BUTTERFLIES ASSOCIATED WITH AN ARMY ANT SWARM RAID IN HONDURAS: THE "FEEDING HYPOTHESIS" AS AN ALTERNATE EXPLANATION

Drummond (1976, J. Lepid. Soc. 30: 237–238) reported that a few female Mechanitis isthmia Bates (Nymphalidae: Ithomiinae) and male Graphium philolaus (Boisduval) (Papilionidae: Papilioninae) were attracted to a swarm raid of army ants (Eciton burchelli (Westwood)) in Honduras. As an explanation, Drummond suggested a “reproductive odor hypothesis” to account for the attraction of female Mechanitis to the swarm raid: the strong, unpleasant odor mimicked the courtship scent of male Mechanitis, thus causing females of this species to follow the swarm. As Drummond indicated, the attraction of male Graphium to the swarm raid was puzzling since, like ithomiines, males produce the courtship scent. Recent literature on the feeding behavior of selected butterflies suggests an alternative explanation to these interesting observations.


Assuming that odors of decay cause the attraction of adult butterflies to nutrient sites, I suggest a “feeding hypothesis” as an alternative explanation for Drummond’s findings: both the Mechanitis and Graphium butterflies were being “fooled” by the swarm raid odors. The odors of decay associated with the swarm raid triggered food searching behavior by these butterflies, causing them to follow the army ants. Such an explanation accounts for the attraction of both sexes to the ants. Under the feeding hypothesis, the attraction of butterflies to puddling sites, bird-droppings, manure heaps, etc. is aided by responses to characteristic odors associated with these sources of nutrients (amino acids, sodium, etc.).

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