innen hinten mit 2 ganz kurzen Borsten. Mittelmetarsus außen mit langen Borsten. Die drei mittleren Glieder der Mitteltarsen mit auffallend langen posterodorsalen Apikalborsten, von denen die am 3. und 4. Gliede viel länger sind als diese selbst (Fig. 1, rechts). Hinterschienen innen nur in der Basishälfte mit wenigen Borstenhaaren. Flügel schwach graulich getrübt, ohne Randdorn, hintere Querader fast gerade. Schüppchen gelblichweiß, dunkler gelb gerandet, Schwinger gelb.

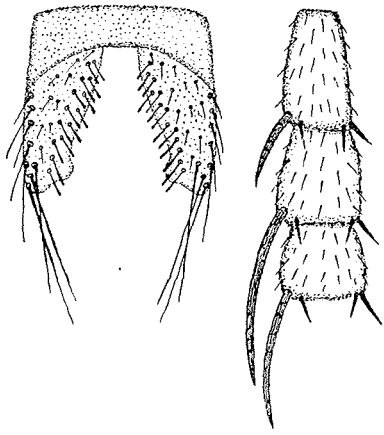

Fig. 1. *Hylemyia trispinosa* n. sp. (Rechts: Die drei mittleren Glieder der Mitteltarsen; links: 5. Bauchsegment (Sternit). Vergr. 100 ×.)

Bei dem Versuche, das ♂ nach den vorhandenen Tabellen zu bestimmen, wird man immer auf *H. fabricii* Holmgr. kommen. Von dem ♂ dieser Art unterscheidet es sich aber durch die langen posterodorsalen Apikalborsten an den Mitteltarsen.

♀. Stirnstrieme rot. Körper einfarbig gelbgrau, Thorax und Hinterleib ohne Striemung. An den Mittelschienen ist die Beborstung mehr entwickelt als beim ♂. Sie haben außen vorn eine lange Borste, außen hinten eine kürzere und innen hinten zwei kürzere Borsten.

Länge 5 mm.

Holotype, Allotype und Paratypen im Deutschen Entomologischen Institut, Berlin-Dahlem, ein Pärchen von den letzteren auch in meiner Sammlung.

The nearctic sawflies of the genera *Ametastegia, Aphilodyctium* and *Allantus.*

(Hymenoptera: Tenthredinidae.)

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(With 25 Text-Figures.)

The species of the genera treated in this paper [1]) have been placed

[1]) Most of the material discussed in this paper is represented in the collections of the Deutsches Entomologisches Institut, Berlin-Dahlem, determined and revised by the author.

in various genera by different authors with little apparent basis for the combinations used. A study of the mandibles and male genitalia has exposed a wealth of characters for grouping them into genera and placing them in phylogenetic series with related genera.

The five genera *Ametastegia*, *Aphilodyctium*, *Allantus*, *Macremphytus* and *Taxonus* form a distinct branch of the *Allantinae*. The male genitalia offer some interesting characters for grouping these. *Ametastegia* alone has short sagittae, fig. 12, the remainder have sagittae bearing a long, basal lobe, figs. 13, 14. *Ametastegia* also is unique in having triangular praeputial lobes, figs. 1, 2; *Aphilodyctium* has them somewhat the same, but with the apices more definitely set off, fig. 6; the other three genera have the apices of the lobes parallel sided, and set off like steps, figs. 7—9. The penis valves of each genus have a distinctive shape, figs. 15—21.

The mandibles also posses distinctive generic characters. In *Ametastegia* and *Aphilodyctium* both mandibles are bidentate, fig. 22. In *Allantus* and *Macremphytus* the left one is bidentate but the right one is unidentate and sickle-shaped, fig. 23. In *Taxonus* the right one is unidentate as in these two but the apical tooth of the left mandible has a subtooth near the base, fig. 24, which gives the appearance of a tridentate condition in some forms, fig. 25.

