

The Provancher Species of Chalcidoidea (Hymenoptera)

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Abstract

The extant types of chalcids described by Provancher are re-examined. A few are lost or so badly damaged that accurate placement is now impossible, but the majority of species are correctly identified in modern literature. Five new combinations and nine new synonymies are proposed.

During the years 1881 to 1888, Abbé Léon Provancher of Quebec published descriptions of 49 species he placed as chalcids. Most of these species names have not come into general use, and many of them are now listed as unplaced (6, 7). These species names cannot, however, be considered as "forgotten names", since they have been listed from the first as part of the North American chalcid fauna. Those of the Provancher species that had been published by 1887 were included in Cresson's catalog of described North American Hymenoptera (3). Dalla Torre in 1898 (4) included all of the Provancher chalcid species in his catalog of Hymenoptera, as did Schmiedeknecht in 1909 (12), in his catalog and classification of the Chalcidoidea. A. B. Gahan and S. A. Rohwer studied the Provancher collections in 1915 and selected lectotypes for all the Provancher Hymenoptera except the bees, omitting a few species they did not find represented in the collections. They published these lectotype designations in 1917-1918 (5); all of the Provancher chalcids except two which they could not locate were included in this paper. More recently the catalog of Muesebeck *et al.* in 1951 (7), and its supplement in 1958 (6), included all the Provancher chalcids.

The Provancher Collections

The Provancher collections of Hymenoptera and his original notebook have, all things considered, been preserved in good condition. The collections have suffered many vicissitudes since Provancher's time, but most of the types of chalcids are well preserved today. Abbé Provancher made one collection of Hymenoptera which was sold to the Quebec Provincial Museum in 1877. This collection included no types of chalcids; it contained, in fact, only two species of chalcids that were attributed by Provancher to other authors. A second one, designated the Dernière Collection, which included the types of about two-thirds of his chalcid species, was purchased by the Quebec Provincial Museum after Provancher's death, in 1893. Another collection of Provancher specimens, donated by him to the Collège de Lévis, Quebec, in 1889, contains no types (see Gahan and Rohwer, 5, p. 300). Some workers have thought that still another collection of Provancher material might be at Chicoutimi, P.Q., but, if there is one, it has not yet been located.

Provancher described nearly a third of his chalcid species from the personal collection of W. H. Harrington of Ottawa. Types of these were never deposited in Provancher's own collection, but the specimens were returned to Harrington about the time the descriptions were published.

In 1915 Gahan and Rohwer studied the types in the 1877 and the Dernière collections in Quebec and the Harrington collection in Ottawa and designated lectotypes from all of them.

The Provancher specimens in Quebec, all mounted on pins of card paper, were originally pinned with wax.

Provancher's successor) these wood blocks were replaced by sheets of cork, which the specimens were transferred. For many years after Provancher's time the collections were kept in the Quebec Provincial Museum, in the Quebec Parliament Building. Many of the specimen drawers were on public display. It was in the Parliament Building that Gahan and Rohwer studied the collection in 1915. They found the collections then to be in very good condition, despite the lack of any repellent or insecticidal chemical in the specimen drawers. The published notes on the condition of most of the lectotype specimens they select

In their study, S. A. Rohwer selected the lectotypes for the sawflies, chalcid proctotrupids, cynipids, and aculeates (except for the bees); and A. B. Gahan selected the lectotypes for the ichneumonids. It is more than likely that the two men consulted each other about the selection of the lectotypes of some of the species in all the groups, but the original notes on the chalcid lectotypes are in Rohwer's hand, and are signed, "S.A.R., June 10, 15." Gahan and Rohwer did not label the lectotype specimens as such, but relied on publishing the individual numbers borne by the lectotype specimens. Provancher placed his determination label on only the first specimen of a series, but he had a system of placing a different number on each specimen (these numbers may still be verified by placing a notebook). Since a single number was assigned by Provancher to a particular specimen, and to no other, one may be sure which specimens were selected by Gahan and Rohwer, provided that labels have not been subsequently transferred between specimens. Needless to say, the transfer of labels from one specimen to another by careless or inexperienced workers can occur no matter what system of labeling is used.

