

RECORDS OF DIPTEROUS INSECTS OF THE FAMILY
TACHINIDAE REARED BY THE LATE GEORGE DIM-
MOCK, WITH DESCRIPTION OF ONE NEW SPECIES
AND NOTES ON THE GENUS ANETIA ROBINEAU-
DESVOIDY

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Several years ago Dr. George Dimmock gave to the United States National Museum a series of reared insects with his notes upon them. Many rearings of Tachinidae were included, the records for which were mostly unpublished. I planned to prepare the list for publication, but was obliged to await the appearance of Mr. Webber's revision of the genus *Achaetoneura*, as he was describing several of the species as new. The present paper lists the species as the lots were numbered by Doctor Dimmock, with a few necessary notes and the description of one new species. Several of the species are represented only by puparia, which have been identified for me by my colleague C. T. Greene, who has made an extensive study of the characters of early stages of Diptera.

A. REARED FROM LEPIDOPTERA

148. From *Sphinx chersis* Hübner. Cambridge, Mass., 1882. Puparia found in soil where caterpillar tried to pupate. Three females, identified by Webber as *Achaetoneura frenchii* Williston, "var.?"

246. From *Amphidasis cognataria* Guenee. Wachussetts, Mass., 1882. Pupa only. Determined by Greene as *Exorista larvarum* Linnaeus (*Tachina mella* Walker).

423. From *Drepana bilineata* Packard. Cambridge, Mass., June, 1883. Pupa only. Greene finds that the puparium is different from any in the National Museum, and hence can not identify it.

505. From *Danaus archippus* Fabricius (*Anosia plexippus* Linnaeus of literature). Cambridge, Mass., emerged August 3, 1883. One male, four females. *Achaetoneura archippivora* Williston.

570. From *Sphinx chersis* Hübner. Cambridge, Mass., emerged June 13, 1884. Nine males and two females of *Sturmia incompta* Van der Wulp. The species was described as a *Brachycoma*,¹ and *inquinata* Van der Wulp is a synonym of it, as I found from the

¹ Biologia. Diptera, vol. 2, p. 99, 1890.

types in the British Museum. Coquillett had identified the Dimmock material as *Sturmia inquinata* Van der Wulp.

616. From larva on apple. Arlington, Mass., emerged June 17, 1884. One male of *Zenillia confinis* Fallen.

674. From *Diacrisia virginica* Fabricius. Springfield, Mass., 1885. Notes on moth with this number, but no reference to the parasite. Pupa only. Greene identified it as *Ernestia ampelus* Walker.

898. From arctian at Canobie Lake, N. H., 1889. Determined by Coquillett as *Exorista eudryae* Townsend. No specimens are to be found in the National Museum. There is no reason to doubt that Coquillett determined the species correctly; he had the same species from Dimmock several times, and the other material agrees with the revision of Aldrich and Webber, where the species is referred to the genus *Zenillia*.

934. From *Cingilia catenaria* Walker. Several rearings at Canobie Lake, N. H., in August, 1892. The Museum has under this number one male of *Phorocera claripennis* Macquart; one male of *Zenillia blanda* Osten Sacken, as restricted by Sellers; one *Sarcophaga rapax* Walker (*helicis* Townsend); and a long series of *Ceromasia aurifrons* Townsend. The last was determined by Coquillett as *Masicera festinans* Meigen.

963. From *Tephroclystis absynthiata* Clerck. Canobie Lake, N. H. One male of *Siphophyto floridensis* Townsend.

992. From mixed species of microlepidoptera on *Myrica asplenifolia* Linnaeus. Springfield, Mass, 1892. One female of *Zenillia blanda* Osten Sacken, as restricted by Sellers.

997. Adult flies near caterpillars of *Pheosia rimosa* Packard, as if waiting to oviposit. One female, same as No. 1009.

1009. From *Sphinx gordius* Cramer (?) at Canobie Lake, N. H. Emerged September 20, 1892. Thirteen specimens, both sexes, of *Winthemia quadripustulata* Fabricius, apparently a slight variant of the restricted form as made out by H. J. Reinhard in his recent studies.² The only difference that I note is the restriction of the parafacial hairs, which are almost confined to the upper half and inner or mesial portion of the parafacials.

1019. From *Sphinx chersis* Hübner. Canobie Lake, N. H., emerged June 23, 1893. Twelve males and females of *Sturmia incompta* Van der Wulp. See note to No. 570.

1031. From *Paonias excoecata* Smith and Abbott. Canobie Lake, N. H., emerged 1892. One small female of *Blepharipeza leucophrys* Wiedemann.

1112. From tortricid larva on *Baptisia tinctoria* Linnaeus. Arlington, Mass., emerged June 22, 1898. One male of *Actia pilipennis* Fallen. Determined as the same by Coquillett in 1905.

