

**OR087**

*Comparison of colony dynamics in native and invasive ant species*

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The ability to achieve big colony sizes has been attributed as an important characteristic of invasive social insects. Increasing colony size improves colony defense, foraging success, and productivity of new workers and reproductives. However, invasive social insects are often highly polygynous and both the number of workers and queens determine colony size. Differential effects of queens and workers on colony survival and productivity have been demonstrated in the Argentine ant. These may lead to positive feedbacks between worker and queen abundance that contribute to the large colony sizes of invasive ants. Native ants may show biological resistance to the spread of invasive ants. A native ant, *Tapinoma nigerrimum*, shows the potential to outcompete the Argentine ant under certain colony sizes whereby this potential depends on its ability to achieve colony sizes large enough relative to those of the Argentine ant. We explored the colony dynamics of these two species experimentally. While varying the initial number of queens and workers, we measured individual survival and productivity at different time periods over two months. Overall queen and worker survival was higher in colonies of Argentine ant. Patterns did not vary over the different time period measured. The positive effect of the number of queens found in the Argentine ant was not evident in *T. nigerrimum*, suggesting less potential positive feedbacks that encourage large colonies.