal. Further observations showed that the mean delay between foundation and egg-laying was 2 weeks for queens supplied with vole litter and 4 weeks for queens supplied with inert substratum. In conclusion, vole litter seems to accelerate colony founding in *B. terrestris*. Our best hypothesis is that there is an allomonal interaction determining the choice of the bumblebee queens for *Microtus* galleries and facilitating effect on the foundation.

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