Combining the evidence of the mandibles and genitalia shows that *Allantus*, *Macremphytus*, and *Taxonus*, while sufficiently distinct to be held as different genera, form a specialized and fairly compact group. *Ametastegia* resembles it somewhat in penis valves and *Aphilodyctium* in praeputial lobes. These two latter genera, however, are more primitive in having both mandibles bidentate, so they may safely be considered offshoots of the progenitor of *Allantus* and its two allies.

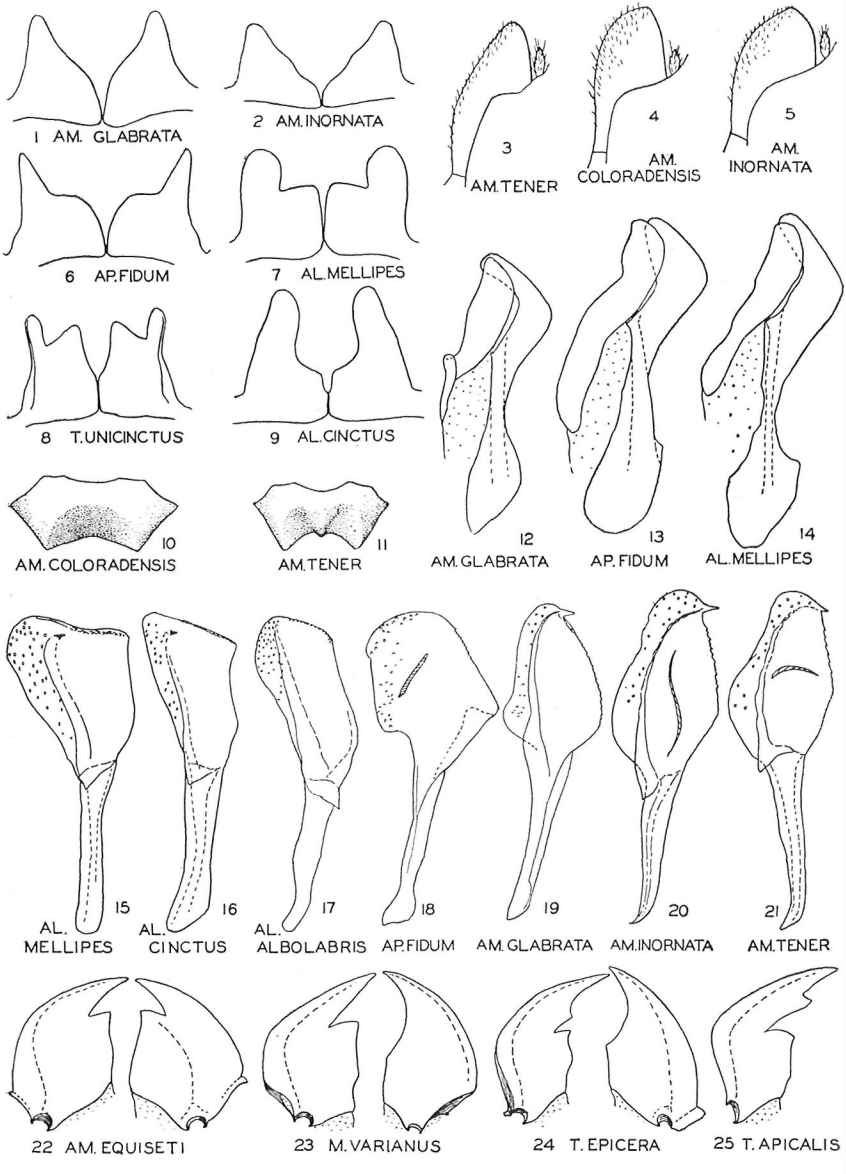
In the following taxonomic treatment only original descriptions of synonyms in North American literature are cited. The European synonymy of the holarctic forms is given by Enslin and others.

Ametastegia A. Costa.

Ametastegia A. Costa, Rendic. Acad. Sci. Fis. Napoli, **21**, pt. 10, 198, 1882. Genotype: *Ametastegia fulvipes* A. Costa = *Ametastegia glabrata* (Fallén).

