

Checklist of Chalcidoidea and Mymarommatoidea (Hymenoptera) of Canada, Alaska and Greenland

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Abstract

A checklist of 1246 extant, described species, classified in 346 genera in 18 families of Chalcidoidea (Hymenoptera) are reported from Canada, Alaska (USA) and Greenland (Denmark) based on examined specimens and published records up to December 31, 2020. Of the reported species, 1214 (in 345 genera in 18 families) are listed from Canada, 113 (in 58 genera in 10 families) from Alaska, and 26 (in 22 genera in 4 families) from Greenland. The list includes 235 new species records and 53 new generic records for Canada (no new family records). Forty-one new species records, 22 new generic records and the families Chalcididae and Eurytomidae are newly reported for Alaska. No new records were found for Greenland. Two species (in one genus) of Mymarommatoidea are reported from Canada. For each species in Canada, distribution is tabulated by province or territory, except the province of Newfoundland and Labrador is divided into the island of Newfoundland and the region of Labrador. The inclusion of known species from Alaska and Greenland results in the first comprehensive distributional checklist for

the entire northern part of the Nearctic region. A brief review of the history of cataloguing Chalcidoidea in North America and a comparison of this checklist with four published checklists from the Palaearctic region is provided.

Keywords

Microhymenoptera, Nearctic region, northern North America, species distributions

Introduction

The superfamily Chalcidoidea is one of the most diverse groups of organisms on the planet (Figs 2–13). More than 22,700 species are described (Huber 2017), but Heraty et al. (2013) estimated that there might be up to 500,000 species worldwide. Most chalcidoids, for which the biology is known, are parasitoids, having been reared from a wide variety (12 orders) of Insecta, and also 2 orders of Arachnida and the family Anguinidae (Nematoda) (Gibson 1993). A few are predators and some are phytophagous. For more comprehensive information on the biology of Chalcidoidea see, e.g., Clausen (1940), Askew (1971), Bendel-Janssen (1977), Gordh (1979a), Gauld and Bolton (1988), Hanson and Gauld (1995), Noyes (2019). In addition to Chalcidoidea, the small superfamily Mymarommatoidea is also included in this paper because it is generally considered to be the sister group to Chalcidoidea (Gibson et al. 2007; Huber et al. 2008; Heraty et al. 2013). The biology of Mymarommatoidea is unknown, except that one has been reared from a bracket fungus and most are collected in shady, moist areas such as deciduous forests (Huber et al. 2008).

The first published cataloguing efforts for Chalcidoidea of the Nearctic region began with Peck (1951), with supplements by Burks (1958, 1967b). Peck (1963) catalogued the literature for each species up to and including 1958. The families comprising the Chalcidoidea section in Krombein et al. (1979) were catalogued by B. Burks, G. Gordh, and E. Grissell, former chalcidologists at United States National Museum of Natural History, Washington, DC (USNM), and included the relevant taxonomic literature to the end of 1972 or 1976 depending on the family. These catalogues also included species and records from Greenland. In his acclaimed Universal Chalcidoidea Database (UCD) for world Chalcidoidea, Noyes (2019) included the data from these previous catalogues. His database is now the only comprehensive compilation of taxonomic, biological, distributional and literature source information for world Chalcidoidea for the past 40–50 years, though it has not been updated since March 2019. Among other searches, it can be used to generate numbers and lists of Chalcidoidea names for any biogeographical region or country, and political subdivision within larger countries. Building on the information contained in the UCD, it is the purpose of this paper to provide the first checklist of the Chalcidoidea and Mymarommatoidea of Canada, Alaska and Greenland incorporating previously published, substantiated records as well as new records based on authoritatively identified specimens.

Methods

Sources of data

All records are substantiated by evidence, either collection- or literature-based. The vast majority of records in this checklist are based on specimens in the Canadian National Collection of Insects, Arachnids and Nematodes, Ottawa (**CNC**). Additional distributional records, for which specimens could not be examined, were obtained by mining previous literature. Because of the relatively poor knowledge of Chalcidoidea, regional collections were generally not consulted because of the immense amount of work required to identify and curate most specimens in these collections. However, a few records were based on examination of specimens (or their photographs) deposited in other collections, as follows: Royal Alberta Museum, Edmonton, Alberta, Canada (**PMAE**: M. Buck); Royal Ontario Museum, Toronto, Ontario, Canada (**ROM**: C. Darling); Royal Saskatchewan Museum, Regina, Saskatchewan, Canada (**RSKM**: C. Sheffield), University of Alaska, Fairbanks, Alaska, USA (**UAM**: D. Sikes). Whereas most records are Canadian, records from Alaska (USA), Greenland (Denmark) and the 242 km² French Overseas Collectivity of Saint Pierre and Miquelon islands located 25 km from the southern coast of Newfoundland are also included so as to provide complete coverage of the northern part of the Nearctic region. Most of the Alaska species records (74 of 113) were based on specimens in collections (CNC and UAM). The remainder were literature records, primarily from the chapters in Krombein et al. (1979), which mostly catalogued specimens in the USNM. The Greenland records were taken almost exclusively from the relevant chapters in Böcher et al. (2015) with some records substantiated by specimens in the CNC. The single species recorded from Saint Pierre and Miquelon was obtained from the TAXREF database (Gargominy et al. 2020) managed by the Muséum national d'Histoire naturelle, Paris, but specimens were not examined and this species is only discussed in the text, not included in Table 2. Because of relatively poor sampling of the chalcidoids of these last three regions, it is likely that the current survey is not as complete for them as it is for Canada. All records published up to December 31, 2020 were evaluated for the current checklist.