In 1932 the Provancher collections were moved from the Parliament Building to the new Provincial Museum Building. In 1940 Noel-M. Comeau was placed in charge of these collections, and he began a project to segregate and label all the Provancher Hymenoptera types. He went through the collections and removed all type material, transferring the specimens to unit trays. These trays were placed in new glass-topped museum drawers. He labeled the lectotypes with red labels, in the main following the Gahan and Rohwer list. He arranged the types alphabetically under the original generic names, and without regard to the groups involved, so that types of all groups of Hymenoptera were together, as they were in the Gahan and Rohwer lectotype list. This labeling project was carried only as far as the letter M, but all the Provancher lectotypes were segregated in unit trays and placed in the new museum drawers. The lectotypes still unlabeled can now be located by reference to the specimen numbers published by Gahan and Rohwer.

Quite recently, in the fall of 1962, the Provancher collections were moved from the Provincial Museum to the Pure Sciences Building on the new Laval University campus, in Ste. Foy. M. René Béique is the present curator. There has been rather extensive damage by dermestids to the Provancher specimens that remained in the original drawers. The types, however, segregated in unit trays in new museum drawers, are apparently in as good condition now as they were in 1915. The entire collection has recently been fumigated and is well stocked with PDB.

As was mentioned above, Provancher described a number of species from the personal collection of W. H. Harrington of Ottawa. The Harrington collection is now in the Canadian National Museum, Ottawa.

I studied the Provancher types of chalcids in Quebec and Ottawa in January, 1963. I wish to express my gratitude to M. René Béique in Quebec and to the staff of the Entomology Research Institute, Ottawa for their great assistance to me during my stay in Canada.

The Provancher Chalcids

Of the 49 species described by Provancher in the Chalcididae, 3 are actually Scelionidae, the types of 3 are lost, lectotypes of 28 are in the Provancher Collections at Laval University, Ste. Foy (Quebec 10), P.Q., and the lectotypes of 15 from the Harrington Collection are in the collections of the Entomology Research Institute, Ottawa. (Provancher described one chalcid species in the Proctotrupidae, and its type is lost.) While I was in Quebec, I segregated in a single museum drawer all the chalcid type material that is deposited there.

In the following list of the Provancher chalcids, I have arranged the species alphabetically under the original generic names, for convenience in referring to the Gahan and Rohwer list. Two of the lectotype designations are new here; they are so indicated. New specific synonymy and new generic combinations, based on my study of the Provancher types, are indicated in the text. On the assumption that labels have been transferred between specimens, I have set aside the lectotypes of two species. The types of them are considered to be lost.

The sequence of entries in the listing below is as follows: Species name, in the original combination; reference to the original description; location of the lectotype; yellow-label Provancher specimen numbers for Quebec specimens (these are the lectotype numbers published by Gahan and Rohwer), or the Harrington and C.N.C. type numbers for Ottawa specimens (these have not been published previously); lectotype labels placed on specimens by M. Comeau (these usually bear the year during which he labeled the specimens, and some labels also carry serial numbers, but information about these labels has not previously been published); taxonomic placement of the species; information, if any, about para-lectotypes.

Callimome fagopirum (8, p. 291, 1881). Lectotype in Quebec; labeled Provancher no. 917; Lectotype no. 213, 1944. Specimen on a pin. The present placement (7) of this species as *Torymus fagopirum* (Provancher) is correct. A so-called paralectotype in Ottawa is another species.

Callimome longicauda (9, p. 34, 1883). Lectotype in Quebec; labeled Provancher no. 1019; Lectotype no. 215, 1944. Specimen on a card point. The present placement of this as *Torymus longicauda* (Provancher) (7) is correct.

Camptoptera clavata (11, p. 404, 1888). This type certainly is lost. Gahan and Rohwer (3, p. 335) were unable to locate it in Quebec in 1915, and it has not subsequently been located in any other collection.

Charitopus facialis (11, p. 203, 1887). Lectotype in Ottawa; labeled Harrington type no. 744; C.N.C. type no. 98; Lectotype, 1940. The specimen is on a pin which slightly distorts the thorax; the gaster has been broken off, but cemented on again. The present placement of this (7) as *Metastemus f. s.* (Provancher) is correct.

Cheiloneurus maculatipennis (11, p. 203, 1887). Lectotype and paralectotype mounted together on a small square of mica in the Ottawa collection; the lectotype is the specimen mounted on its side, to the right, in the Ottawa mount. The paralectotype is mounted upside down. Lectotype and paralectotype

peckhamii (Ashmead, 1886), but since good characters for distinguishing the species of *Encyrtus* in North America have not yet been worked out, it will be best to leave *maculatipennis* where it now is. If it should eventually be decided that *maculatipennis* is the same as *peckhamii* rather than *fuscus*, Provancher's name will still remain in synonymy, since it was proposed after both the other names.