Aomodyctium Ashmead, Can. Ent., **30**, 309, Dec., 1898. Genotype: *Strongylogaster abnormis* Provancher = *Ametastegia glabrata* (Fallén). Synonym of *Ametastegia s. st.*

Protemphytus Rohwer, Can. Ent., **41**, 92, 1909. Genotype: *Emphytus coloradensis* Weldon. Subgenus of *Ametastegia*.



Figs. 1—2: Praeputial lobes. Figs. 3—5: Sheaths. Figs. 6—9: Praeputial lobes. Figs. 10—11: Clypei. Figs. 12—14: Ossicles. Figs. 15—21: Penis valves. Figs. 22—25: Mandibles. Abbreviations: AL = *Allantus*. AM = *Ametastegia*. AP = *Aphilodyctium*. M = *Macremphytus*. T = *Taxonus*.

Emphytina Rohwer, Proc. U. S. Nat. Mus., **41**, no. 1866, p. 399, Oct. 14, 1911. Genotype: *Emphytina pulchella* Rohwer = *Ametastegia recens* (Say). New synonym of subg. *Protemphytus*.

Simplemphytus MacGillivray, Can. Ent., **46**, 363, 1914. Genotype: *Simplemphytus pacificus* MacGillivray = *Ametastegia tener* (Fallén). New synonym of subg. *Protemphytus*.

Unitaxonus MacGillivray, Psyche, **28**, 32, 1921. Genotype: *Unitaxonus repentinus* MacGillivray = *Ametastegia equiseti* (Fallén). New synonym of *Ametastegia s. st.*

The nearctic species in this genus present few structural differences. The species *glabrata* and *equiseti*, the sole nearctic members of *Ametastegia s. st.*, differ from the others in lacking creases in the dorsal portion of the penis valves, fig. 19; those of *inornata*, *coloradensis* and *recens* seem identical, having a longitudinal crease, fig. 20; those of *tener* differ only in having a transverse, narrow shelf, fig. 21. I have not had males of the other species at my disposal.

Key to nearctic species.

1. First free abscissca of Rs present 2
   First free abscissca of Rs absent 3
2. Abdomen entirely black . . . . . *glabrata*
   Abdomen with rufous band . . . . . *equiseti*
3. Abdomen black 4
   Abdomen with venter yellow or straw colored. . . . . *recens*
4. Coxae, trochanters and at least basal portion of femora dark brown or black 6
   Trochanters and at least apex of coxae and base of femora whitish. 5
5. Pronotum entirely black . . . . . *pallipes*
   Pronotum with postero-lateral margins yellow or white. . *inornata*
6. Emargination of clypeus shallow and rounded, fig. 10 . *coloradensis*
   Emargination of clypeus deeper and with a slight tooth in centre, fig. 11 . . . . . *tener*

Ametastegia glabrata (Fallén).

Tenthredro glabrata Fallén, Svensk. Vet.-Acad. Handl., **29**, 108, 1808.
Taxonus nigrisoma Norton, Proc. Boston Soc. Nat. Hist., **9**, 119, 1892, ♀.
Strongylogaster abnormis Provancher, Addit. et Corrections au Vol. II de la Faune Ent. du Canada, 1889, p. 10, ♂, ♀.
Strongylogastroidea potulenta MacGillivray, Univ. Ill. Bull., **20**, no. 50, p. 31, 1923, ♀. New synonymy.

This holarctic species may be recognized by its sooty black body, red legs and black hind tarsi. Nearctic distribution: Alta., Conn., Ill., Ind., Man., Mass., Me., Mich., Minn., N. J., N. Y., Ohio, Ont., Pa., Que., R. I., S. D., Sask., Wisc. Host: *Rumex*.

Ametastegia equiseti (Fallén).

Tenthredo equiseti Fallén, Svensk. Vet.-Acad. Handl., **29**, 60, 1808.

Taxonus innominatus MacGillivray, N. Y. State Mus., Bull., **47**, 585, 1901, ♀. New synonymy.

Strongylogastroidea depressata MacGillivray, Psyche, **28**, 31, 1921, ♀. New synonymy.

Unitaxonus repentinus MacGillivray, ibid., p. 33, ♂, ♀. New synonymy.

