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SPOTLIGHT FEATURED

## Mesa Community College prof publishes study on warring ants

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Mesa Community College life science professor Nicola Plowes is co-author of a research article that describes a mathematical model of the behavior of the pavement ant during territorial battles, and the rules by which border conflicts are resolved.

A faculty member since 2010, Plowes describes herself as a "behavioral ecologist who specializes in foraging and territorial behavior in ants."

"Ants are a family within the insect order," she said. "Ants have the most fascinating behaviors, from building complex underground nests, to coordinating food acquisition, to making complex, yet sensible decisions as a group through the sum of individual decisions such as determining the boundary between two nests."

"It's fascinating how these self-organizing processes occur, as the rules that arise may apply to other systems," Plowes said. "The concept of two groups in time and space applies, for example, to the input and output of data to an internet service provider or to the relationships between immune cells and cancer cells in the human body."

MCC students benefit from the research in two ways: It establishes that some community college professors teach and do research at the same time, and it encourages students to trust the college system when they are required to complete general education courses.

"It's important that students know that many faculty members perform research and are active in their fields." Plowes said. Ad

"Additionally, when you are an undergraduate, you sometimes wonder why you need something that doesn't apply to your specific major. But later in life, you might find that you need, for example, calculus, which we used in this article. A well-rounded person needs a range of skills, and we construct our general education program around providing these tools."