² Proc. U. S. Nat. Mus., vol. 79, art. 20, p. 14, 1931.

1126. From *Smerinthus geminatus* Say. Springfield, Mass., 1895. One female of *Achaetoneura frenchii* Williston, "var.?" Determined by Webber.

1181. From *Vanessa atalanta* Linnaeus. Springfield, Mass., emerged July, 1897. One male and three females of *Zenillia (Eusisyropa) futilis* Osten Sacken.

1227. From *Lagoa crispata* Packard. Chicopee, Mass., emerged May 10, 1898. One female of *Phorocera claripennis* Macquart. Same determination for Dimmock by Coquillett.

1232. From *Euthisanotia grata* Fabricius. Longmeadow, Mass., emerged June 5, 8, and 18, 1898, the caterpillars having been collected in the preceding year. One female in the National Museum, *Zenillia eudryae* Townsend.

1346. From lepidopterous larva on *Rhus copallina* Linnaeus at Springfield, Mass. Emerged June 5, 1898. Two males and one female of *Achaetoneura dimmocki* Webber. Type series.

1371. From *Euthisanotia* at Belchertown, Mass. Emerged June 19, 1898. One male and two females of *Zenillia eudryae* Townsend.

1372. From arctiid pupa (woolly bear?). Springfield, Mass., emerged June 8, 1898. One male of *Sturmia ricinorum* Townsend (*albifrons* Walker 1849, preoccupied). Determined by Coquillett as *albifrons*, correctly, but he was unaware of the preoccupation. I examined the type of Walker's species in the British Museum.

1441. From *Diacrisia virginica* Fabricius. Springfield, Mass., emerged August 18, 1898. I can not find any specimens with this number in the National Museum, but Dimmock's notes state that Coquillett determined the species as *Tachina mella* Walker. It is therefore reasonably certain that the species is what I now call *Exorista larvarum* Linnaeus, the same as No. 246.

1446. From *Cerura* at Springfield, Mass. Emerged September 3, 1898. One male and five females of *Exorista larvarum* Linnaeus.

1516. From *Automeris io* Fabricius. Tatham, Mass., emerged July 12, 1900. One male and three females of *Achaetoneura dimmocki* Webber. Type lot.

2103. From *Pholus* larva. Springfield, Mass., September, 1902. Sixteen specimens, both sexes, the type lot of *Achaetoneura pholi* Webber.

2646. From *Atreus plebeja* Fabricius (*Sphinx plebejus*). Springfield, Mass., 1920. One female of *Compsilura concinnata* Meigen.

B. REARED FROM COLEOPTERA

591. From larvae of *Ceruchus piceus* Weber. Milton, Mass., emerged in 1884 from larvae kept over winter. One male and one female, determined by Coquillett as *Theresia canescens* Walker. The

type of *canescens* in the British Museum is a *Ptilodexia*, quite distinct from the present species, which is the species named *Eutheresia monohammi*, new genus and species, by Townsend.³ I have examined with care the descriptions of three new species of *Eutheresia* by West and two by Curran, but on comparing the series of 28 specimens in the National Museum it seems that the pollen varies so much that I do not feel much confidence in the specific value of the characters offered for these species. I therefore tentatively allow our material to stand as *monohammi*.

1671. From *Chelymorpha cassidea* Fabricius (*argus* of authors). Springfield, Mass., emerged July 12, 1900. Two males and two females. The species was identified by Coquillett as *Hypostena barbata* Coquillett, which was a mistake. I am describing it as *Anetia dimmocki* in the present paper.

1820. From the pupae of *Monochamus scutellatus* Say. Springfield, Mass., emerged May 14, 1901. Two males, the same species as No. 591, *Eutheresia monohammi* Townsend.

1937. From *Ceruchus piceus* Weber. Springfield, Mass., emerged June 13, 1901. One female in poor condition, but no doubt the same as No. 591, *Eutheresia monohammi* Townsend.

2032. From *Xyloryctes* sp. at Wilbraham, Mass. Emerged May, 1902. One male and four females, correctly identified by Coquillett as *Macromeigenia chrysoprocta* Wiedemann.

2053. From *Ceruchus piceus* Weber. Springfield, Mass., emerged April 19, 1902. One female. Same as No. 591, *Eutheresia monohammi* Townsend.

2075. From *Chelymorpha cassidea* Fabricius (*argus* of authors). Chicopee, Mass. One male and three females, erroneously determined by Coquillett as *Masicera exilis* Coquillett. It is really the same species as No. 1671.

C. REARED FROM HYMENOPTERA

1115. Reared from sawfly larvae on *Pinus rigida* at Canobie Lake, N. H. Emerged about July 7, 1894. One small female of *Phorocera claripennis* Macquart, as identified by Coquillett.