We exclude from the checklist the very few fossil species of Chalcidoidea described from Canadian Cretaceous amber; all are now classified in Mymaridae (Poinar and Huber 2011) and Rotoitidae (Gumovsky et al. 2018). Further, species introduced into Canada from other countries for biological control against introduced pests are included only if there is irrefutable evidence that they became established after release. Often, no follow up surveys were undertaken to determine if the species released had established and so their continued presence is unsubstantiated. Because there is no single compilation of intentionally released species, one must search for their names in the five volumes on biological control in Canada: McLeod et al. (1962), Kelleher et al. (1971), Kelleher and Hume (1984), Mason and Huber (2002) and Mason and Gillespie (2012). At least 18 species are or were commercially produced in Canada (Mason and Huber 2002), 14 of which are included in the checklist. The other four species, *Aphytis melinus* DeBach, *Eretmocerus californicus* Howard, *Metaphycus helvolus* (Compere) and

Trichogrammatoidea bactrae Nagaraja, occur in the southern states of USA or outside the Nearctic region on pests of crops not, or not extensively, grown commercially in Canada so are most unlikely to be found there. Some of the commercially produced species may establish more or less permanent populations in areas where they are released, often in large numbers at intervals (usually in greenhouses) or may occur naturally outside the facilities that produce them. We do not include any records in Table 2 that are solely known from websites such as iNaturalist, BugGuide or online databases of specimens in museums because for Chalcidoidea, examination of specimens with reference to authoritatively identified material is generally required. Finally, we only include described species, not undescribed taxa or specimens identified only to genus.

Presentation of data

Distributions of taxa are indicated using acronyms of 18, mostly political, regions of northern (mostly north of 45° latitude) North America. For practical purposes the province of Newfoundland and Labrador is divided into the island of Newfoundland and the region of Labrador on mainland Canada. The acronyms used for the regions are: **CAN** = Canada, **AK** = Alaska (USA), **GL** = Greenland, **SPM** = Saint Pierre and Miquelon. Within Canada, the regions are: **AB** = Alberta, **BC** = British Columbia, **LB** = Labrador, **MB** = Manitoba, **NB** = New Brunswick, **NF** = Newfoundland island, **NS** = Nova Scotia, **NT** = Northwest Territories, **NU** = Nunavut, **ON** = Ontario, **PE** = Prince Edward Island, **QC** = Quebec, **SK** = Saskatchewan, **YT** = Yukon Territory. All regions are shown in Fig. 1. The distributional data are presented in two ways. Table 1 is a summary of the numbers of described, recorded species of Chalcidoidea and Mymarommatoidea in Canada, Alaska and Greenland (not including Saint Pierre and Miquelon) totalled for each family for all 17 regions. Table 2 is the species checklist arranged alphabetically by family for the same 17 regions. It contains three types of distributional records: 1) a published record for which we have examined a specimen; 2) a new (unpublished) record for which we have examined a specimen; and 3) a published record for which we have not examined a specimen, but is well-substantiated (see Assessing credibility of records section in Bennett 2021a). The different types of records are indicated by different fonts and colours in Table 2 (see Table heading). The absence of a provincial or territorial acronym for a species recorded from Canada indicates that the taxon was recorded from Canada but no province was specified. Literature references (shown in the far right column of Table 2) are only noted for previously published records for which no specimens were examined. Authors' names that have been spelled in different ways, such as with or without diacritic marks, are spelled in only one way for consistency, for example, Förster, not Foerster. Literature references for published records for which specimens were examined are not provided as this would dramatically increase the size of the study and make it practically impossible to present the distributional data in a table format. We do provide an extensive, but by no means comprehensive, list of references for higher taxa, e.g., revisions of genera and regional checklists, which are cited directly under the higher taxon names in Table 2. Our list is not a catalogue so synonyms and homonyms are generally excluded;

these can be found in UCD. In addition to the published checklist, the data presented in Table 2 have been added to Canadensys (<https://data.canadensys.net/ipt/resource?r=aafc-hymenoptera-canada-ak-gl>) and are also registered on GBIF (Bennett 2021b).

Classification

The family classification in Chalcidoidea has been extremely volatile, varying from 1 to 23 recognized families (see Grissell and Schauff 1997), with changes even in the last few years and more changes likely in the future. We mainly follow the family classification in Heraty et al. (2013) in which 22 families were recognized, except we also recognize the family Megastigmidae, which was raised from subfamily status within Torymidae by Janšta et al. (2018). Five extant families, the Agaonidae, Cynipencyrtidae, Eriaporidae, Rotoitidae, and Tanaostigmatidae do not occur in northern North America. Species of Agaonidae are associated exclusively with figs (*Ficus* spp.), which do not naturally occur in Canada, Cynipencyrtidae consists of one genus and species in Asia, Eriaporidae occur only in the Old World, the two described species of Rotoitidae occur only in Chile and New Zealand, and species of Tanaostigmatidae occur in the New World only as far north as the southern states of USA.

