ABSTRACTS

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The "SOS" in *Cataglyphis cursor* ants

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Rescue behaviour in non-human animals has been observed occasionally in the wild and recently has been experimentally explored in *Cataglyphis cursor* ants (Nowbahari et al. 2009). In *C. cursor* species, as in some other insect societies, young ants less than 4 days after emergence are able to be adopted in foreign colonies whereas adult ants never are adopted and are attacked instead (Nowbahari & Lenoir 1989). The period shortly after emergence is critical for physiological maturation. Nonetheless, it is not known if workers less than 4 days old already carry the colonial odours and if they are able to call for or receive help when trapped. To explore our understanding of the signals triggering rescue behaviour and its ontogenesis, we conducted both behavioural and biochemical analyses of experiments in which mature rescuers were tested with ensnared workers of different age categories, namely newly hatched ants under 3 days old (callows), young ants that were 10 days old, and mature adults. Control tests were conducted with same-age victims made dead by chilling. Volatiles released by victims in each of the three live-victim groups were subject to SPME (Solid Phase Micro Extraction) chromatography. Our results show that rescue behaviour was directed toward all three types of live victims. The biochemical analysis revealed the presence of volatile components in both ten-day-old and mature workers, but not in callows. The chemical signal appeared to be highly similar to alarm signals found in *Formicinae* ants. Rescue behaviour elicited by 10-day-old and mature ants likely was triggered by some of the molecules emitted by victims, whereas rescue behaviour elicited by callows probably depended upon their strong attractiveness.

Nowbahari E. et al. 2009. PLoS ONE 4(8): e6573.
Nowbahari E. & Lenoir A. 1989. Behav. Process. 18: 173-181.