Chrysocharis viridis (11, p. 209, 1887). Lectotype in Ottawa; labeled Harrington type no. 755; C.N.C. type no. 57; Lectotype, 1940. Specimen cemented on a square of mica. This is the species currently (7) taking the name *Chrysocharis compressicornis* Ashmead, 1894. Since Provancher's name has priority, Ashmead's must fall. **New synonymy.**

Cleonymus superbus (11, p. 407, 1888). Lectotype in Quebec; labeled Provancher no. 1601; Lectotype no. 271, 1944. Specimen mounted on a card point. Currently listed (7) as a distinct species of *Torymus*, this actually is a synonym of *Torymus flavicoxa* (Osten Sacken, 1870). **New synonymy.**

Coccophagus brunneus (11, p. 205, 1887). Lectotype in Quebec; labeled Provancher no. 1384; Lectotype no. 275, 1944. Specimen on a card point. This is at present listed as an unplaced species (7). The lectotype specimen is badly broken, with all the legs gone, the wings represented only by fragments, and the apex of the abdomen missing. It is a pteromalid with a subsessile abdomen, incomplete parapsides, antenna with 6 funicular segments, and the head transverse. This looks much like *Belonura singularis* Ashmead, 1896. I hesitate, however, to place the latter name in synonymy; the Provancher specimen is in such poor condition that to reach a really firm decision about its identity will probably never be possible. The original description of *brunneus* mentions another specimen as a "var.", but that specimen is now represented in the Quebec collection by a bare pin.

Coccophagus compressicornis (11, p. 206, 1887). Lectotype in Ottawa; labeled Harrington type no. 736; C.N.C. type no. 104; Lectotype, 1940. Specimen on a mica mount. This species now is listed (7) as a valid name in *Sympiesis*, which it is. *Sympiesis nitripes* Ashmead, 1888, is a synonym. **New synonymy.**

Coccophagus pallipes (11, p. 206, 1887). Lectotype in Quebec; labeled Provancher no. 1389; Lectotype no. 278, 1944. Specimen on a pin. This is now placed (7) as a species of *Eulophus*, and as a senior synonym of *smertitshi* Ashmead, 1898. This placement is incorrect; *pallipes* is a valid, but apparently rare, species of *Prigalio*. **New combination.** The species in *Eulophus* must again take the name *smertitshi*.

Copidosoma pallipes (11, p. 205, 1887). Lectotype in Ottawa; labeled Harrington type no. 737; C.N.C. type no. 95; Lectotype, 1940. Specimen on a mica mount. This species now is correctly placed (7) as *Cerchysius pallipes* (Provancher).

Decatoma basilaris (8, p. 290, 1881). Lectotype in Quebec; labeled Provancher no. 1343; Lectotype no. 401, 1944. Specimen on a card point. Present designation of lectotype. Gahan and Rohwer (5) were unable to locate the type of *basilaris*, but M. Comeau found it in the collection under another name. I agree that this specimen is the type, since it agrees in all particulars with the original description. This species is correctly placed at present (7) as a synonym of *Harmolita tritici* (Fitch, 1859).

Dimotus acutus (11, p. 201, 1887). Lectotype in Quebec; labeled Provancher no. 1355; Lectotype no. 410, 1944. Specimen on a card point. The

Eurytoma conica (11, p. 193, 1887). Lectotype in Ottawa; labeled Harrington type no. 720; C.N.C. type no. 99; Lectotype, 1940. Specimen originally pinned, now remounted on a card point. This is a valid species of *Eurytoma*, with *Eurytoma phloeosini* Ashmead, 1894, a synonym, as was published by Bugbee in 1956 (1).

Eurytoma nigricoxa (11, p. 193, 1887). Lectotype in Ottawa; labeled Harrington type no. 739; C.N.C. type no. 2513; Lectotype label added Jan. 1963. Specimen on a mica mount. This is a valid species of *Eurytoma*, very closely related to *Eurytoma auriceps* Walsh, as that species is currently identified.

Haltichella viridis (11, p. 192, 1887). Lectotype in Quebec; labeled Provancher no. 1394; Lectotype no. 550, 1944. Specimen on a pin. This is correctly placed at present (7) as a species of *Diomorus*. When a detailed study of *Diomorus* is made, however, it may be found that it is impossible to separate *viridis* and *Diomorus zabriskiei* Cresson, 1878.