Results and discussion

A total of 1246 described, extant species of Chalcidoidea in 346 genera in 18 families are listed for Canada, Alaska and Greenland (Tables 1 and 2). Of these, 1214 species, classified in 345 genera in 18 families, are listed from Canada. To place the current number of species in perspective, it represents a 149% increase from the 500 species reported in Danks (1979). In terms of relative species richness within Hymenoptera, Chalcidoidea species comprise 13.5% of the 9250 species recorded in northern North America and 13.6% of the 8933 recorded in Canada (Bennett 2021a). Yet in comparison to other areas of the world the number of Chalcidoidea is relatively low. Gijswit (2003) recorded 1085 species of Chalcidoidea for The Netherlands, Weber et al. (2018) 1964 species (and likely about 380 more) for Germany, Dale-Skey et al. (2016) 1754 species for Great Britain and Ireland, and Belokobylskij et al. (2019) 2307 species for Russia, other countries that have recently published checklists for Chalcidoidea. Britain and Ireland together (313,100 km²) are only about 3.2% the size of Canada (9.985 million km²), but despite this, the 1754 species recorded from there is almost 1.5 times greater than all the species we record from Canada. Canada and Russia have a much greater variety of ecozones and habitats than does Britain and Ireland, which have little or no tundra, temperate rain forest, grassland or semi-desert. While the colder climate over much of Canada contributes to the apparently depauperate fauna this is not the main reason. Lack of collecting as well as lack of study of what has been collected, in groups other than those of research interest to the few taxonomists who study Chalcidoidea in Canada, is probably the main factor contributing to poor knowledge of species and their distributions.

Table 1. Described, recorded species of Chalcidoidea and Mymarommatoidae in Canada, Alaska and Greenland totalled for each taxon and in each region. See Methods for acronyms used for the regions and Fig. 1 for their locations. Regions are arranged generally north to south and west to east.

Taxon	CAN+ AK+GL	CAN(New)	AK	YT	NT	NU	BC	AB	SK	MB	ON	QC	NB	PE	NS	LB	NF	GL
Aphelinidae	38	38 (12)	0	0	0	0	11	9	6	5	27	20	8	1	8	0	1	0
Azotidae	1	1 (0)	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Chalcididae	39	39 (7)	3	2	1	0	13	9	14	16	29	17	5	1	2	0	1	0
Encyrtidae	110	100 (23)	4	2	3	1	33	23	16	14	69	35	23	5	22	1	5	10
Eucharitidae	8	8 (0)	1	1	1	0	4	7	3	2	6	3	3	2	1	0	0	0
Eulophidae	379	374 (62)	43	23	34	2	133	108	61	87	285	191	107	18	89	5	28	6
Eupelmidae	28	28 (7)	0	0	0	0	8	6	3	4	20	8	4	3	3	0	0	0
Eurytomidae	87	87 (15)	4	5	3	0	35	27	21	20	65	44	9	8	11	2	0	0
Leucospidae	1	1 (0)	0	0	0	0	1	1	1	1	1	1	1	1	1	0	0	0
Megastigmidae	21	21 (5)	3	2	2	1	11	5	3	4	12	10	3	2	3	2	3	0
Mymaridae	96	94 (7)	12	5	8	0	29	19	4	9	67	46	10	10	18	0	1	1
Ormyridae	9	9 (3)	0	0	1	0	2	2	0	2	7	4	2	0	3	0	0	0
Perilampidae	20	20 (6)	0	2	0	0	8	9	8	3	14	13	5	4	5	0	0	0
Pteromalidae	309	295 (71)	36	22	20	3	111	98	57	58	186	136	64	21	49	3	16	9
Signiphoridae	1	1 (0)	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Tetracampidae	4	4 (0)	0	0	0	0	0	1	0	0	4	3	1	0	0	0	0	0
Torymidae	60	59 (17)	3	3	3	0	28	20	9	14	41	22	8	2	5	0	1	0
Trichogrammatidae	35	35 (0)	4	2	2	0	13	11	1	6	17	13	4	1	3	0	0	0
CHALCIDOIDEA	1246	1214 (235)	113	69	78	7	440	355	207	245	852	566	257	79	223	13	56	26
MYMAROMMATOIDEA	2	2(0)	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0

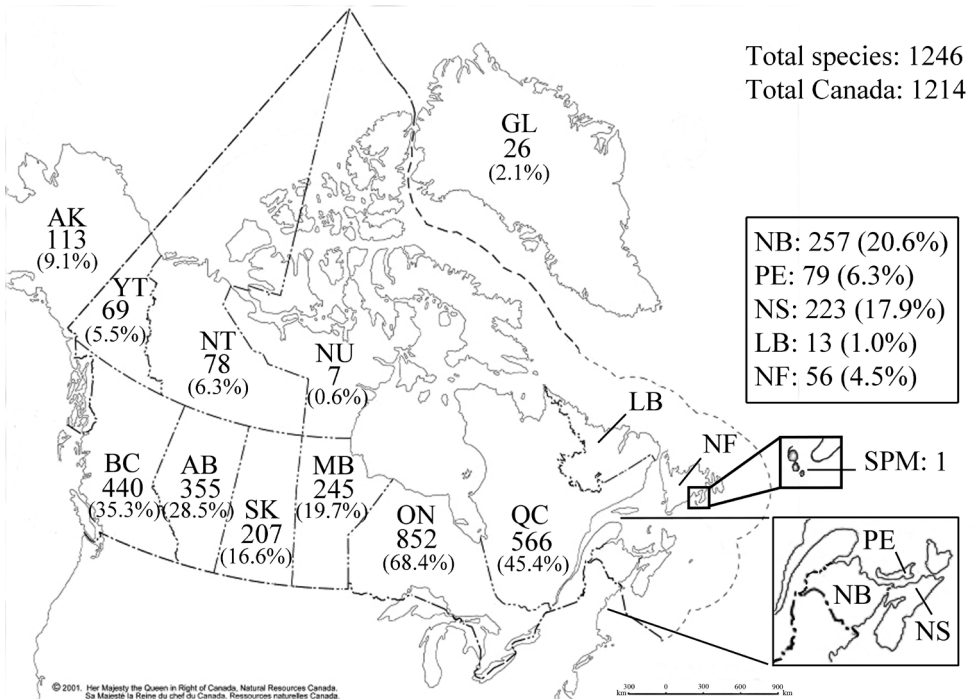


Figure 1. Map of Canada, Alaska, Greenland, and Saint Pierre and Miquelon showing number of described, recorded Chalcidoidea species and percentage of total species for each region. Canada is comprised of all regions except for Alaska, Greenland, and Saint Pierre and Miquelon. See the Presentation of data section under Methods for the acronyms of the regions treated in the checklist.

