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*Neighbor removal increases forager longevity, slows progression through temporal castes (*Pogonomyrmex badius*)*

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In the Florida harvester ant (*Pogonomyrmex badius*), aging workers move through a sequence of labor roles, culminating in foraging. By wire marking age-cohorts in field colonies, we demonstrated that a 5 fold difference in the age at first foraging exists between workers born in summer and autumn (43 vs. 200+days). The interaction of both development rates generated a seasonal pattern of forager allocation, conserved across years, for more than 55 field colonies. Here, we ask how these patterns are influenced from the top-down by forager longevity. In this study, removal of conspecific, neighboring colonies resulted in an immediate and significant increase in monthly forager survival (+40%), which in turn suppressed the movement of younger workers into the forager population, resulting in a maintenance of forger number. Likewise, when foraging-range was limited, longevity increased under both starved and fed conditions, delaying the movement of younger workers into the forager population and increasing their tenure in prerequisite labor roles. In contrast, removal of 50 -75% foragers did not increase per diem forager addition, workers were not drawn from other behavioral castes to fill induced labor gaps, and larvae died in proportion to foragers lost. Overall, this study suggests that development rate is influenced by increased worker longevity but not death rate (as might be suggested if labor roles were filled due to low occupancy). Furthermore, our results challenge the idea that foragers in social insects are disposable and that selection has favored a lifespan that predicts external mortality. We predict colony growth to occur when death rate falls below 3% per day, at 1 colony per 670 M2; resulting in increased forager tenure and suppression of younger workers. Development rate was also correlated with early adult and larval nutrition (15N), and percent fat in newly enclosed adults, suggesting multi-directional effects.