

# Hardworking sisters enable insect colonies to thrive

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A spider ant worker is carrying a baby sibling. Credit: Alexander Wild

They are among the animal kingdom's most industrious workers ... now a study reveals why colonies of ants and bees depend on females for their success.

Altruistic workers in social insect colonies – such as [ants](#), bees and wasps – are more likely to be female, because their maternal instincts make

them better at caring for the queen's offspring.

The findings come from a study of who does what in these highly organised [insect societies](#). In these species, it is only [females](#) that raise the colony's young. This is in contrast to other insect groups, such as termites, in which both males and females lend support.

This behaviour They are among the [animal kingdom](#)'s most industrious workers ... now a study reveals why colonies of ants and bees depend on females for their success. had for a long time been attributed to the unusual genetics of species such as ants, in which females are more closely related to their sisters than other relatives.

However, an analysis of species in which help is shared found that this could not be explained by genetics. Instead, males and females were found to take on jobs to which they are best suited historically – so that species in which females are the main carers, such as ants, are found to have evolved from [species](#) in which mothers did most of the parenting.

The study, by researchers from the Universities of Edinburgh, Oxford and St Andrews and Auburn University in the US, overturns the longstanding theory which suggests that an instinctive drive to help individuals with whom they share more genes is the reason why females assist in rearing the queen's young.

Dr Laura Ross, of the University of Edinburgh's School of Biological Sciences, who led the study, said: "The best explanation for why females are more inclined to help in rearing the queen's offspring is that they are already equipped with maternal behaviours preserved through evolution. In contrast, males aren't usually involved in parental care, and so they don't have the skills required."

Provided by University of Edinburgh

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