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**MELANISTIC MALES OF *CALLOSAMIA PROMETHEA*  
(LEPIDOPTERA: SATURNIIDAE)**

G. P. Waldbauer and J. G. Sternburg<sup>1</sup>

During the summer of 1983 seven melanistic male promethea moths appeared among several hundred males that emerged from cocoons we were holding in the laboratory. They probably emerged from cocoons that had been reared from stock collected in central Wisconsin but perhaps came from cocoons that had been reared by a dealer in northern

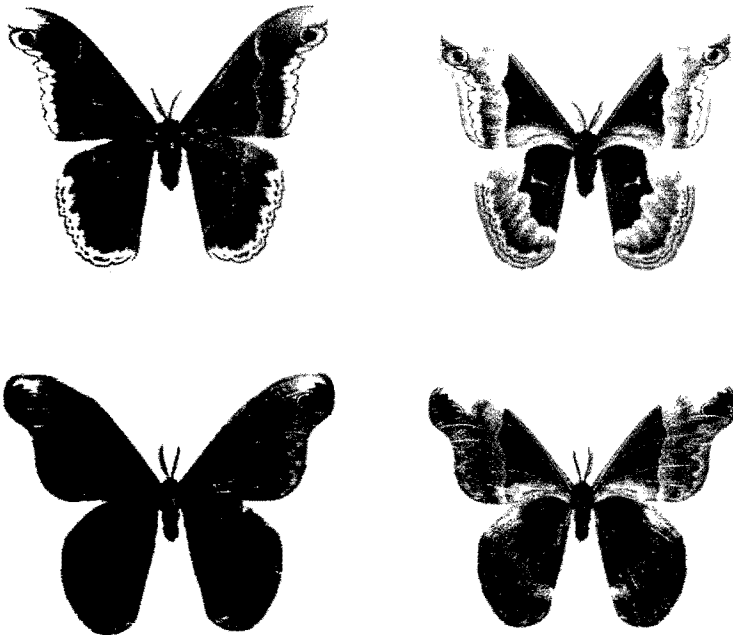


Fig. 1. Adult *Callosamia promethea*: (above) upper- (left) and underside (right) of a normally pigmented male; (below) upper- (left) and underside (right) of a melanistic male.

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Indiana. There were no phenotypically melanistic females among several hundred females that appeared.

The wing pattern of normally pigmented promethea males is composed of minute scales of at least eight different colors. On the uppersides, the wings are blackish with clay-colored borders along their margins. The dark areas distad of the postmedial lines are suffused with a few gray and brownish scales, and there are some white and reddish scales around the eyespots. The undersides of the wings are largely maroon and reddish-magenta with clay-colored borders. The magenta areas distad of the postmedial lines have a scattering of white scales, and the eyespots are similar to those on the upperside (Fig. 1).

The melanistic males have only black, gray, and white scales, but the normal wing pattern is dimly visible as blackish gray on black (Fig. 1). On both the upper- and undersides of the wings, the areas proximal of the postmedial lines are jet black, the gray scales being largely confined to the area distad of the postmedial lines. The white scales are distributed as they are on normally pigmented males, some in the vicinity of the eyespots on the upper- and undersides and a scattering on the wing areas distad of the postmedial lines on the underside.

Normally pigmented promethea males are Batesian mimics of *Battus philenor* (L.) (Waldbauer and Sternburg 1976, Sternburg et al. 1977). The melanistic male is even more similar to *B. philenor*, and it may represent a way in which promethea could greatly enhance its resemblance to its model in a single evolutionary step if the melanism is genetically based (Clarke and Clarke 1983).

#### ACKNOWLEDGMENTS

J. Mark Scriber collected cocoons in Wisconsin and Harold W. Hartman provided cocoons reared in northern Indiana. This research was supported by NSF Grant BSR 82-02772. We thank the University of Michigan Biological Station for the use of their facilities.

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