

We checked the cottonwoods and other trees bordering the nearby slough, and noted *V. cardui* engaged in the same type of activity, but the insects were present at a lower density. The isolation of the cottonwood of our observations may well have acted to concentrate activity in its vicinity.

Activity ended abruptly. At 2148 h, flight and "dance" activity was still high. Two minutes later, only a few individuals were noted flying, and by 2154 h, all flight had ceased.

Individuals were observed flying into the tree and alighting on a leaf, where they remained at least as long as we could see them (until about 2200 h), and presumably passed the night there. All individuals observed (we estimate at least 100 insects present at any time) came to roost in the tree, but were widely dispersed, with no group roosting observed. We were unable to return to the site during the morning hours to observe dispersal for the day.

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OVIPOSITION BY *PARIDES* *ARCAS* *MYLOTES* (BATES) (PAPILIONIDAE) ON A GRASS LEAF-BLADE

Additional key words: Papilioninae, Troidini, *Aristolochia*, *Acroceras zizanoides*, Costa Rica.

Neotropical *Parides* oviposit exclusively on *Aristolochia* (Aristolochiaceae) plants (Moss 1919, Nov. Zool. 26:295-319; Cook, Frank & Brower 1971, Biotropica 3:17-20; Young 1973, Psyche 80:1-21; 1977, J. Lepid. Soc. 31:100-108; Brown, Damman & Feeny 1980, J. Res. Lepid. 19:199-226). Here I report a single observation of *Parides arcas mylotes* Bates ovipositing on the leaf-blade of grass.

At 1600 h on 28 July 1986, a "fresh" *P. arcas mylotes* was followed for ten minutes through the 10-20 cm high ground cover of grass and weeds in a small clearing within the cacao plantation "Finca Experimental La Lola" near Siquirres (10°06'N, 83°30'W; 50 m elev.), Limon Province, Costa Rica. The butterfly alighted on a 15 cm long *Aristolochia* sp. seedling partly concealed in dense grass, and placed one egg on a meristem leaf. The butterfly then flew around the vicinity of this vine, and returned a few minutes later and placed another egg on the leaf-blade of the grass *Acroceras zizanoides* (H.B.K.) Dandy (Graminae), about 25 cm from the *Aristolochia* (Fig. 1).

I collected both the *Aristolochia* and the *Acroceras zizanoides*, placing them in a tightly-closed plastic bag, to rear the two eggs. Roots of both plants were placed in a water-pik in the bag. I wanted to determine if the larva from the leaf-blade egg would feed on the grass, move to the *Aristolochia* vine (closest leaves about 10 cm away), or become disoriented and not feed at all. For the following two weeks of observation, neither larva fed on *Acroceras zizanoides*. The larva from the egg on the grass crawled to the *Aristolochia* without attempting to feed on the grass. Both larvae fed on the *Aristolochia*. I tentatively conclude that the oviposition on the grass leaf-blade was an aberrant behavior. Because troidine butterflies such as *Parides* are specialist herbivores on Aristolochiaceae (Brower & Brower 1964, Zoologica 49:137-159; and others), it would be of interest to determine the frequency of such behavior in the wild. Given that the meristem leaf of *Aristolochia* and the leaf-blade of *Acroceras zizanoides* are both narrow



FIG. 1. Top: Leaf-blades of the grass *Acroceras zizanoides* (H.B.K.) Dandy, and meristem leaves of *Aristolochia* sp., nonhost and host plants, respectively, for *Parides arcas mylotes* in Costa Rica. A second instar of *P. arcas mylotes* is on the ventral surface of the *Aristolochia* leaf. Bottom: Egg of *P. arcas mylotes* on the ventral surface of the grass leaf-blade.

and similar in shape (Fig. 1), suggesting they are visually similar to ovipositing troidine butterflies as shown by Rausher and Papaj (1983, *Anim. Behav.* 31:341–347), a fresh, “inexperienced” butterfly, like the individual observed here, might visually confuse host and nonhost plants. Nonhost oviposition occurs in the troidine genus *Battus* when the nonhost is visually similar to the host (Papaj 1986, *J. Lepid. Soc.* 40:348–349).

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