1478. Found in wasp's nest, probably *Odynerus*, containing dipterous pupae, at Hollys Ledge, Holyoke, Mass., in October, 1898. Flies emerged June, 1899. One male and two females of *Pachyophthalmus signatus* Meigen. Correctly identified by Coquillett.

D. REARED FROM DEAD BAT

1356. Larvae in dead bat in barn, Springfield, Mass., eating all the flesh, 1898. Eighteen specimens of the fly, both sexes. *Sarcophaga securifera* Villeneuve. Identified by Coquillett as *Sarcophaga* sp.

³ Journ. New York Ent. Soc., vol. 20, p. 117, 1912; Insector Inscitiae Menstruus, vol. 4, p. 51, 1916.

ANETIA DIMMOCKI, new species

Description.—Smallish, rather slender, gray species, with three posterior dorsocentrals, black palpi, discals well developed, one bristle on outer side of middle tibia. Female with piercer and 2 to 4 pairs of striking blunt spines on edge of inflexed tergites 2 and 3, on middle of venter. Infrascapular setules absent.

Male: Front 0.225 of head width at vertex, not widening to middle; pollen of parafacials, parafrontals, and face grayish white, hardly silvery. One pair verticals, ocellars large and proclinate, three pairs reclinate frontals above, the uppermost, however, very small; about nine other frontals, the single row ending at about middle of second antennal joint. Parafrontal with only a few very minute hairs besides frontals; frontal stripe dark brown, wider above than one parafrontal; parafacial bare, narrower at its middle than third antennal joint. Antennae black, third joint rather slender, almost reaching vibrissae, hardly more than twice as long as the second joint. Arista thickened on basal third, microscopically pubescent, basal joints short. Vibrissae at oral margin, only a few hairs above them on the divergent part of the ridges. Cheek one-seventh eye height. Eyes bare; back of head with white hair except one row behind eye.

Thorax black, subshining, from behind showing thin pollen, on which a pair of slender black stripes lie between the acrostichals and the dorsocentrals and extend considerably behind the suture; outside the dorsocentrals a pair of broader black stripes reaching to the hindmost dorsocentral. Acrostichal, 3, 3, one pair close in front of the suture; inner presutural (anterior intraalar) present; sternopleural, 2, 1. Scutellum black to apex with three pairs marginal, one smallish discal, and a pair of decussate apicals about half as long as adjacent marginal; the apicals are only a little upturned.

Abdomen black, pointed, rather slender, second to fourth segments of equal length, first not much shorter; one-half or more of second and third segments shining black, the base with an ill-defined band of gray pollen fading out behind and clearly interrupted in the middle; fourth segment with narrower basal band hardly interrupted. First segment with a pair of strong medium marginals, second with a discal and a marginal pair, the latter stouter; third with discal pair and stout but sparse marginal row numbering only six in the whole width; fourth segment with stout bristly erect hairs all over dorsal surface and a few irregular bristles, apex especially below with long backwardly directed bristles. Venter mostly shining except in very oblique view. Along the median dorsal region between the bristles of second and third segments the hairs are noticeably erect and coarse.

Legs black, tarsi long, claws and pulvilli long, the latter brownish; front tibiae with one outer bristle below middle; hind ones irregularly bristled on outer side.

Wings hyaline, third vein with 2 to 4 setules at base above and below; fourth vein with rounded, oblique bend, then straight to margin, joining the costa not very far before extreme apex of wing, the distance being equal to half the length of the hind cross vein. Calypters white.

Length, 5.5 mm.

Female: Front at vertex 0.25 of head width, widening very little until close to antennae; pollen of front distinctly yellowish; parafrontals wider than in male but parafacials not. Outer verticals not half as long as inner; ocellars smaller than in male; third antennal joint slightly shorter, not quite twice the second. Dorsal bristles of abdomen as in male but less strong, no erect hairs along median line. The stubby bristles of venter, mentioned in diagnosis, may be very striking if the venter happened to dry with protruding keel, or may be difficult to see if the keel is completely flattened down. The length of the fourth segment below is considerably longer than that of the two preceding segments combined.

Length, 4.4 mm.

Type.—Male, U.S.N.M. No. 43589.

Remarks.—The foregoing description is based on the type and allotype. Most of the other females do not show the yellow tinge to the parafrontal pollen. A few of the numerous females lack the pair of discals on the second segment. Several males have a distinct brownish tinge on the wings and calypters.

Described from the following material (all paratypes except the first two):

- (a) Type, allotype, one additional male and two females, reared from *Chelymorpha cassidea* Fabricius, at Chicopee, Mass., by George Dimmock (Dimmock No. 2075).
- (b) One male and one female, reared from the same host in 1900, at Springfield, Mass., by Dimmock (Dimmock No. 1671).
- (c) Two males and two females, reared from the same host in New Hampshire by workers of the Gipsy Moth Laboratory (G. M. L. No. 12172).
- (d) One male, one female, reared from the same host in 1900, at Chicopee, Mass., by F. Knab.
- (e) One male, Hatch Experiment Station of Massachusetts, with label, "Parasite on Lady-bird." The host larva was probably the same as preceding, which might easily be mistaken for a coccinellid. The date is August 10, 1895.
- (f) One female, reared from the same host as type, at Cedar Keys, Fla., by Hubbard and Schwarz, May 6, 1875.

