

NOTES ON THE SYRPHIDAE COLLECTED AT
JAFFREY AND MOUNT MONADNOCK, N. H.,
WITH A DESCRIPTION OF A NEW SPECIES

BY CHARLES W. JOHNSON

Boston Society of Natural History

My first visits to Jaffrey and Mt. Monadnock, N. H., were made in February and March, 1917. Even with the deep snow covering the beautiful woodland and mountain, one could readily see that this would be an ideal place for collecting. June, 1917, was therefore selected for another two weeks visit. Arriving on the 15th, the flowers of the choke cherry were just opening and for four days I caught hundreds of syrphids and other insects on these blossoms. Later the flowers of a *Cornus* followed by those of a *Viburnum* attracted many other species. Among the specimens obtained were about seventy species of Syrphidæ. In 1920 another visit was made, this time covering a period from June 4th to 14th. In the depression back of the old red school house some timber had recently been cut and from the stumps of sugar maple and birch sap was still flowing freely, the fermented sap containing many larvæ from which were bred *Ferdinandea dives* and *Brachyopa perplexa*. The *Cornus* bushes were mostly dead, probably winter killed by the severe cold of January, 1918. My next visit was in 1923, staying from June 14th to the 23rd. A few rainy days had made the cherry blossoms poor collecting ground but this loss was somewhat made up by the flowers of the raspberry which had grown up on the clearing back of the old red school house, species of *Criorhina* and *Xylota* being especially common. My next visit covering a period from May 9th to 21st, 1925, was perhaps the most interesting. To see the various spring species appear one after the other was a very enjoyable experience. An old oak log along the brook near "The Ark" was visited daily from the 14th to the 21st to secure the two species of

Chalcomyia. The last of my June trips was in 1926 from the 5th to the 18th.

It is interesting to note how seasons and conditions change in different years in this fascinating place. I was not able to duplicate the great catch I made in June, 1917, on the flowers of the choke cherry, neither have I been able to find so much sap flowing from stumps as in 1920, nor another oak log frequented by the two species of Chalcomyia. The area covered in collecting extends from the Shattuck Inn to about 1700 feet on Mt. Monadnock and from Mead's Brook to Hadley Brook, an area of about two square miles. A few trips were made to the top of the mountain (3166 ft.) but no additional species were taken, all those on the bare rocks of the summit being probably derived from lower levels. With "The Ark", where I stayed, as a center, I doubt if there is a corresponding area that would produce as many Syrphidae in the time mentioned. Of the 113 species recorded below, six were new to science. In addition to these a great many other insects were also collected.

LIST OF SPECIES

- Microdon ocellaris* Curr. June 20, 1923.
M. tristis Loew. June 14-21, 1923.
M. ruficrus Will. June 21, 1923.
Chrysotoxum fasciolatum DeGeer. June 18, 1917.
Chrysogaster nigripes Loew. June 15-25, 1917.
C. pulchella Will. June 18, 1917.
C. pictipennis Loew. June 18, 1917.
Pipiza femoralis Loew. June 18, 1917.
P. nigropilosa Will. May 14, '25, June 14, '23.
P. nigrotibiata Curr. Allotype June 17, 1917.
P. quadrimaculata Panz. May 12, '25, June 19, '17.
Heringia salax Loew. June 9, 1920.
Cnemonon pisticoideus Will. May 16, '25, June 12, '26.
Paragus bicolor Fab. May 16, '25, June 15, '17.
Chilosia (*Chilosia*) *orillænsis* Curr. June 16-18, 1923.
C. (Cartosyrphus) pallipes Loew. June 8, 1920.
C. (Cartosyrphus) sialia Shan. May 18, '25, June 10, '26.
C. (Cartosyrphus) slossonæ Shan. May 16-18, 1925.
C. (Cartosyrphus) tristis Loew. June 14, 1920.

