A pathogen reduces yellow crazy ant (*Anoplolepis gracilipes*) reproductive ability in Australia

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- Yellow crazy ants are a widespread invasive species which can have severe ecological impacts on native ant and invertebrate communities
- In the Seychelles formerly huge populations of this ant disappeared completely¹
- In Arnhem Land, AU, populations fluctuate spatially and temporally and sometimes vanish altogether
- Mechanisms responsible for these declines have yet to be determined
- Yellow crazy ants are known to carry several microbial endosymbionts²

OBJECTIVES
- Investigate mechanisms by which a globally significant invader declines
- Identify potential pathogens

METHODS
- Collected 226 queens from 7 sites in northeastern Arnhem Land
- Dissected 150 queens and counted the number of oocytes in each ovary

RESULTS
- Unidentified infection found
- Fewer oocytes in infected queens (Mann-Whitney U test, U= 171, p= 0.006)

CONCLUSIONS & FUTURE WORK
- Queens can be significantly affected by pathogens
- Initial findings suggest this pathogen may affect egg production and thus population abundance
- Next steps in this study will be to identify the pathogen using next-generation sequencing techniques

REFERENCES


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