- (g) One male, one female, reared from same host, at Arlington, Va., July 2 and 9, 1919, by M. T. Van Horn (Chittenden No. 6062).
- (h) One male, reared at College Park, Md., from *Coptocycla* sp. by K. C. Babcock (Chittenden No. 6017).
- (i) One male, one female, reared from *Deloyola clavata* Fabricius, from North Carolina Department of Agriculture, presumably reared in that State.
- (j) Six males and eight females, reared at Baton Rouge, La., from *Mettriona bicolor* Fabricius, July and August, 1921, by C. E. Smith (Chittenden No. 7030).
- (k) Thirty-three collected specimens (22 males and 11 females): 3 males, Lawrence, Kans., 1893, identified for the writer by D. W. Coquillett about 1898 as *Hypostena barbata* Coquillett; 12 males and 4 females, La Fayette, Ind.; one male, Turtle Mountains, N. Dak., June 21, 1918; one female, Mount Vernon, Va., July 21, 1923; one female, Great Falls, Va., August 9, 1923; one female, Shenandoah River, Clarke County, Va., September 3, 1923 (all the preceding collected by the writer); two males, Sandusky, Ohio, July (Reinhard); two males, Blendon, Ohio, September 11, 1901 (Hine); one male, Sugar Grove, Ohio, June 20, 1926, no collector; one female, College Station, Tex., June 1, 1923 (Reinhard); one male, Bexar County, Tex., June 9, 1928 (Parks); one female, Meridian, Miss., September 3, 1922 (Allen); one female, Onondaga County, N. Y., August 11, 1897, no collector; and one female, Falls Church, Va., September 6 (Banks).

Coquillett⁴ records a specimen of *Hypostena barbata* Coquillett as bred from a larva of *Coptocycla clavata* Fabricius, at College Park, Md., by Willis G. Johnson. I am unable to find the specimen in the National Museum at present; but as Coquillett was considerably confused in his identifications of what he called this species, and identified my Lawrence, Kans., males of *dimmocki* as the same, it is very probable that this rearing record also belongs to *dimmocki*.⁵

NOTES ON THE GENUS ANETIA

The genus *Anetia* was described by Robineau-Desvoidy,⁶ with the single species *occlusa*, new, which Bezzi⁷ made a synonym of *Tachina nigripes* Zetterstedt. The latter has been supposed for years to be the type species of the genus *Lydella* Robineau-Desvoidy; but Doctor Villeneuve⁸ has shown that *Lydella* has been entirely misunder-

⁴ Revision of the Tachinidae of America North of Mexico, Tech. Ser. No. 7, Div. Ent., U. S. Dept. Agr., p. 17, 1897.

⁵ See Aldrich, Proc. Ent. Soc. Washington, vol. 30, p. 42, 1928.

⁶ Dipteres de environs de Paris, vol. 1, 1863, p. 868.

⁷ Catalogue of Palaearctic Diptera, vol. 3, p. 292, 1907.

⁸ Bull. et Ann. Soc. Ent. Belgique, vol. 49, p. 103, 1929; Konowia, vol. 9, p. 218, 1930.

stood, and its type species *grisescens* Robineau-Desvoidy is the species which has been known in recent literature as *Masicera senilis* Meigen (and which should be known as *Lydella grisescens* Robineau-Desvoidy, since the true *senilis* of Meigen is an entirely different species). There appears to be no earlier generic name for what has been called *Lydella* than *Anetia*, and Doctor Townsend in a recent letter advises me that he adopts this.

The striking genitalic characters of the females, with piercer and stubby ventral abdominal spines, imply such biological difference that they should if possible be recognized as generic, although I readily admit that it is difficult to separate the males of these species from those in which the females do not have a piercer. *A. dimmocki* differs from the type of *Anetia*, *Tachina nigripes* Zetterstedt, a European species represented in the National Museum by several specimens of both sexes indentified by Villeneuve, Bezzi, and Nielsen, chiefly in lacking the tuft of minute setules underneath the calypter (a single distinct setule is present in one male from La Fayette); *nigripes* also has several large bristles on the outer front side of the middle tibia, not usually regarded as generic. *A. dimmocki* fits better here than in *Dexodes* Brauer and Bergenstamm (in which I would include as synonyms *Parameigenia* Townsend, *Paradexodes* Townsend, and *Aubaeanetia* Townsend), as the latter has no piercer in the female.