

Elitism, specialisation and the foraging behaviour of common wasps (*Vespula vulgaris*)

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We examined the foraging behaviour of common wasps (*Vespula vulgaris*). Using RFID tags glued onto newly emerged adult workers we asked three questions related to variation in foraging effort and patterns within nests. Firstly, we examined the variation in foraging effort between nestmates: is there evidence for 'elite foragers' or highly active workers doing a disproportionate number of foraging trips? Our results demonstrated that some workers indeed undertook many hundreds of foraging trips during their lifetime, while other workers were exceedingly lazy. Secondly, we examined how foraging behaviour changes with age. Does the foraging effort change over the lifespan of a wasp? Our adult wasps lived for up to 49 days. The peak in foraging effort was for 26 day-old wasps, but there was considerable variation between workers within a nest. Finally, we examined for evidence of specialisation in foraging behaviour. Some wasps specialised throughout their adult life in collecting prey items. Approximately a quarter of foragers were only observed to collect fluid or pulp for nest building. Our work demonstrates considerable variation between related individuals in the same social and environmental context, both in their foraging activity and level of specialization. We observed a degree of age-related polyethism, but not to the extent observed in bees.