SUBFAMILY HALTICHELLINAE**Genus *Haltichella* Spinola, 1811**

Nearctic review – Halstead 1990a

H. xanticles (Walker, 1843) CAN – – – – – SK – ON QC – – – – – Burks 1979a**Genus *Hockeria* Walker, 1834**

Nearctic revision – Halstead 1990b

H. bicolor Halstead, 1990 CAN – – – – – – – ON – – – – – Halstead 1990b*H. eriensis* (Wallace, 1942) CAN – – – – – AB SK – – – – – PMAE; RSKM*H. micra* Halstead, 1990 CAN – – – – – AB – – – – – PMAE*H. unipunctatipennis* (Girault, 1918) CAN – – – – – – – ON QC – – – – –**Genus *Psilochalcis* Kieffer, 1905***P. usta* (Grissell & Schauff, 1981) CAN – – – – – BC – SK – ON – – – – –**SUBFAMILY PHASGONOPHORINAE****Genus *Phasgonophora* Westwood, 1832***P. sulcata* Westwood, 1832 CAN – – – – – BC – – MB ON QC NB – – – – –**Genus *Trigonura* Sichel, 1866**

Nearctic key – Burks 1959

T. elegans (Provancher, 1887) CAN – – – – – BC – – MB ON QC – – – – –*T. pini* Burks, 1959 CAN – YT – – – – – BC – – MB – – – – –*T. tarsata* (Dalla Torre, 1898) CAN – – – – – SK MB ON QC NB – – – – – Burks 1979a*T. ulmi* Burks, 1959 CAN – – – – – SK MB ON QC NB – – – – –**FAMILY ENCYRTIDAE**

Nearctic generic key – Noyes et al. 1997; Nearctic review – Noyes and Woolley 1994; world review (biocontrol) – Noyes and Hayat 1994; Nearctic catalogue – Gordh 1979b; Nearctic review of genera and keys – Trjapitzin and Gordh 1978a, 1978b, Gordh and Trjapitzin 1981

SUBFAMILY ENCYRTINAE**Genus *Acerophagus* Smith, 1880**

Nearctic Revision and keys – Rosen (1969)

A. angelicus (Howard, 1898) CAN – – – – – – – QC – – – – – Peck 1963*A. malinus* (Gahan, 1946) CAN – – – – – – – ON – – – – – Boyce 1948**Genus *Adelencyrtus* Ashmead, 1900***A. intersectus* (Fonscolombe, 1832) CAN – – – – – BC – – – – – Gahan 1924**Genus *Ageniaspis* Dahlbom, 1857***A. bicoloripes* (Girault, 1915) CAN – – – – – – – ON – – – – – NS – – – – –*A. fuscicollis* (Dalman, 1820) CAN – – – – – BC – – – – – ON – – – – –*A. scutellatus* (Miller, 1961) CAN – – – – – – – ON – – – – – NS – – – – –*A. testaceipes* (Ratzeburg, 1848) CAN – – – – – – – ON – – – – – Wang and Laing 1989**Genus *Aphycoides* Mercet, 1921***A. clavellatus* Dalman, 1820 CAN – – – – – – – – – – – Tjapitzin 1989**Genus *Apsilophrys* De Santis, 1964***A. vaga* (Howard, 1885) CAN – – – – – BC AB – MB ON QC NB – – – – – Peck 1963**Genus *Blastothrix* Mayr, 1876**

Nearctic review – Sugonjaev 1983

B. britannica Girault, 1917 CAN – – – – – BC – – – – – Sugonjaev 1983*B. longipennis* Howard, 1881 CAN – – – – – – – ON QC – – – – – Noyes 2004*B. sericea* (Dalman, 1820) CAN – – – – – BC – SK – ON QC NB – NS – – – – –**Genus *Bothriothorax* Ratzeburg, 1844***B. nigripes* Howard, 1895 CAN – – – – – BC AB – – – – –*B. noveboracensis* Howard, 1895 CAN – – – – – BC – – – – – ON NB NS – – – – –**Genus *Casus* Noyes & Woolley, 1994***C. parma* Noyes & Woolley, 1994 CAN – – – – – – – ON – – – – – Noyes and Woolley 1994**Genus *Cerchysius* Westwood, 1832***C. pallipes* (Provancher, 1887) CAN – – – – – – – ON – – – – –**Genus *Cheiloneurus* Westwood, 1833**

World revision – Guerrieri and Viggiani 2005

C. alaskae Trjapitzin & Triapitsyn, 2008 – AK – – – – – – – – – – – Tjapitzin and Triapitsyn 2008*C. albicornis* Howard, 1881 CAN – – – – – – – MB ON – – – – –*C. elegans* (Dalman, 1820) CAN – – – – – – – ON – – PE – – – – – Gahan 1933*C. swezeyi* Ashmead, 1903 CAN – – – – – – – ON – – – – – Guerrieri and Viggiani 2005**Genus *Coelopencyrtus* Timberlake, 1919***C. hylaeoleter* Burks, 1958 CAN – – – – – – – ON – – – – – Gordh 1979b**Genus *Copidosoma* Ratzeburg, 1844**

