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**Functional behavioral responses to prey among the orb-weaving spider *Zygiella x-notata***

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**ABSTRACT**

The functional response hypothesis concerning predator behavior towards prey predicts that the presence of potential prey will influence predator behavior. Among web-spinning spiders, the minimum requirement to capture prey is the construction of a web in a given site. In this paper we test the hypothesis studying the influence of the presence of prey on web building and web characteristics, among the orb-weaving *Zygiella x-notata*. Evidence is presented that suggests that the presence of prey induces web building but has no apparent effect on the reconstruction of destroyed webs. Traps are smaller and the amount of time spent weaving is shorter in the presence of prey, regardless of when the prey is presented to the spiders. It appears that the presence of prey in the environment has two types of effect, the first in relation with the spiders state of nourishment influences the "decision" of when to begin the construction, and the second whatever the state of nourishment concerns certain aspects of web construction (size of the web and time spent weaving). Results are discussed in terms of predator response to prey and suggest an increase in predator efficiency in the presence of prey.

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