Holcopelte albipes (11, p. 210, 1887). Lectotype in Quebec; labeled Provancher no. 1378; Lectotype no. 591, 1940. Specimen on a card point. This species is correctly placed at present in the genus *Pediobius* (6); the species *Pediobius albitarsis* (Ashmead, 1888) is a synonym of *albipes*. **New synonymy.**

Metacolus conicus (11, p. 200, 1887). Lectotype in Quebec; labeled Provancher no. 1365; Lectotype, 1940. Specimen on a pin. This is now placed correctly as a species of *Sympiesis* (7); *Sympiesis nigrifemora* Ashmead, 1888, is a synonym of *conicus*. **New synonymy.**

Miotropis nebulosa (11, p. 208, 1887). Lectotype in Ottawa; labeled Harrington type no. 750; C.N.C. type no. 97; Lectotype, 1940. Specimen on a mica mount. The present placement of this species (7) as *Eulophus nebulosus* (Provancher), with *Comedo bookeri* Crawford, 1912, a synonym, is correct.

Monodontomerus viridaeneus (8, p. 290, 1881). Lectotype in Quebec; labeled Provancher no. 622; Lectotype, 1947. Specimen on a pin. Present designation of lectotype. Gahan and Rohwer were unable to find the type of this species (5, p. 103), but M. Comeau found it subsequently in the collection under another name. I agree that this specimen is the type of *viridaeneus*, since it agrees in all particulars with the original description. This species is now listed (7) as a synonym of *Glyphomerus stigma* (Fab.), but that listing is incorrect. It is a true *Monodontomerus*, and is a synonym of the species currently identified as *M. dentipes* (Dalman, 1820). **New synonymy.**

Oligosthenus bimaculatus (11, p. 196, 1887). Lectotype in Ottawa; labeled Harrington type no. 721; C.N.C. type no. 101; Lectotype, 1940. Specimen on a card point. The present placement (7) of this species as a synonym of the species currently identified as *Glyphomerus stigma* (Fab.), is correct.

Ormyrus brunneipes (11, p. 198, May 1887). Lectotype in Quebec; labeled Provancher no. 1358; Lectotype, 1947. Specimen on a card point. The lectotype is badly faded, but can be placed as a specimen of the species now called *Ormyrus ventricosus* Ashmead, November 1887. As Provancher's description has priority, Ashmead's name falls in synonymy. **New synonymy.**

Paphagus rugosus (8, p. 293, 1881). Scelionidae.
Pterilampus aciculatus (11, p. 199, 1887). Lectotype in Quebec; labeled Provancher no. 1359; Lectotype, 1947. Specimen on a pin. The statement in the original description is probably an error, since the specimen is intact. I believe

Eucharis gibbosa (8, p. 292, 1881). Lectotype in Quebec; labeled Provancher no. 623; Lectotype no. 462, 1940. Specimen on a pin. Paralectotype in Ottawa; labeled 311 Prov., Harrington coll.; Paratype, 1940. The statement by Gahan and Rohwer (5, p. 398) that the head of the lectotype is missing is an error; since only the antennae are mostly broken off (2 scapes and 1 pedicel remain). Otherwise, however, the specimen is badly broken, with the thorax distorted by the mounting pin and the gaster and hind legs embedded in glue that attaches them to one corner of the number label. The paralectotype in Ottawa is virtually intact, lacking only the apices of the antennae. The present placement (7) as *Pseudochaleura gibbosa* (Provancher) is correct.

Eulophus ramosus (8, p. 297, 1881). The lectotype of *ramosus* must be considered to be lost. In Quebec there is a specimen labeled Provancher no. 924 and Lectotype no. 465, 1945. This cannot be a specimen from which Provancher described this species, since it does not agree in any particular of size, color, or structure with the original description of *ramosus*. It is inconceivable that Provancher, whose specific descriptions have proven to be uniformly accurate, could have described this specimen as having the characters he gave for *ramosus*. I also rather doubt that this is the specimen Gahan and Rohwer saw under this name, and bearing the Provancher no. 924, in 1915. It is, in fact, a female specimen with unbranched antennae, of the common *Pteromalus puparum* (L.). My opinion is that this might be the type of *Pteromalus pieridis* Provancher, which also must be listed as lost as the collection now stands. Unfortunately, there can be no easy solution for this problem, since the specimen now labeled as lectotype of *pieridis* and which cannot be the type of that species, could not be the type of *ramosus*. It seems probable that at some time a few labels must have been transferred among specimens in the Provancher collection. In Ottawa there is a so-called paralectotype of *ramosus*; it also is a female with unbranched antennae, a specimen of *Habritis*. It is possible, although the specimen does not agree well, that this is the female of *ramosus* that was very briefly mentioned by Provancher. *E. ramosus* will best be left unplaced, as it is now (7). The description, however, sounds much like *Sympiesis miltoni* Girault, 1917.

