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The First Records in Illinois of *Heliconius Charitonius* (Lepidoptera: Heliconiidae) and *Phoebis Agarithe* (Lepidoptera: Pieridae)

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ENTOMOLOGICAL NOTES

THE FIRST RECORDS IN ILLINOIS OF *HELICONIUS CHARITONIUS* (LEPIDOPTERA: HELICONIIDAE) AND *PHOEBIS AGARITHE* (LEPIDOPTERA: PIERIDAE)

Our key to Illinois butterflies, exclusive of the skippers (Hesperiidae), was published in 1980. It includes those butterflies listed by Irwin and Downey in their 1973 Illinois checklist plus two species, *Anaea aidea* (Guerin-Meneville) (Nymphalidae) and *Celastrina ebonina* Clench (Lycaenidae), added to the state list after 1973. Presented here are two additions to the Illinois list, the zebra butterfly, *Heliconius charitonius* (Linnaeus) (Heliconiidae), and the large orange sulphur, *Phoebis agarithe* (Boisduval) (Pieridae).

H. charitonius, in the United States, is presently known from South Carolina, Georgia (Comstock and Brown 1950), Florida, the Gulf Coast, and Texas, and to stray northward to Kansas (Ehrlich and Ehrlich 1961) and Colorado (Howe 1975).

We have recently examined a male specimen of *H. charitonius* that is housed in the Illinois State Museum, Springfield. The label information is as follows: Monroe Co., Illinois; 1 mile north of Waterloo (T2S R10W S13); 13 Aug. 1970; on petunia; Tim Vogt, Collector.

This species can be separated from *Agraulis vanillae nigrior* Michener, the only other Illinois heliconiid, by the dorsal color pattern of the wings. *H. charitonius* has black ground color and yellow stripes, whereas *A. vanillae nigrior* has orange-brown ground color and lacks yellow stripes.

Klots (1951) reported that *P. agarithe* occurs from Florida along the Gulf Coast to Texas, and south into Mexico, and strays north to Kansas, Arkansas, and Illinois; Howe (1975) added Arizona. Irwin and Downey (1973) listed *P. agarithe* as a species of possible occurrence in Illinois and referred to Klots (1951). However, Klots did not cite specific records to support his inclusion of Illinois in the range of this sulphur.

We have recently seen two Illinois male specimens of *P. agarithe*. One of these was observed in flight at Fountain Bluff, Jackson Co., on 7 June 1981, but was not captured. The other was captured by another collector who donated it to the SIU Entomology Collection, Zoology Research Museum. The label information is as follows: Sparta, Illinois; Randolph Co.; 2 May 1981; T. L. Wiley, Collector.

P. agarithe can be separated from *P. philea* (Johansson) and *P. sennae eubule* (Linnaeus), the other Illinois representatives of *Phoebis*, by the dorsal color pattern of the wings. Males of *P. agarithe* have orange ground color, whereas those of *P. philea* and *P. sennae eubule* have yellow ground color. Females of *P. agarithe* have wings with pinkish orange ground color and fore wings with a row of discontinuous brown marginal spots; females of *P. philea* have wings with dull orange to brownish yellow ground color and fore wings with a brown marginal border, and those of *P. sennae eubule* have wings with yellow ground color and fore wings with a row of brown marginal spots which may be continuous. The wings of female *P. philea* and *P. sennae eubule* are illustrated in Figs. 23 and 24, respectively, of our 1980 Illinois butterfly key.

ACKNOWLEDGMENTS

We wish to thank Dr. E. D. Cashatt, Illinois State Museum, for allowing us to examine the specimen of *H. charitonius*; and Mr. T. L. Wiley, R. R. #1, Sparta, Illinois, for donating his specimen of *P. agarithe* to the SIU Entomology Collection.

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NEW RECORDS OF *PASIMACHUS ELONGATUS* IN MICHIGAN
(COLEOPTERA: CARABIDAE: SCARITINI)

Pasimachus elongatus LeConte is a large (21-28 mm), flightless ground beetle which occurs from Michigan westward to Montana and south to Louisiana and Arizona. A search of major entomological collections and the literature revealed that only a few specimens have actually been collected in Michigan. Banninger (Rev. de Entomologia 21:481-511, 1950) did not specify where his Michigan specimens were taken. The United States National Museum has two specimens labelled "Mich.", one collected by C. V. Riley and one by W. Robinson, and seven specimens from St. Joseph (Berrien Co.), Michigan collected by H. G. Butler between 14 July and 19 August 1938.

In 1979 five barrier-type pitfall traps were installed in the Barry County State Game Area (T3N, R10W, Sec. 22, Barry Co.), Michigan to sample the carabid fauna. The soil in the area is sandy and covered with lichens, moss, and herbaceous vegetation. The overstory is scattered, mature black oak with an understory of "scrub" oak and black cherry.

A single *Pasimachus elongatus* was captured on 10 June 1979; three additional specimens were taken on 17 June 1979. Another specimen was taken from the same area on 28 June 1980. These captures represent new county records, and are significant because the site is 60 miles northeast of the St. Joseph locality. Also, *P. elongatus* has apparently not been taken in Michigan since 1938. However, it is possible that this species occurs in scattered localities throughout southwestern Michigan in areas of open woodland with sandy soil.

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