Abstract

Males of the damselfly Hetaerina rosea may defend mating sites along river margins (resident males) or, alternatively, wander among different areas presumably searching for mates (nonterritorial males). Although the occurrence of territorial and nonterritorial males of H. rosea is very common in Brazil, studies examining which factors may be responsible for the adoption of alternative mate-locating tactics in this species are inexistent. We investigated the relationship between the adoption of these alternative mate-locating tactics by males of H. rosea and two possible causes: body weight and male abundance. We carried the study in three areas: sites 1, 2 and 3. Samples were monthly undertaken in sites 1 and 2 between September/2001 and August/2002 and in site 3 between May/1999 and January/2001. Using the scan method with fixed areas and mark-resighting techniques, we did not find any relationship between the proportion of nonterritorial males and male abundance per month on sites 2 (n=6) and 3 (n=7), indicating that the adoption of alternative mate-locating tactics is not affected by competition for territories. In the same way, nonterritorial and resident males showed similar body and thoracic weight measures (n=30 and n=27 for sites 2 and 3 respectively). Maybe the nonterritorial tactic is adopted by individuals searching for better territories or males that were evicted from their defended sites. The absence of relationship between weight and male territorial status is in accordance with other Hetaerina species. However, other traits not investigated here such as parasitic load, fat content and age may influence the adoption of different mate-acquisition tactics in H. rosea males. Rev. Biol. Trop. 57 (1-2): 361-370. Epub 2009 June 30.

Keywords

Alternative mate-locating tactics, mating systems, territoriality, resource holding potential, density, Hetaerina rosea, Calopterygidae.