Eulophus tricladius (11, p. 208, 1887). Lectotype in Ottawa; labeled Harrington type no. 753; C.N.C. type no. 100; Lectotype label added Jan. 1963. Specimen on a card point. Paralectotype in Quebec; labeled no. 1374; Paralectotype label added Jan. 1963. The lectotype is a female, the paralectotype a male; the two are certainly conspecific. This species is now incorrectly placed in *Eulophus* (7); *tricladius* is a distinct species of *Sympiesis*. **New combination.** This species seems not to have been redescribed since Provancher's time.

Euplectrus lucens (11, p. 207, 1887). Lectotype in Quebec; labeled Provancher no. 1369; Lectotype no. 474, 1945. Specimen on a card point. This is now correctly placed (7) in the genus *Asaphes*. It is the species at present under the name *Asaphes fletcheri* (Crawford, 1909). Both *fletcheri* and *Asaphes americanus* Girault, 1914, are synonyms of *lucens*. **New synonymy.**

Euplectrus mellipes (11, p. 207, 1887). Lectotype in Ottawa; labeled Harrington type no. 741; C.N.C. type no. 93; Lectotype label added Jan. 1963. Specimen on a card point. Paralectotype in Quebec; labeled Provancher no. 1363; Paralectotype label added Jan. 1963. The current placement (7) of this is a valid species of *Euplectrus* is correct.

Euplectrus viridaeneus (11, p. 207, 1887). Lectotype in Ottawa; labeled

aciculatus (7) as a synonym of *Perilampus byalinus* Say is probably correct, although the *byalinus* complex needs to be critically restudied.

Perilampus laevis (11, p. 199, 1887). Lectotype in Ottawa; labeled Harrington type no. 731; C.N.C. type no. 92; Lectotype label added Jan. 1963. Specimen mounted on a card point. The lectotype in the Ottawa collections agrees with the original description in all particulars, and certainly is the specimen Provancher had when he described the species. This species was supposed to have been described from a specimen collected in Ottawa, but it is strange that other specimens of it have not been collected in North America during the 75 years since. This may not be a North American species, although it has not been possible so far to locate it in collections of exotic perilampids. *P. laevis* belongs in the genus *Elatus* Walker (considered by some workers to be a synonym of *Chrysolampus* Spinola). **New combination.** In Quebec there is a specimen that was designated a paralectotype of *laevis* by Gahan and Rohwer, with the Provancher no. 932. It does not, however, agree in any way with the original description and cannot be a type of this species. This Quebec specimen is a true *Perilampus*, of the *chrysopeae* group. The Provancher specimen no. 932 given by Gahan and Rohwer, for this Quebec specimen, evidently was a printer's error, since the specimen now in Quebec bears the number 923, and Rohwer's original notes on the collection give the number as 923. Any discussion of this so-called paralectotype is, however, academic, because it is not congeneric with the lectotype, and probably was not before Provancher when he described the species.

Perilampus stygius (11, p. 406, 1888). Lectotype in Quebec; labeled Provancher no. 1599; Lectotype, 1947. Specimen on a pin. The present placement of this (7) as a valid species of *Perilampus* is correct.

Phasgonophora elegans (11, p. 191, 1887). Lectotype in Ottawa; labeled Harrington type no. 719; C.N.C. type no. 103; Lectotype label added Jan. 1963. Paralectotype in Quebec, labeled no. 1341; Paralectotype label added Jan. 1963. Both specimens on pins. The lectotype and paralectotype are unquestionably the same species, but the latter is badly broken. The present placement (2) of *elegans* as a valid species of *Trigonura*, with *Trigonura bicorata* Rohwer, 1919, a synonym, is correct.