European revision – Guerrieri and Noyes 2005

C. albipes (Westwood, 1837) CAN – – – – – BC AB SK MB ON QC NB – – – – –

Genus *Leptomastix* Förster, 1856

<i>L. dactylopii</i> Howard, 1885	CAN	-	-	-	-	BC	AB	SK	-	ON	QC	NB	-	NS	-	NF	-	AB,SK,ON,NS- Baird 1939; BC,QC,NB- Baird 1941; NF-Peck 1963
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Genus *Mira* Schellenberg, 1803

<i>M. mucra</i> Schellenberg, 1803	CAN	-	-	-	-	-	-	-	-	-	-	-	-	NS	-	-	-	
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Genus *Pseudoleptomastix* Girault, 1915

<i>P. squamulatus</i> Girault, 1917	CAN	-	-	-	-	-	AB	-	-	-	-	-	-	-	-	-	-	Noyes 2000
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Genus *Rhopus* Förster, 1856

<i>R. sulphureus</i> (Westwood, 1837)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	GL	Noyes 2015
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Genus *Tetracnemoidea* Howard, 1898

<i>T. westwoodi</i> (Cockerell, 1898)	CAN	-	-	-	-	-	-	-	-	QC	-	-	-	-	-	-	-	Gordh 1979b
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Genus *Zaplatycerus* Timberlake, 1925

<i>Z. gela</i> (Noyes & Woolley, 1994)	CAN	-	-	-	-	-	-	-	-	QC	-	-	-	-	-	-	-	
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Genus *Zarhopalus* Ashmead, 1900

<i>Z. corvinus</i> (Girault, 1915)	CAN	-	-	-	-	BC	AB	-	-	ON	QC	NB	-	NS	-	-	-	Baird 1941
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<i>Z. sheldoni</i> Ashmead, 1900	CAN	-	-	-	-	AB	-	MB	ON	QC	-	-	-	-	-	-	-	AB,MB-Noyes and Hayat 1994; QC-Baird 1946
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FAMILY EUCHARITIDAE

World generic revision – Heraty 2002; Nearctic generic key – Heraty 1997; Nearctic catalogue – Burks 1979b

SUBFAMILY EUCHARITINAE

Nearctic revision – Heraty 1985

Genus *Pseudochalcura* Ashmead, 1904

New World revision – Heraty 1986

<i>P. gibbosa</i> (Provancher, 1881)	CAN	AK	YT	NT	-	BC	AB	SK	MB	ON	QC	NB	-	-	-	-	-	
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Genus *Pseudometagea* Ashmead, 1899

<i>P. bakeri</i> Burks, 1961	CAN	-	-	-	-	BC	AB	SK	-	-	-	-	-	-	-	-	-	
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<i>P. barberi</i> Heraty, 1985	CAN	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	-	
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<i>P. montana</i> (Ashmead, 1890)	CAN	-	-	-	-	-	AB	SK	-	ON	QC	NB	PE	NS	-	-	-	Heraty 1985
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<i>P. nefrens</i> Heraty, 1985	CAN	-	-	-	-	-	AB	-	ON	-	-	-	-	-	-	-	-	
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<i>P. occipitalis</i> Heraty, 1985	CAN	-	-	-	-	BC	AB	-	-	-	-	-	-	-	-	-	-	Heraty 1985
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<i>P. schwarzi</i> (Ashmead, 1892)	CAN	-	-	-	-	-	AB	-	-	ON	QC	NB	PE	-	-	-	-	
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SUBFAMILY ORASEMINAE

Genus *Orasema* Cameron, 1884

Revision – Baker and Heraty 2020

<i>O. coloradensis</i> Wheeler, 1907	CAN	-	-	-	-	BC	AB	-	MB	ON	-	-	-	-	-	-	-	Baker and Heraty 2020
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FAMILY EULOPHIDAE

Phylogenomics – Rasplus et al. 2020; Nearctic generic review – Schauff et al. 1997; Nearctic catalogue – Burks 1979c

SUBFAMILY ENTEDONINAE

Genus *Achrysocharoides* Girault, 1913

Nearctic revision – Yoshimoto 1977

<i>A. albus</i> Yoshimoto, 1977	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	NS	-	-	-	
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<i>A. arienascapus</i> (Miller, 1962)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	
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<i>A. bipunctatus</i> (Girault, 1916)	CAN	-	-	-	-	-	-	SK	-	ON	QC	-	-	-	-	-	-	
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<i>A. bisulcus</i> Yoshimoto, 1977	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	
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<i>A. cariocus</i> (Miller, 1962)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	
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<i>A. chypeatus</i> (Miller, 1962)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	
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<i>A. gabani</i> (Miller, 1962)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	
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<i>A. guizoti</i> Girault, 1917	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
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<i>A. hirtiscapus</i> (Miller, 1962)	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
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<i>A. intricatus</i> Yoshimoto, 1977	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	
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<i>A. mali</i> Kamijo, 1991	CAN	-	-	-	-	-	-	-	-	-	-	-	-	NS	-	-	-	
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<i>A. reticulatus</i> Yoshimoto, 1977	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	
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<i>A. tetrapunctatus</i> Yoshimoto, 1977	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
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<i>A. titiani</i> Girault, 1916	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	NS	-	-	-	
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<i>A. yoshimotoi</i> Kamijo, 1991	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	
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<i>A. zwolferi</i> (Delucchi, 1954)	CAN	-	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-	
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Genus *Asecodes* Förster, 1856

