



RESEARCH  
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# NEWSLETTER

2016-2017



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We evaluated the potential of using *Pheidole megacephala* as a biological control agent against the coffee twig borer *Xylosandrus compactus* (Eichhoff), an economically important pest of Robusta coffee in Uganda. Upon observing that *P. megacephala* was common in coffee fields infested by *X. compactus*, we tested hypotheses that (1) *P. megacephala* feeds on all stages of *X. compactus*, (2) *P. megacephala* can enter galleries of *X. compactus* inside coffee twigs in search for the prey and (3) *P. megacephala*'s presence on infested twigs reduces populations of *X. compactus* in the galleries. In a Petri dish bioassay over 24 h, we found that *P. megacephala* preyed upon all stages of *X. compactus* without indication of preference. We caged up *X. compactus* infested twigs with *P. megacephala* in a plastic container over 48 h and found that the predator was unable to enter the galleries. Lastly, we caged up intact *X. compactus* infested coffee twigs in the field with muslin cloth sleeves for one month and found that *P. megacephala* reduced the population of *X. compactus* per twig by almost 22-fold compared to the untreated control. We concluded that *P. megacephala* is an indiscriminate predator of all *X. compactus* stages, and, though unable to enter *X. compactus* galleries, the predator may reduce *X. compactus* population on infested twigs. Exploitation of *P. megacephala* in the biological control of *X. compactus* on coffee and other crops would require additional studies on how to enhance presence of the predator on the infested crop.