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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.

The acquisition of nutrients by adult butterflies of both sexes may be of widespread importance (Gilbert, 1972, Proc. Natl. Acad. Sci., U.S.A. 69: 1403-1407; 1976, Biotropica 8: 282-283; Arms et al., 1974, Science 185: 372-374). Adult butterflies are attracted to nutrient sites having an odor of decay (Gilbert, 1972, in litt.; Young, 1975a, Stud. Neotrop. Fauna 10: 19-56; 1975b, Rev. Biol. Trop. 23: 101-123; Young & Muysmond, 1973, Carib. J. Sci. 13: 1-49). Ithomiine butterflies are attracted to fresh deposits of bird droppings splashed on leaves (pers. obs.). Drummond (in litt.) suggested that the male *Graphium* might be responding to an odor stimulus that elicits food searching behavior. These observations suggest that the attraction to nutrient sites by adult butterflies involves odors of decay, although this is only speculation at the present time.

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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