<i>A. congruens</i> (Nees, 1834)	CAN	-	-	-	-	BC	-	-	-	ON	-	-	-	-	-	-	-	
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<i>A. ercias</i> (Walker, 1848)	CAN	-	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-	
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<i>A. lucens</i> (Nees, 1834)	CAN	-	-	NT	-	-	-	SK	-	ON	QC	NB	-	NS	-	-	-	
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<i>A. politum</i> (Hansson, 1994)	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
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Genus *Ceraninus* Walker, 1842

Nearctic review – Triapitsyn and Morse 2005

<i>C. americanus</i> (Girault, 1917)	CAN	-	-	-	-	BC	AB	-	-	ON	-	-	-	-	-	-	-	-	
<i>C. loomansi</i> Triapitsyn & Headrick, 1995	CAN	-	-	-	-	BC	AB	SK	MB	ON	-	NB	PE	-	-	-	-	-	
<i>C. menes</i> (Walker, 1939)	CAN	-	-	-	-	BC	-	-	-	ON	-	-	-	-	-	-	-	-	
<i>C. planitiansus</i> Erdős, 1966	<i>CAN</i>	-	-	<i>NT</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Triapitsyn and Morse 2005
<i>C. russelli</i> (Crawford, 1911)	CAN	-	-	-	-	-	-	-	-	ON	<i>QC</i>	-	-	-	-	-	-	-	Triapitsyn and Morse 2005

Genus *Chrysocharis* Förster, 1856New World/Nearctic revisions – Hansson 1987, 1995b, respectively; Palaearctic revision – Hansson 1985; Nearctic review *Chrysocharis (Kratochviliana)*, Nearctic revision *Chrysocharis s str* – Yoshimoto 1973a, 1973b, respectively

