


**NEWS HOMEPAGE**
[University home](#) > [All news](#) > [2003](#) > [Ants hold key to traffic chaos...](#)

## Ants hold key to traffic chaos

Press release issued 27 January 2003

Drivers wishing to avoid traffic jams could learn from the behaviour of army ants, according to new research by biologists at the Universities of Bristol and Princeton.

The study, carried out by Professor Nigel Franks of Bristol University and Dr Iain Couzin of Princeton University, found similarities between the problems encountered by New World army ants as they migrate between nest sites and the thousands of drivers who commute to work daily in British cities.

While commuting drivers tend to want to beat jams by cutting in and trying to take short-cuts, the ants keep constant speed, stay in their lanes and, essentially, act unselfishly.

The New World army ant (*Eciton burchelli*) stages huge swarm raids with up to 200,000 virtually blind foragers forming trail systems up to 20m wide and 100m long. These massive raids are severely time-constrained, beginning at dawn and ending at dusk.

However, the ants have developed a simple yet highly effective way of ensuring they don't get stuck in a traffic jam. They create trails of pheromones which act as a guide to other ants and ensure the trail continues at a fast pace in a steady stream.

Professor Franks said: "The ants always act for the good of the whole rather than the individual and are never unpredictable. Selfish humans clearly have a lot to learn from the ants' ability to arrange smooth traffic flows."

[Self-organized lane formation and optimized traffic flow in army ants by I.D. Couzin and N.R. Franks](#)


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