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### LITERATURE CITED

- HEINRICH, C. 1923. Revision of the North American moths of the subfamily Eucosminae of the family Olethreutidae. USNM Bulletin 123:1-286, pls. 1-59.

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### GENERAL NOTE

#### OVERWINTERING AGGREGATIONS OF HACKBERRY CATERPILLARS (*ASTEROCAMPA CLYTON*: NYMPHALIDAE)

Hackberry caterpillars (*Asterocampa* spp. Roeder: Nymphalidae) overwinter as mid-instars, presumably in fallen leaves and crevices of bark (Scudder, 1893, Guide to the Commoner Butterflies, Holt, New York). In the fall of 1981 in Gainesville (Alachua Co.), Florida, the preparatory overwintering behavior of *Asterocampa clyton* Boisduval and Leconte was observed. After molting in mid- to late October, the greenish caterpillars moved up to several meters from the molting site to the ends of branches of their host plant, hackberry (*Celtis laevigata* Willdenow). Each group of caterpillars effectively tied a leaf to its branch by repeatedly laying silk over the junction of the branch and leaf petiole. Some groups tied the sides of the leaf together. Eventually the leaf curled and dried around the caterpillars. By late fall most of the leaves still on the trees were those tied by the caterpillars. Occasionally, the aggregation of caterpillars split and, consequently, two or more leaves at the end of a branch were tied, each leaf sheltering some caterpillars. By this time the caterpillars were pinkish-brown, blending with the dead leaves.

To determine the mean number of larvae per overwintering group, 20 groups were collected in December (just after leaf abscission) and 21 groups in late February (just prior to budbreak). Group size was not significantly different ( $\bar{x} = 8.7$  larvae  $\pm 1.9$  S.E. in December and  $\bar{x} = 10.1 \pm 2.7$  S.E. in February; Mann-Whitney *U* test,  $P > 0.20$ ). Similar group size early and late in the overwintering period suggests that probably few individuals were lost from an aggregation during that period.

To determine the effectiveness of tying leaves to the trees for overwintering sites, larval groups were marked in December by attaching numbered, plastic bird bands to the branches. Of 71 groups, 16% were recovered in late February, each with more than half of the leaf and caterpillars present. Fourteen percent of the markers had less than half of a leaf and 70% of the markers had no leaf. None of these had caterpillars. This supports the idea that disappearance from the branches was a larval group event rather than an individual event.

Thus, it appears that hackberry caterpillars overwintered within leaves tied to branch tips on their host plants when more than half of the leaf remained intact and tied to the branch. Tied leaves and aggregations of caterpillars missing from the trees may be a result of avian predation or weather, causing deterioration or detachment of the leaves.

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