Unitaxonus rumicis MacGillivray, ibid., ♀. New synonymy.

Hemitaxonus dedititius MacGillivray, ibid., **30**, 77, 1923, ♂. New synonymy.

Strongylogastroidea rufocinctella MacGillivray, Univ. Ill. Bull., **20**, no. 50, p. 32, 1923, ♀. New synonymy.

Another holarctic species. Nearctic distribution: Me., Mass., N. H., Ohio, Ont., Ore., Pa., Que. Hosts: *Rumex* and *Polygonum*.

Ametastegia recens (Say).

Emphytus recens Say, Bost. Jour. Nat. Hist., **1**, 221, 1936, ♂.

Emphytus apertus Norton, Proc. Bost. Nat Hist. Soc., **8**, 155, 1861, ♀. New synonymy.

Emphytus stramineipes Cresson, Trans. Amer. Ent. Soc., **8**, 52, 1880, ♀. New synonymy.

Emphytus angustus Kincaid, Proc. Wash. Acad. Sci., **2**, 360, 1900, ♂. New synonymy.

Emphytina pulchella Rohwer, Proc. U. S. Nat. Mus., **41**, no. 1866, p. 400, 1911, ♀. New synonymy.

Emphytina virginica Rohwer, ibid., p. 401, ♀. New synonymy.

Emphytina pallidiscapa Rohwer, ibid., ♂, ♀. New synonymy.

Emphytus yuasi MacGillivray, Psyche, **28**, 31, 1921, ♀. New synonymy.

? *Emphytus leucostomus* Rohwer, Jour. N. Y. Ent. Soc., **16**, 110, 1908, ♀. Preoccupied.

Emphytina plesia Rohwer, Proc. U. S. Nat. Mus., **41**, no. 1866, p. 402, 1911. N. n. for *leucostomus*.

This species is widely distributed over the nearctic region. A study of more than a hundred specimens indicates that the color of the scape, pectus and abdomen varies considerably, as do the pits on the head. The lighter forms usually occur in southern localities but are almost always intermingled with darker specimens. In the original description

of *leucostomus* the inner tooth of the tarsal claws was cited as absent. Since this character is often difficult to see, it was probably overlooked, but it will be necessary to check the type before final disposition of the name is made.

There seems to be no doubt that Say's name applies to this species and no other. It fits exactly the particular color combination described as *pallidiscapa* Rohwer.

Neotype: ♂; Urbana, Illinois, July 5, 1889, in woods; C. A. Hart; Hart no. 520. In the collection of the Illinois Natural History Survey.

Distribution: Alta., Alaska, Colo., D. C., Ia., Md., N. Y., Ohio, Okla., Ont., Pa., Que., Va., „W. T."

Ametastegia inornata (Say).

Dolerus inornatus Say, Appendix to Keating's Narrative of an Expedition to the Source of St. Peter's river under Stephen Long, **2**, 319, 1825, ♀.

Emphytus halitus MacGillivray, Univ. Ill. Bull., **20**, no. 50, p. 14, 1923, ♀. New synonymy.

This species is common east of the Great Plains from southern Canada to Virginia. The color of the legs varies considerably, especially in the males. Distribution: D. C., Ill., Ind., Me., Mich., N. J., N. Y., Ont., Pa., Que., Tex., Va.

Ametastegia coloradensis (Weldon).

Emphytus coloradensis Weldon, Can. Ent., **39**, 304, 1907, ♂.

Emphytus hiulcus MacGillivray, Univ. Ill. Bull., **20**, no. 50, p. 15, 1923, ♀. New synonymy.

This species is close to *inornatus* and *tener*, differing from the former in the longer sheath, figs. 4, 5, and from the latter in the rounded ventro-distal outline of same, figs. 3, 4, and the even curve of the anterior margin of the clypeus. The interstitial character of cross-veins 2^r and 3^{r-m} was used by Rohwer in erecting a new genus for this species. It is, however, possessed by *tener* also, in which it varies between the two extremes. The penis valves are the same as those of *inornatus*. To date only a single male and female labelled „Colo" are known.

Ametastegia pallipes Spinola.