- Chalcomyia ærea* Loew. May 14-21, 1925.
C. cyanea Smith. May 16-19, 1925.
Cynorhinella longinasus Shan. Holotype June 4, 1920.
Myiolepta nigra Loew. June 11-18, 1917, 1926.
M. varipes Loew. June 18, 1917.
Ferdinandea dives O. S. Bred from larvae in sap oozing from the stumps of maple and birch. Adults emerged June 25 to July 6, 1920.
Baccha cognata Loew. June 19, 1917.
B. fascipennis Wied. June 28, 1917.
Pyrophæna rosarum Fab. June 16, 1923.
Platychirus chætopodus Will. June 7-10, 1920.
P. hyperboreus Stæg. June 15, 1917.
P. peltatus Meig. June 15, 1917.
Melanostoma confusum Curr. May 14, '25, June 11, '20.
M. mellinum Linn. May 18, '25, June 19, '17.
M. obscurum Say. May 9, '25, June 18, '17.
Didea fasciata var. *fuscipes* Loew. June 19, 1917.
Syrphus lapponicus Zett. (*arcuatus* auct.) June 12, 1926.
S. amalopis O. S. June 15-19, 1917.
S. johnsoni Curr. Type June 15, another June 18, 1917.
S. latifasciatus Macq. June 27, 1917.
S. laticaudus Curr. May 9-18, '25, June 4-10, '26.
S. nitens Zett. May 17, 1925.
S. perplexus Osburn. June 28, 1917.
S. rectus O. S. June 14-18, 1917-'20.
S. ribesii Linn. May 19- June 21, 1917.
S. ribesii var. *vitifrons* Shan. June 15-19, 1917.
S. torvus O. S. May 19, 1925.
S. venustus Meig. June 4-15, 1917-'20.
Epistrophe arcticus Zett. May 9, 1920.
E. diversipes Macq. June 9-21, 1917-'23.
E. fisheri Walt. June 18-27, 1917.
E. genualis Will. May 9, '20, '25, June 15, '17.
E. mentalis Will. May 12, 1925.
E. oronoensis Metc. May 17, 1925.
E. umbellatorum Fab. June 4, 1920.
E. xanthostomus Will. May 18 '25, June 18, '17.
E. xylotoides John. One male, June 18, 1917.
Doros æqualis Loew. June 14, 1920.

- Toxomerus geminatus* Say. June 21, 1923.
Sphærophoria menthastri Linn. May 16, '23, June 15, '17.
Spheina campanulata Robt. June 20, '23.
S. flavimana Mall. June 21, 1923.
S. infuscata Loew. June 17 and 18, 1917-'26.
S. keeniana Will. May 19, '25, June 10-18, '17-'26.
S. lobata Loew. June 14-19, 1923.
S. monticola Mall. June 11, 1926.
S. petiolata Coq. June 28, 1917.
S. rufiventris Loew. June 18-25, 1917.
Neoascia distincta Will. May 13-20, 1925.
N. globosa Walk. May 20, 1925.
Rhingia nasica Say. May 17, '23, June 15, '17.
Hammerschmidtia ferruginea Fall. June 25, 1917.
Brachyopa diversa John. *Holotype*. June 18, 1917.
B. flavescens Shan. June 23, 1917.
B. notata O. S. June 9-25, 1917-'25.
B. perplexa Curr. June 9-25, 1920-'23.
Condidea lata Coq. One, June 16, 1926.
Sericomyia chrysotoxoides Macq. June 15-21, 1917.
S. militaris Walk. June 18, 1917.
Eristalis compactus Walk. May 13, '25, June 15, '26.
E. bastardi Macq. May 12, '25, June 4-18, 1917-'26.
E. dimidiatus Wied. May 20 '25, June 16, '23.
E. arbustorum Linn. May 14, '25, June 19, '17.
E. flavipes Walk. May 19, '25, June 18, '17.
E. saxorum Wied. June 16-21, 1917.
E. transversus Wied. June 8-18, 1917-'26.
E. tenax Linn. June 22-28, 1917.
Tropidia quadrata Say. June 28, 1917.
Helophilus fasciatus Walk. (*similis* auct.) June 15, 1917.
Parhelophilus lætus Loew. June 17, 1917.
P. obsoletus Loew. June 16, 1923.
Lejops lunulatus Meig. May 21, '25, June 18, '23.
L. stipatus Walk. (*conostomus* Will.) June 17, '26.
Mallota cimbiciformis Fall. June 15-25, 1917.
M. cimbiciformis var. *bautias* Walk. June 16-18, '17.
M. posticatus Fab. June 16-22, 1917.
Syrirta pipiens Linn. May 19, '25, June 18, '17.
Xylota ejuncida Say. June 13-18, 1917-'26.

