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A pathogen reduces yellow crazy ant reproductive ability in Australia

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The yellow crazy ant (*Anoplolepis gracilipes*) is a widespread invasive species which can have severe ecological impacts on native ant and invertebrate communities. In some areas of their invaded range, yellow crazy ant populations have been observed to fluctuate strongly. In Arnhem Land, Australia, populations of these ants fluctuate spatially and temporally and sometimes disappear altogether. The mechanisms responsible for such declines have yet to be investigated. Yellow crazy ant populations in Arnhem Land represent a unique opportunity to investigate mechanisms by which a globally significant invader declines. It is my hypothesis that microorganisms affect fitness of yellow crazy ants. In order to test this hypothesis, I will compare pathogen and bacterial endosymbiont load of ants from sites with declining and expanding populations, I will also evaluate the effects of these microorganisms on colony fitness. Initial findings suggest pathogens may affect egg production in queens. By identifying the mechanisms behind such population collapses, we aim to improve the management and control of invasive species.