Tenthredo pallipes Spinola, Insect. Ligur., **2**, 19, 1808, ♂, ♀.

Tenthredo pallipes Provancher, Nat. Can., **10**, 66, 1878, ♂, ♀. Homonym and synonym.

Emphytus canadense Kirby, List of Hymen. Brit. Mus., **1**, 204, 1882. N. n. for *pallipes* Prov.

Empria cavata MacGillivray, Can. Ent., **43**, 305, 1911, ♀. New synonymy.

Empria cetaria MacGillivray, Psyche, **28**, 33, 1921, ♀. New synonymy.

Emphytus halesus MacGillivray, Univ. Ill. Bull., **20**, 13, 1923, ♀. New synonymy.

Emphytus heroicus MacGillivray, ibid., p. 14, ♀. New synonymy.

Emphytus hiatus MacGillivray, ibid., ♀. New synonymy.

Emphytus hospitus MacGillivray, ibid., p. 15, ♀. New synonymy.

Emphytus hyacinthus MacGillivray, ibid., p. 16, ♀. New synonymy.

This species, the violet sawfly, is holarctic. Nearctic distribution: B. C., Mass., N. H., N. Y., Ore., Que.

Ametastegia tener (Fallén).

Tenthredo tener Fallén, Svensk. Vet.-Acad. Handl., **29**, 109, 1808.

Simplemphytus pacificus MacGillivray, Can. Ent., **46**, 363, 1914, ♂, ♀.

Emphytina vanduzeei Rohwer, Proc. U. S. Nat. Mus., **49**, 205, 1915, ♀.

Empria columna MacGillivray, Bull. Brooklyn Ent. Soc., **18**, 54, 1923, ♀. New synonymy.

Emphytus haliartus MacGillivray, Univ. Ill. Bull, **20**, no. 50, p. 14, 1923, ♀. New synonymy.

Emphytus haustus MacGillivray, ibid., ♂. New synonymy.

Except for portions of the palpi and front legs, this holarctic species is entirely black. Nearctic distribution: B. C., Ill., Mich., N. B., N. Y., Ohio, Ore.

Aphilodyctium Ashmead.

Aphilodyctium Ashmead, Can. Ent., **30**, 310, 1898. Genotype: *Strongylogaster rubripes* Cresson = *Aphilodyctium fidum* (Cresson).

Polytaxonus MacGillivray, ibid., **40**, 368, 1908. Genotype: *Taxonus robustus* Provancher = *Aphilodyctium fidum* (Cresson).

Contains only one species, *fidum* (Cresson). The penis valves are broad, fig. 18, with a diagonal shelf. The mesal ossicle has a broad, basal „tail", and the praeputial lobes have the disto-lateral angle produced into a long, tapering process.

Aphilodyctium fidum (Cresson).

Strongylogaster fidus Cresson, Trans. Amer. Ent. Soc., **8**, 19, 1880, ♀.

Strongylogaster rubripes Cresson, ibid., p. 20, ♀. New synonymy.

Taxonus robustus Provancher, Petite Faune Ent. du Canada, 4me Ordre, Hyménoptères, 1883, p. 743, ♀. New synonymy.

Taxonus parens Provancher, Addit. et Corrections au vol. II de la Faune Ent. du Canada, 1889, p. 9. New synonymy.

Taromus lenis Rohwer, Journ. N. Y. Ent. Soc., **16**, 110, 1908, ♂, ♀. New synonymy.

Aphilodyctium rubripes nigritarsis Rohwer, Proc. U. S. Nat. Mus., **41**, no. 1866, 408, 1911, ♂, ♀. New synonymy.

Taromus inclinatus MacGillivray, Psyche, **30**, 78, 1923, ♂. New synonymy.

The abdomen varies in color from a totally black condition to one in which most of it is rufous with only the apex black. There is such a complete series of intergradations from one extreme to another that no satisfactory division may be made on this basis. Furthermore, almost extreme opposites have been collected in the same region. Records: Alta., B. C., Calif., Colo., Ida., Ill., Man., Mich., Mon., Ore., S. D., Utah.

Allantus Panzer.