<i>C. acoris</i> (Walker, 1839)	CAN	AK	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	-	-
<i>C. acutigaster</i> Hansson, 1985	CAN	-	-	-	-	-	-	-	MB	ON	<i>QC</i>	NB	-	-	-	-	-	-	Hansson 1987
<i>C. ainsliei</i> Crawford, 1912	CAN	AK	<i>YT</i>	-	-	BC	AB	SK	-	ON	<i>QC</i>	NB	-	NS	-	-	-	-	Hansson 1987
<i>C. aluta</i> Yoshimoto, 1973	CAN	-	-	NT	-	-	-	-	-	ON	<i>QC</i>	-	-	-	-	-	-	-	-
<i>C. amasis</i> (Walker, 1839)	<i>CAN</i>	-	-	-	-	-	-	-	-	-	-	-	-	<i>NS</i>	-	-	-	-	Hansson 1987
<i>C. amyite</i> (Walker, 1839)	CAN	AK	YT	NT	-	BC	AB	SK	MB	-	<i>QC</i>	-	-	-	-	-	<i>NF*</i>	-	Hansson 1987
<i>C. assis</i> (Walker, 1839)	CAN	-	YT	-	-	-	AB	SK	-	ON	<i>QC</i>	NB	-	NS	-	-	<i>NF*</i>	-	Hansson 1987
<i>C. avia</i> Hansson, 1985	CAN	-	-	NT	-	-	-	-	-	ON	-	-	-	-	-	-	-	-	-
<i>C. beckeri</i> Yoshimoto, 1973	CAN	-	-	-	-	-	-	-	-	ON	<i>QC</i>	NB	-	-	-	-	-	-	-
<i>C. cerodonthae</i> Hansson, 1987	CAN	-	-	-	-	-	AB	-	-	ON	QC	-	-	-	-	-	-	-	-
<i>C. chromatomyiae</i> Hansson, 1987	CAN	-	-	-	-	BC	AB	-	-	ON	<i>QC</i>	NB	-	-	-	-	-	-	-
<i>C. clarkae</i> Yoshimoto, 1973	CAN	AK	YT	NT	-	BC	AB	-	MB	ON	<i>QC</i>	NB	-	NS	-	-	-	-	-
<i>C. collaris</i> Graham, 1963	CAN	-	-	-	-	-	-	-	-	-	<i>QC</i>	-	-	-	-	-	-	-	-
<i>C. compressicornis</i> Ashmead, 1895	CAN	-	-	-	-	BC	-	-	-	ON	<i>QC</i>	NB	-	-	-	-	-	-	-
<i>C. coptodiscae</i> Yoshimoto, 1973	CAN	-	-	-	-	BC	-	SK	MB	ON	<i>QC</i>	NB	-	NS	-	-	<i>NF*</i>	-	Hansson 1987
<i>C. cornigera</i> Hansson, 1995	CAN	-	-	-	-	-	AB	-	-	-	-	-	-	-	-	-	-	-	-
<i>C. crassiscapus</i> (Thomson, 1878)	CAN	<i>AK</i>	YT	NT	-	BC	AB	<i>SK</i>	MB	ON	<i>QC</i>	NB	-	NS	-	-	-	-	Hansson 1987
<i>C. elongata</i> (Thomson, 1878)	CAN	AK	YT	NT	-	BC	AB	-	MB	ON	QC	NB	-	-	-	-	-	-	-
<i>C. entedonoides</i> (Walker, 1972)	<i>CAN</i>	-	<i>YT</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Hansson 1987
<i>C. frigida</i> Baur & Hansson, 1997	CAN	-	-	-	-	-	-	-	-	<i>QC</i>	-	-	-	-	-	-	-	-	-
<i>C. fulviscapus</i> Hansson, 1987	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	-	-
<i>C. gemma</i> (Walker, 1839)	CAN	-	-	-	-	BC	-	-	-	ON	-	-	-	-	-	-	-	-	-
<i>C. giraulti</i> Yoshimoto, 1973	CAN	<i>AK</i>	-	-	-	<i>BC</i>	AB	-	MB	ON	<i>QC</i>	NB	-	NS	-	-	-	-	Hansson 1987; Yoshimoto 1973b
<i>C. griffithsi</i> Hansson, 1987	CAN	-	<i>YT</i>	-	-	BC	AB	-	-	ON	-	-	-	-	-	-	-	-	Hansson 1987
<i>C. ignota</i> Hansson, 1987	CAN	-	-	-	-	-	AB	-	-	ON	-	-	-	-	-	-	-	-	-
<i>C. illustris</i> Graham, 1963	CAN	-	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>C. laomedon</i> (Walker, 1839)	CAN	-	-	-	-	BC	-	-	-	ON	<i>QC</i>	-	-	NS	-	-	-	-	-
<i>C. laricellae</i> (Ratzeburg, 1848)	CAN	AK	-	-	-	BC	AB	-	MB	ON	<i>QC</i>	NB	<i>PE</i>	NS	-	NF	-	-	Yoshimoto 1973a
<i>C. liriomyzae</i> Delucchi, 1954	CAN	-	-	-	-	-	-	-	-	<i>ON</i>	-	PE	-	-	-	-	-	-	Heimpel and Meloche 2001
<i>C. longicoxa</i> Hansson, 1987	CAN	AK	<i>YT</i>	NT	-	BC	AB	-	-	-	-	-	-	-	-	-	-	-	Hansson 1987
<i>C. longigaster</i> Hansson, 1987	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	-	-
<i>C. mediana</i> Förster, 1861	CAN	AK	-	-	-	-	-	-	MB	ON	<i>QC</i>	NB	-	-	-	-	-	-	-
<i>C. minuta</i> (Hansson, 1986)	CAN	-	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>C. nephereus</i> (Walker, 1839)	CAN	AK	-	-	-	BC	AB	SK	MB	ON	<i>QC</i>	NB	-	NS	-	-	-	-	-
<i>C. nitetis</i> (Walker, 1839)	CAN	-	-	-	-	BC	<i>AB</i>	<i>SK</i>	-	ON	<i>QC</i>	<i>NB</i>	-	<i>NS</i>	-	<i>NF*</i>	-	-	AB,SK,NS- Yoshimoto 1973a; NB,NF- Hansson 1987
<i>C. occidentalis</i> (Girault, 1916)	CAN	-	-	-	-	-	-	-	MB	ON	<i>QC</i>	<i>NB</i>	-	NS	-	NF	-	-	Hansson 1987
<i>C. oscinidis</i> Ashmead, 1888	CAN	AK	YT	NT	-	BC	AB	SK	MB	ON	<i>QC</i>	NB	-	NS	-	-	-	-	-
<i>C. pallipes</i> (Nees, 1834)	CAN	AK	-	-	-	BC	<i>AB</i>	-	-	ON	<i>QC</i>	-	-	-	-	-	-	-	Hansson 1987
<i>C. paradoxax</i> Hansson, 1985	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	-	-
<i>C. pentheus</i> (Walker, 1839)	CAN	AK	-	-	-	BC	-	SK	MB	ON	<i>QC</i>	NB	-	-	-	-	-	-	-
<i>C. phytomyzivora</i> Hansson, 1987	CAN	<i>AK</i>	-	-	-	-	AB	-	-	-	-	-	-	-	-	-	-	-	Hansson 1987
<i>C. pilosa</i> Delucchi, 1954	CAN	-	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>C. polita</i> (Howard, 1897)	CAN	-	-	-	-	BC	AB	-	-	ON	<i>QC</i>	-	-	NS	-	<i>NF*</i>	-	-	Hansson 1987
<i>C. polyzo</i> (Walker, 1839)	CAN	AK	YT	NT	-	BC	AB	<i>SK</i>	MB	ON	<i>QC</i>	NB	-	NS	-	LB	NF	-	Hansson 1987