Pteromalus acutus (8, p. 297, 1881). Lectotype in Quebec; labeled Provancher no. 922; Lectotype, 1940. Specimen on a card point. The present assignment (7) of *acutus* to the genus *Habrocytus* is correct, but it cannot be placed specifically in the classification until that genus is revised.

Pteromalus nigricornis (8, p. 297, 1881). Lectotype in Quebec; labeled Provancher no. 1602; Lectotype label added Jan. 1963. Specimen on a card point, badly broken. This species is at present unplaced (7). The fragmentary type shows the following characters: Parapsides incomplete, anterior margin of pronotum ecarinate, abdomen sessile, head broader than thorax, propodeum with extremely rugose sculpture and without apical neck, marginal and postmarginal veins of forewing equal in length, stigmal half as long as either, antennal formula 1:1.2:6:3, first funicular segment 3 times as long as wide. These characters will refer *nigricornis* to the tribe Sphégigasterini, but there does not seem at present to be a described sphégigasterine genus to which it can be referred. It would, however, be a mistake to describe a new genus from a specimen as preserved as is the type of *nigricornis*. Another specimen in the Quebec

since it does not at all agree with the description. It is a specimen of *Asaphes lucens* (Provancher).

Pteromalus pieridis (8, p. 296, 1881). The type of this species must be considered to be lost. In Quebec there is a specimen labeled Provancher no. 628; Lectotype, 1940. Although 628 is the Provancher specimen number Gahan and Rohwer give for the lectotype of *pieridis*, this specimen does not agree in any particular with the original description of *pieridis*, so it cannot be the type. Its characters differ too greatly from those given by Provancher for it to be acceptable as the specimen he had when he described *pieridis*. It is, in fact, a male specimen of *Cecidostiba*. It seems that at some time after Gahan and Rohwer's visit to the Provancher collection in 1915, labels were transferred among some specimens. As I indicated above under *Eulophus ramosus*, the specimen now labeled as lectotype of *ramosus* might be the type of *pieridis*. The specimen now labeled as lectotype of *pieridis*, however, could not be the type of *ramosus*. The only reasonable course to follow is to consider that the types of both are lost. The characters and biological information given by Provancher in the original description of *pieridis* make likely the present placement (7) of it as a synonym of *Pteromalus puparum* (L.).

Rhopalicus pallipes (11, p. 407, 1888). The type is lost; Gahan and Rohwer were unable to find it in 1915, and it has not been located subsequently. There is, however, a specimen in the Provancher Dernière Collection bearing a manuscript species name and placed in the genus *Rhopalicus*. This specimen clearly belongs in the eulophid genus *Euderus*. The original description of *pallipes* could easily apply to a species of *Euderus*. This species will never, of course, be assigned with certainty anywhere; but it may safely be excluded from *Rhopalicus*, where it is now (7) placed. It should be treated as an unplaced species.

Roctrocerus rectus (11, p. 202, 1887). Lectotype in Quebec; labeled Provancher no. 1386; Lectotype, 1948. Specimen on a card point. The present placement of this species (6), as a synonym of the species currently identified as *Roctrocerus xylophagorum* (Ratzeburg, 1844), is correct.

Semiotellus cupraeus (8, p. 295, 1881). Lectotype in Quebec; labeled Provancher no. 920; Lectotype, 1940. Specimen on a card point. This lectotype specimen is a male pteromalid, making its placement difficult, in the current state of the classification. The present assignment of *cupraeus* (7) to the genus *Merisus* is, however, clearly untenable, as the propodeum has well-developed carinae. Since this lectotype has an acuminate antennal club, elongate funicular segments, 4-toothed mandible (only the left one is visible in the lectotype), anteriorly carinate pronotum, slightly enlarged stigmal knob, and the post-scutellum flat and shining, *cupraeus* should be referred to the genus *Caenacis*. **New combination.** I have not located the specimens that were reared from two species of *Megachile* and identified as *cupraeus* to provide the published host records for this species (7). It is rather unlikely that those specimens were correctly identified as *cupraeus*.

Semiotellus fasciatus (8, p. 294, 1881). Lectotype in Quebec; labeled Provancher no. 226; Lectotype label added Jan. 1963. Specimen on a pin. Although labeled as a male, it is a female. This specimen, however, must be the one Provancher described under this name as a male, since it agrees in size, color, and structure with his description. The so-called female briefly mentioned by Provancher in the original description seems to be lost, but it probably was

1963, has the head and thorax remaining. *T. canadensis*, despite the very fragmentary condition of the type specimens, clearly is *Entelmella vesiculifris* (Retzius, 1783), as that species is currently identified. **New synonymy.** *Trichasius clavatus* (11, p. 209, 1887). Scelionidae.