Allantus Panzer, Faunae Insectorum Germanicae Initia, Heft 7, p. 82, 1801. Genotype: *Tenthredo (Allantus) togatus* Panzer.

Emphytus Klug, Mag. Ges. Naturf. Berlin, **7**, 273, 1813. Genotype: *Tenthredo cincta* Linnaeus.

This genus and the next are mentioned primarily to draw attention to the necessary change from *Emphytus* and *Strongylogastroidea* which are commonly used at present in North America.

Key to nearctic species.

1. Hind femora black 2
   Hind femora red 3
2. Hind tibiae black . . . . . *basalis*
   Hind tibiae reddish brown . . . . . *cinctus*
3. Clypeus brown or black . . . . . *mellipes*
   Clypeus white or cream . . . . . *albolabris*

Allantus basalis (Klug).

Tenthredo (Emphytus) basalis Klug, Magaz. Ges. naturf. Fr. Berlin, **8**, 282, 1814, ♂.

Allantus cinctus nigritibialis Rohwer, Proc. U. S. Nat. Mus., **41**, no. 1866, 407, 1911, ♀. New synonymy.

This palaearctic species has been taken twice on the Atlantic coast, once at Rutherford, N. J., and again at Old Forge, N. Y. Mr. Rohwer was the first to recognize the above synonymy.

Allanthus cinctus (Linnaeus).

Tenthredo cinctus Linnaeus, Syst. Nat., 10th edit., **1**, 557, 1758.

Emphytus cinctipes Norton, Trans. Amer. Ent. Soc., **1**, 229, 1867, ♂, ♀.

A common species on cultivated roses across the northern United States and southern Canada.

Allantus albolabris (Rohwer).

Emphytus mellipes var. *albolabris* Rohwer, Proc. U. S. Nat. Mus., **53**, no. 2195, 152, 1917, ♀.

Emphytus gemitus MacGillivray, Journ. N. Y. Ent. Soc., **31**, 163, 1923, ♀. New synonymy.

Superficially this species is remarkably similar to *mellipes*, but the male genitalia show it to be quite distinct.

Male: Length, 9 mm. Color and general structure as in female. Genitalia typical for genus, with praeputial lobes long as in *cinctus*, fig. 9, and penis valve rounded at apex, fig. 17, quite distinct from both *cinctus* and *mellipes*, figs. 15, 16.

Allotype: ♂; Steelhead, B. C., June 17, 1933, H. B. Leech. In the collection of the Illinois State Natural History Survey.

Distribution records: Alaska: Kodiak. B. C.: Departure Bay, Steelhead, Vancouver. Wash.: Olympia.

Allantus mellipes (Norton).

Emphytus mellipes Norton, Proc. Boston Soc. Nat. Hist., **8**, 1861, p. 155, ♀.

Emphytus gillettei MacGillivray, 15th Rep. Colo. Expt. Sta., p. 113, 1902, ♀. New synonymy.

Distribution records: Alta., Colo., Ill., N. B., N. Y., Ont., Que.

Taxonus Hartig.

Taxonus Hartig, Fam. Blatt- u. Holzwesp., p. 297, 1837. Genotype: *Tenthredo (Allantus) nitida* Klug = *Taxonus agrorum* (Fallén).

Ermilia O. Costa, Fauna Napoli, Tenthred., p. 106, 1859. Genotype: *Ermilia pulchella* O. Costa = *Taxonus agrorum* (Fallén).

Strongylogastroidea Ashmead, Can. Ent., **30**, 308, 1898. Genotype: *Strongylogaster apicalis* Say. New synonymy.

Parasiobla Ashmead, ibid. Genotype: *Strongylogaster rufocinctus* Norton.

Hypotaxonus Ashmead, Can. Ent., ibid., p. 311. Genotype: *Strongylogaster pallipes* Say.

An examination of specimens of *T. agrorum*, the genotype of *Taxonus*, shows that it is practically identical in structure with *apicalis*, *rufocinctus* and *pallipes*, the genotypes of Ashmead's genera. The members of this genus form a very closely knit group, which apparently needs no further division.