

Public Abstract

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Title: The Biology of the Scrub Endemic Millipede, *Floridobolus penneri*

I report on several laboratory and field tests designed to learn about the ecology and life history of the large millipede, *Floridobolus penneri* that is endemic to native scrub only in south central Florida. *F. penneri* was found preferentially in patches of rosemary scrub, a xeric habitat containing extensive gaps of barren sand. Both male and female millipedes were active above-ground during the rainy season (July – October). Immature millipedes were captured fairly steadily during the entire period the pitfall traps were open (June-December), though peak activity for immature millipedes was early November, more than two months after the adult peak. Maximum temperature and weekly precipitation were not significant predictors for capturing mature millipedes. However, maximum temperature, but not weekly precipitation, was a significant predictor for capturing immature millipedes. Time-since-fire in rosemary scrub did not affect the number of millipedes captured at a site. Based on laboratory feeding trials, stable isotope analysis, and laboratory observations of feeding behavior, it seems unlikely that leaf litter and root tissues from woody scrub plants are major dietary inputs. The identity of the main food source of *F. penneri* remains an enigma.