

LEPIDOPTERA AS PREY OF OTHER INSECTS

by HOMER F. PRICE

During the past 21 years the writer has collected 120 species of Odonata and 20 species of robberflies (Asilidæ) in northwestern Ohio and north-eastern Indiana. Of the Odonata, 4800 specimens were taken in Ohio and 480 specimens in Indiana. Considerable attention has been given to the larger prey of these insects with rather poor results. In all cases the Odonata and prey were papered together while the robberflies and prey were pinned together. Dr. E. S. THOMAS and his assistant Mr. ROBERT GOSLIN of the Ohio State Museum have determined nearly all of my collection of robberflies. Dr. B. ELDWOOD MONTGOMERY of Purdue University and Dr. D. J. BORROR of the Ohio State University have determined or checked one or more specimens of nearly every species of Odonata in my collection. The following list was prepared for the instances in which butterflies were taken as prey.

ODONATA TAKEN WITH PREY

1. *Gomphus externus* Hagen, ♂, 3 Aug. 1947, Maumee River, Paulding Co., Ohio, prey—*Pieris rapæ* Linné.
2. *Gomphus fraternus* Say, ♀, 11 June 1953, pond in Williams Co., Ohio, prey—*Phyciodes tharos* Drury.
3. *Dromogomphus spoliatus* Hagen: ♂, 5 Aug. 1946, Eagle Creek, Defiance Co., Ohio, prey—*Pieris rapæ*; ♂, 25 Aug. 1950, Brown Township, Paulding Co., Ohio, prey—*Colias philodice* Latreille; ♂, 19 Aug. 1949, Flatrock Creek, Paulding Co., Ohio, prey—*Phyciodes tharos*.
4. *Erythemis simplicicollis* Say: ♀, 7 July 1955, Cedar Lake bog, Lagrange Co. Ind., prey—*Lycæna phlæas americana* Harris; ♀, 22 July 1949, pond in Paulding Co., Ohio; prey—*Phyciodes tharos*.

ROBBERFLIES TAKEN WITH PREY

1. *Promachus vertebratus* Say, ♂, 20 Aug. 1950, Mud Lake, Williams Co., Ohio, prey—*Pieris rapæ*.
2. *Asilus sericeus* Say: ♀, 7 July 1942, Auglaize River, Paulding Co., Ohio, prey—*Cercyonis pegala nephele* Kirby; ♀, 14 June 1958, Oak Openings, Lucas Co., Ohio; prey—*Euptychia cymela* Cramer.

The following observations are also given: *Anax junius* Drury was seen in October while capturing either *Colias philodice* or *C. eurytheme* Boisduval. The common Tenspot (*Libellula pulchella* Drury) was once observed while capturing an unidentified butterfly. The large bold *Hagenius brevistylus* Selys was once seen on wet sand vibrating and showing great interest in a concentration of *Colias philodice* only inches away at the water's edge of the Maumee River; it probably would soon have captured a butterfly if I had not quickly netted it. The very large *Epiaschna heros* Fabricius was once noted securing a moth about the size of an *Autographa*; it flew around in circles afterward for several minutes as if greatly pleased and finally alighted high up in a tree where it could not be taken. At the Monument City bog in Huntington County, Indiana, a large *Tachopteryx thoreyi* Hagen once alighted on my shoulder with a small moth; it flew away when I tried to take it but was captured soon afterward although the moth was lost. At Mud Lake in Williams County, Ohio, a large Green Frog (*Rana clamitans* Latreille) was once seen to jump a few inches and capture a large swallowtail butterfly which it quickly swallowed entire; several other frogs of the same species were observed in the same area, crouched in deep depressions formed in the wet soil by the feet of livestock; they probably secured many butterflies as well as other insects.

I was puzzled for a long time by the sight of numbers of wings of *Colias philodice* and *C. eurytheme* lying on the wet earth in the bottom of ditches where the species congregated. For some time it was believed that Odonata were responsible for this although none were ever observed making captures. I lacked the time and patience to solve the problem, but believe now that shrews and mice were probably responsible; shrews were often glimpsed running along the ditch bottom.

It is the opinion of the writer that butterflies and moths constitute a small part of the food of Odonata and robberflies.

Reference

- Price, Homer F., 1958. Additional notes on the dragonflies of northwestern Ohio. *Ohio journ. sci.* 1958: 50-62.

Payne, Ohio, U. S. A.