



Plate 7.1. Natural history of *Utetheisa ornatrix* (left panel). Adult male (top); larva feeding on seedpod of *Crotalaria mucronata* (middle); adult male courting a female (bottom). The yellow genitalic coremata are partially inflated and thrust toward the female. Natural history of *Cosmosoma myrodora* (right panel). Adult male resting on leaf of the larval host plant *Mikania scandens* (top); larva (middle); male courting female (bottom). The flocculent has been released and forms a cloud around the pair.

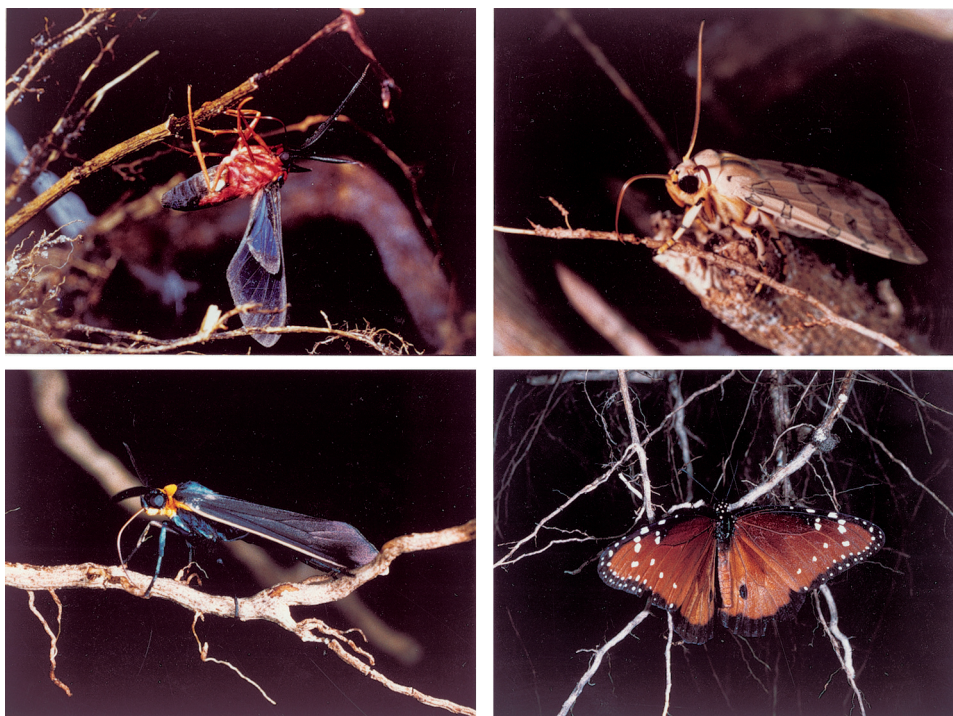


Plate 7.2. Pharmacophagous adults attracted to the roots of *Eupatorium capillifolium*: adult male *Cosmosoma myrodora* (top left); female *Halisidota tessellaris* (top right); male *Cisseps fulvicollis* (bottom left); male queen butterfly *Danaus gilippus bernice* (bottom right). This last photograph was taken during mid afternoon. The ring flash blackened the background. All other photos were taken at night.

behavior is well known to lepidopterists. Butterfly and moth collectors in the tropics (Beebe, 1955; Beebe and Kenedy, 1957) have long known about and exploited the remarkable attractive power of plants containing PAs. *Heliotropium indicum*, commonly called “fedegoso,” is usually the plant of choice. It is uprooted, sometimes damaged or moistened, and then hung as bait. The foliage and especially the roots of the plant attract Lepidoptera from several families including danaine and ithomiine nymphalid butterflies (Pliske 1975a,b; Brown, 1984; Boppré, 1990). Individuals approach the baits from downwind, land, extend their proboscis, and regurgitate on the plants. The regurgitant dissolves alkaloids on the plant’s surface and the extract is then reimbibed. The process can continue for hours, with the insect sometimes becoming engorged and even lethargic (Boppré, 1990). Michael Boppré has defined this extraordinary behavior as a form of pharmacophagy: “Insects are pharmacophagous if they search for certain secondary plant substances directly,