

FIG. 1. A, aberrant female *Lycaeides melissa melissa*, ventral surface. B, normal *L. m. melissa* female.

I have shown pictures of this aberration to Dr. Cyril F. dos Passos, Dr. John C. Downey, Harry K. Clench and several other knowledgeable lepidopterists and none can recall seeing a similar specimen, which suggests that such an aberration is rare in the species *melissa*. The aberrant specimen and several normal specimens from the same collecting site have been donated to the Allyn Museum of Entomology, Sarasota, Florida.

WILLIAM B. WRIGHT, JR., 18 Clinton Place, Woodcliff Lake, New Jersey 07675.

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POPULATION OUTBREAK OF CATOCALA PALAEOGAMA (NOCTUIDAE)

Early in the afternoon of 22 July 1978, I encountered large numbers of the oldwife underwing moth, Catocala palaeogama Guenée at Illinois Beach State Park in NE Illinois. The park, located on Lake Michigan approximately 1 mi E of Zion, Lake Co., provides an excellent wildlife habitat. Natural features of this extensive tract include prairie, forest, marsh, dunes, stream and several miles of Lake Michigan shore. Low dunes along the beach support an unusual assemblage of plants, including various dune-associated grasses, bearberry (Arctostaphylos Uva-ursi) and trailing juniper (Juniperus sibirica). Black oak (Quercus velutina), sand cherry (Prunus pumila), willow (Salix sp.), New Jersey tea (Ceanothus pubescens), shrubby cinquefoil (Potentilla fruticosa), prickly-pear cactus (Opuntia polyacantha), wild indigo (Baptisia tinctoria), lead plant (Amorpha fruticosa) and a proliferation of other plants cover dunes further inland, attracting a variety of unusual moth and butterfly species from early spring until late fall.

The concentration of *Catocala palaeogama* was discovered on trunks of black oak at a sandy picnic area close to the lake and adjacent dunes inland. I first observed the moths when I startled individuals at their resting sites, causing them to fly to other trees nearby. From one to as many as five recently emerged specimens were found roosting on nearly every sizeable tree, always on the shady side, from two to five feet

above the ground. When sunlight touched resting sites, individuals moved around the trunk to shade. Observing and collecting was facilitated in these moths as they rested on the same side of all trees at a given time. Forewing markings, showing the considerable variation common in many *Catocala* species, blended well with the grey bark of the oaks.

It would be difficult to estimate the number of underwing moths in this aggregation, or to know how extensive the population was. But certainly many hundreds of specimens were congregated within the park that afternoon. It is likely this phenomenon occurred in this area in other years as well, but this was my first observation of such a remarkable event. While *C. palaeogama* was the predominate species represented, single specimens of *C. lacrymosa* Guenée and *C. amica* Hübner were collected. A large series of *C. palaeogama* was taken, and a number of these, deposited in the collection of Mr. Bryant Mather, Clinton, Mississippi, were subsequently positively identified by Mr. Eric Quinter, American Museum of Natural History. Specimens of the same catch were also deposited in the collections of Dr. Clifford D. Ferris (Laramie, Wyoming), Mr. Patrick J. Conway (Downers Grove, Illinois), Mr. Mogens C. Nielsen (Lansing, Michigan), and the Illinois Natural History Survey (Urbana, Illinois).

It is interesting to note that a collecting trip during the following weekend to the same locality yielded no additional specimens of *C. palaeogama* after the superabundance of the previous week. The area which had been alive with activity at that time was now dead, so far as that species was concerned. However, specimens of other *Catocala* species were collected during the second visit.

IRWIN LEEUW, 1219 Crystal Lake Road, Cary, Illinois 60013.

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NOTES ON THE BIOLOGY OF BATTUS PHILENOR (PAPILIONIDAE) IN CENTRE COUNTY, PENNSYLVANIA

Centre County occupies parts of two geographic provinces. The northwestern third lies in the Allegheny Plateau Province, while the southeastern two thirds belongs to the Ridge and Valley Province (Westerfeld, 1959, Pa. Agr. Exp. Sta. Bull. 647: 6–17). The configuration of land surface in the latter is due to the folding of the rocks into parallel mountain chains. These sandstone ridges are oriented from southwest to northeast and average from 550–730 m in elevation. Separated by these ridges are limestone valleys averaging about 310 m above sea level. Battus philenor (L.) is largely confined to the stream trenches of these valleys. One such area is along Spring Creek adjacent to the Benner Springs Fish Hatchery about 8.5 km northeast of State College. A small but rather stable population has existed here since at least 1974.

B. philenor is bivoltine with flight periods from 13 May to 16 June and 6 July to 26 August. Fresh adults occasionally observed in September and early October represent a partial third brood. However, these individuals, mostly males, are probably lost to the population since it is doubtful that their progeny would have sufficient time to reach the pupal (overwintering) stage prior to the onset of cold weather.

Males are frequently observed visiting mud puddles, or flying rapidly along the creek and woodland trails and in adjacent meadows. Females are more secretive and are best sought along woodland trails or in open woods. Both sexes prefer pink to purplish flowers such as Hesperis matronalis L., Dipsacus sylvestris Huds., and various thistles (Cirsium spp.). Associated butterflies of special note include Asterocampa clyton (Boisduval and LeConte), Calephelis borealis (Grote and Robinson), and Erynnis lucilius (Scudder and Burgess).