

GENERAL NOTES

FIELD OBSERVATIONS OF DIVERGENT RESTING BEHAVIOR AMONG
HICKORY FEEDING CATOCALA LARVAE (NOCTUIDAE)

Catocala are known for their sympatric diversity, with at least 35 species present at almost any forested locality in southern New England (see Sargent, 1976, *Legion of night: The underwing moths*, Univ. Massachusetts Press, Amherst, MA; also personal observation). Of these, about one third feed on Juglandaceae (hickories and walnuts). The precise foodplant preferences of these Juglandaceae feeders will be the topic of another paper (Schweitzer, in prep.) and are also being investigated by L. F. Gall.

Sargent (1976, op. cit.; 1977, *J. Lepid. Soc.* 31:1-16) suggested that food may not be an important limiting factor in *Catocala* evolution. "Competition" for predator avoidance might be more important in *Catocala* ecology. Such competition might be manifest in different larval resting behaviors, which might serve to inhibit effective search image formation by predators, especially birds. Sargent (1976, op. cit.) reports laboratory observations of instar specific resting behaviors in *Catocala dejecta* Strecker and *C. resecta* Grote which were reared in plastic containers on *Carya ovata*. Although similar in appearance the two species grow at very different rates and so avoid having similar size and behavior simultaneously.

Little is known about field resting habits of most *Catocala* species. From my own observations it seems that late instar *C. epione* (Drury) and *C. c. consors* (J. E. Smith) larvae almost invariably rest on branches or small trunks. Late instars of *Catocala habilis* larvae are quite flattened and can be found resting under bark shags. Most sleeved *C. palaeogama* and *C. dejecta* last instar larvae rested exposed on the branches. Most other species typically hid in folds of the cloth or in debris.

The resting habits of larvae collected on 25 and 26 May 1980, West Rock, New Haven, Connecticut, were noted and are presented in Table 1. Data for those larvae observed at rest were analyzed by chi-square tests. *Catocala epione* differs from the other species, all of which appear to have similar resting behavior ($\chi^2 = 10.6$, $P < 0.005$, with Yates correction). Of course, resting habits may diverge in later instars, and a larger sample size might have revealed more differences.

These limited observations are apparently the first demonstration of differences in field resting behavior of the sort described by Sargent and may be the first published documentation of natural foodplants for these species. The data in Table 1 are from larvae collected on four stunted trees at the edge of trap rock outcrops. All trees had trunk diameters of less than 15 cm and had some bark exfoliations on the trunk. All branches were carefully searched and then beaten with a baseball bat. All but two of the 25 larvae were found by the visual search.

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TABLE 1. Resting behavior of *Catocala* larvae collected at West Rock, New Haven, Connecticut on 25 and 26 May 1980 on *Carya ovata*. *C. epione* were in ultimate (1) and penultimate (5) instars. Others were 2-3 cm long and dark colored, and were probably in the third instar.

	Beaten	Numbers observed resting on			Crawling
		Foliage ¹	Twig	Trunk	
<i>C. epione</i>	1	0	5	0	0
<i>C. palaeogama</i>	1	9	1	0	1
<i>C. residua</i>	0	4	0	0	0
<i>C. resecta</i>	0	2	1	0	0

¹ Midrib on underside of leaflets.



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