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The Infestation of Canadian Produce Inspected in United Kingdom Ports Between 1953 and 1959

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Abstract

Over 5,000 cargoes of grain, grain products, oilseeds, oilseed products and pulses from Canada were examined between 1953 and 1959. Only a few cargoes were found to be infested and there was a general decline in infestation over this period. Many of the insects recorded were acquired from the structure of the ships but mites were more frequently introduced with the grain. The mites which occurred most frequently were *Acarus siro*, *Glyciphagus* spp. and *Cheyletus* spp.; the commonest insects were Psocoptera and Cryptolestes spp. Including those species derived from residues in ships, the total of species and species groups recorded was 77. Cases where insects have been derived from infested residues on the ships are described. A greater variety of species is to be found on Western than on Eastern Canadian grain. This appears to be due to the change

in the genus *Arthrolytus* Thomson. New combination. I have seen other specimens of it from La Trappe, Que., Durham, N.H., Crisp, Pa., and Riverside, Mass., none, unfortunately, reared. [An undescribed, but closely related, species of *Arthrolytus* from California was reared from the galls of *Callirhytis agrifoliae* (Ashmead).] It may be noted that several other North American species at various times have been referred to *Arthrolytus*, but all have subsequently been transferred to other genera. Thus *fasciatus* remains the only described North American species now referred to *Arthrolytus*.

Semiotellus fuscipes (8, p. 294, 1881). Lectotype in Quebec; labeled Provancher no. 918; Lectotype label added Jan. 1963. Specimen fragmentary, on a pin. This is, as indicated in the Hymenoptera Catalog (7), a species of *Pteromalus*. It looks much like *Pteromalus vanesae* Howard, 1889; but I do not care to place Howard's species in synonymy from the study of a specimen that is as poorly preserved as is this one.

Semiotellus melanivorus (8, p. 294, 1881). Lectotype in Quebec; labeled Provancher no. 627; Lectotype label added Jan. 1963. Specimen on a pin. This species is correctly assigned at present to the genus *Habrocytus* (7), but it cannot be placed specifically until that genus is revised.

Semiotellus minimus (8, p. 295, 1881). Lectotype in Quebec; labeled Provancher no. 921; Lectotype label added Jan. 1963. Specimen on a pin. This species now is unplaced (7). The type specimen is so poorly preserved that the species cannot be placed with certainty. The abdomen is short-petiolate and (although the mounting pin badly distorts the thorax) the parapsides seem to be complete. These characters may place *minimus* somewhere in the Sphegigasterini.

Semiotellus oblongus (8, p. 295, 1881). Lectotype in Quebec; labeled Provancher no. 919; Lectotype label added Jan. 1963. Specimen on a pin. This species is at present unplaced (7). It should be referred to the genus *Tridymus*.

New combination.

Semiotellus suborbicularis (8, p. 296, 1881). Lectotype in Quebec; labeled Provancher no. 972; Lectotype, 1940. Specimen on a pin. The present placement of this species (7) as *Coelopisthia suborbicularis* (Provancher) is correct.

Spalangia aenea (11, p. 200, 1887). Scelionidae.

Syntomaspis splendens (11, p. 196, 1887). Lectotype in Ottawa; labeled Harrington type no. 722; C.N.C. type 94; Lectotype, 1940. Specimen on a pin; gaster and one hind leg missing. The current concept of this species (7) as *Allotorymus splendens* (Provancher) is correct.

Tetrastichus trisulcatus (11, p. 211, 1887). Lectotype in Ottawa; labeled Harrington type no. 740; C.N.C. type no. 56; Lectotype label added Jan. 1963. Specimen on a card point. This lectotype specimen is a female, but since this is a species in which the ovipositor is hidden, I believe that Provancher mistook the sex from the start and described this female specimen as a male. A paralectotype specimen, another female, is in Quebec. It is labeled Provancher no. 1377; a paralectotype label was added Jan. 1963. This specimen also is on a card point. The Ottawa and Quebec specimens are unquestionably conspecific. The present placement (7) as a valid species of *Tetrastichus*, with *Hyperteles bylotomus* Ashmead, 1888, a synonym, is correct for *trisulcatus*. The so-called female of this species, specimens of which seem to have disappeared, is very likely another species.