***Xylota aristata* n. sp.**

Head bluish black, face shining, with a pollinose spot on each side and white hairs on the cheeks, front slightly roughened and pollinose, narrowly margined with brown above the antennæ, first and second joints of the antennæ dark brown, the third joint light brown, arista white, the base with a slight yellow tinge. Thorax black, slightly roughened and with short blackish pubescence, pleura shining, scutellum black, slightly rugose. Abdomen dark blue, shining, second and third segments margined posteriorly with an opaque black band that extends forward in the middle forming a broad triangle. Legs black with white hairs, posterior femora irregularly thickened with a cluster of spine-like bristles on the underside near the apex, posterior tibia strongly curved, with a prominent apical spur. under side of the tarsal joints with yellowish pubescence. Wings hyaline, base, stigma and veins dark brown, the cross-veins slightly clouded. Halteres light yellow. Length, 7 mm.

One male, Jaffrey, May 18, 1925. Type in the collection of the Boston Society of Natural History. The species is readily recognized by its white aristæ.

Xylotomina chalybea Wied. June 16-28, 1917-'23.

X. curvipes var. *satanica* Bigot. June 15, '23.

X. pigra Fab. June 9, 1926.

X. plesia Curr. June 12-22, 1923.

X. vecors O. S. June 15-19, 1917.

Brachypalpus oarus Walk. (*frontosus* Loew). May 16 and 21, '25, June 22, '17.

Criorhina intermedia John. *Holotype*. June 15-18, 1917.

Cynorhina analis Macq. June 8-22, 1917-'23.

C. badia Walk. June 16, 1923.

C. confusa John. June 6-18, 1917-'20.

C. nigra Will. May 16, '25, June 18, 1917.

Somula decora Macq. June 17-28, 1917.

Sphecomyia vittata Wied. June 8-21, 1917-'26.

Temnostoma alternans Loew. June 15-21, 1917.

T. balyras Walk. June 16-23, 1917-'23.

T. bombylans Fab. June 21, 1917.

An autumn trip to Jaffrey (Oct. 2nd to 16th, 1929) yielded comparatively few insects. Among these, however, were twenty species of Syrphidæ of which the following are not in the above list: *Syrphus wiedemanni* John. *Epistrophe grossulariæ* Meig. and *Toxomerus marginatus* Say.

This region has entomologically speaking, an interesting history from the fact that the earliest collection of insects made in the state were found here. These were collected by the Rev. L. W. Leonard of Dublin, N. H., between 1828 and 1835. The specimens are now in the Harris collection, in the Boston Society of Natural History. In referring to Mr. Leonard's work Dr. T. W. Harris, in a letter to Hentz dated Milton, [Mass.] June 17, 1828, says: "My friend, Mr. Leonard has promised to send me a quantity of duplicates from his parish in Dublin, N. H. near the Grand Monadnock Mountain. Many among those which I have already received from him are entirely new to me. Mr. Leonard is indefatigable in studying the habits of insects and very successful in raising them from the larvæ. Through him I have ascertained the larvæ of many species in my collection and particularly of the Lepidoptera."

In Hitchcock's Report on the Geology, Botany and Zoölogy of Massachusetts, 1835, in the notes, page 601, Dr. Harris says: "I have included in the catalogue some insects which, though found beyond the boundaries of the State, may eventually be detected in Massachusetts. For these, and an immense number of duplicates, I am indebted to my friend the Rev. L. W. Leonard of Dublin, N. H., who has still more increased my obligations to him by his disinterested liberality in sending me even the rare and undescribed insects of which he possessed no duplicates."

In the material collected by Rev. L. W. Leonard are a number of interesting Syrphidæ including the type of *Temmostoma excentricum* Harr., and a specimen of *Criorhina intermedia* John., collected May 1832, which had been sent to Say by Harris in 1833 and given the manuscript name "*Milesia gnava*." There are also specimens of *Chrysotoxum perplexum* John., *Sphærophoria cylindrica* Say., *Helophilus latifrons* Loew, *Criorhina verbosa* Walk., and *Spilomyia fusca* Loew.