<i>C. prodice</i> (Walker, 1839)	CAN	-	YT	NT	-	BC	AB	SK	MB	ON	QC	NB	-	-	-	NF*	-	Hansson 1987
<i>C. pubicornis</i> (Zetterstedt, 1838)	CAN	-	-	NT	-	BC	AB	-	MB	ON	QC	-	-	NS	-	-	GL	AB-Hansson 1987; BC, QC-Yoshimoto 1973b; GL-Baur 2005
<i>C. robusta</i> Yoshimoto, 1973	CAN	-	-	-	-	BC	AB	-	-	-	-	-	-	-	-	-	-	
<i>C. subcircularis</i> Yoshimoto, 1973	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
<i>C. submutica</i> Graham, 1963	CAN	-	-	-	-	BC	AB	-	-	ON	QC	NB	-	NS	-	-	-	
<i>C. tristis</i> Hansson, 1987	CAN	-	-	-	-	BC	AB	-	-	ON	-	-	-	-	-	-	-	
<i>C. viridis</i> (Nees, 1934)	CAN	AK	YT	NT	-	BC	AB	-	MB	ON	QC	-	-	NS	-	NF*	-	Hansson 1987
<i>C. walleyi</i> Yoshimoto, 1973	CAN	-	-	-	-	BC	-	-	-	ON	QC	-	-	NS	-	-	-	
Genus <i>Chrysonotomyia</i> Ashmead, 1904																		
<i>C. albipes</i> (Girault & Dodd, 1913)	CAN	-	-	-	-	-	AB	-	-	-	-	-	-	-	-	-	-	
<i>C. maculata</i> (Delucchi, 1962)	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
Genus <i>Closterocerus</i> Westwood, 1833																		
Nearctic revision – Hansson 1994																		
<i>C. agromyzae</i> Narayanan, Subba Rao & Ramachandra, 1960	CAN	-	-	-	-	BC	AB	-	MB	ON	-	-	-	PE	-	-	-	
<i>C. cincinnatus</i> Girault, 1916	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
<i>C. cincipennis</i> Ashmead, 1888	CAN	-	-	-	-	-	-	-	-	ON	QC	NB	-	NS	-	-	-	
<i>C. damastes</i> Walker, 1847	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
<i>C. nius</i> Hansson, 1994	CAN	-	-	-	-	-	-	-	-	-	QC	-	-	-	-	-	-	
<i>C. ruforum</i> (Krausse, 1917)	CAN	-	-	-	-	-	-	-	-	ON	QC	NB	-	-	-	-	-	Baird 1938
<i>C. solidaginis</i> (Yoshimoto, 1980)	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
<i>C. trifasciatus</i> Westwood, 1833	CAN	-	-	NT	-	BC	AB	-	MB	ON	QC	NB	-	NS	-	-	-	Digweed 1998
<i>C. utahensis</i> Crawford, 1912	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
<i>C. vesiculis</i> (Moser, 1965)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	NS	-	-	-	Hansson 1994
Genus <i>Derostenus</i> Westwood, 1833																		
<i>D. freemani</i> Yoshimoto, 1973	CAN	-	-	-	-	BC	AB	SK	-	ON	QC	-	-	NS	-	-	-	
Genus <i>Emersonella</i> Girault, 1916																		
<i>E. lemae</i> Girault, 1916	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Thompson 1955
<i>E. niveipes</i> Girault, 1917	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
Genus <i>Entedon</i> Dalman, 1820																		
Nearctic revision – Schauff 1988																		
<i>E. anthonomi</i> Schauff, 1988	CAN	-	-	-	-	-	-	-	-	ON	-	NB	-	-	-	-	-	
<i>E. bigeloviae</i> Ashmead, 1894	CAN	-	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-	
<i>E. columbianus</i> Ashmead, 1888	CAN	-	-	NT	-	-	AB	SK	MB	ON	QC	-	-	-	-	-	-	
<i>E. darleneae</i> Schauff, 1988	CAN	AK	-	NT	-	-	AB	SK	MB	-	-	-	-	-	-	-	-	
<i>E. ergias</i> Walker, 1839	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	NS	-	-	-	Schauff 1988
<i>E. genei</i> Schauff, 1988	CAN	-	-	-	-	-	-	-	-	-	NB	-	-	-	-	-	-	Schauff 1988
<i>E. methion</i> Walker, 1839	CAN	-	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-	
<i>E. nearcticus</i> Özdikmen, 2011	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	Schauff 1988
<i>E. occidentalis</i> Girault, 1916	CAN	-	-	-	-	BC	AB	-	-	-	-	-	-	-	-	-	-	
<i>E. pecki</i> Schauff, 1988	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
<i>E. tachypterelli</i> Gahan, 1931	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	Schauff 1988
<i>E. teedoe</i> Schauff, 1988	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
Genus <i>Entedonomphale</i> Girault, 1915																		
<i>E. carbonaria</i> (Erdős, 1954)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	
Genus <i>Holarcticesa</i> Koçak & Kemal, 2010																		
Holarctic review – Hansson 1988 (as <i>Grahamia</i> Erdős)																		
<i>H. clinius</i> (Walker, 1839)	CAN	-	-	-	-	BC	-	-	-	ON	-	NB	-	-	-	-	-	
<i>H. tetrica</i> (Erdős, 1966)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	NS	-	-	-	Hansson 1988
Genus <i>Horismenus</i> Walker, 1843																		
<i>H. fraternus</i> (Fitch, 1856)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	
<i>H. latroecti</i> Burks, 1971	CAN	-	-	-	-	-	-	-	-	-	QC	-	-	-	-	-	-	
<i>H. livivorus</i> Crawford, 1907	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
<i>H. putleri</i> (Grissell, 1981)	CAN	-	-	-	-	-	-	-	-	ON	-	NB	-	-	-	-	-	Sears and Boiteau 1989
Genus <i>Ionympha</i> Graham, 1959																		
New World revision – Hansson 1989; status of genus – Hansson 1996c																		
<i>I. carne</i> (Walker, 1839)	CAN	-	-	-	-	-	-	SK	-	ON	-	-	-	-	-	-	-	Hansson 1989
<i>I. ochus</i> (Walker, 1839)	CAN	-	-	-	-	BC	-	-	-	-	QC	-	-	NS	-	-	-	
Genus <i>Mestocharis</i> Förster, 1878																		
Holarctic revision – Hansson 1988																		

<i>C. pictus</i> (Nees, 1834)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	Peck 1963
Genus Colpochypus Lucchese, 1941																		
<i>C. florus</i> (Walker, 1839)	CAN	-	-	-	BC	-	-	-	-	ON	QC	-	-	-	-	-	-	
Genus Dablboninus Hincks, 1945																		
<i>D. fuscipennis</i> (Zetterstedt, 1838)	CAN	-	-	-	BC	-	-	-	-	ON	QC	NB	PE	NS	-	NF*	-	BC-Baird 1942; NB-Hawboldt 1939; PE-Baird 1947; NS,NF- Baird 1946
Genus Diaulinopsis Crawford, 1912																		
<i>D. callichroma</i> Crawford, 1912	CAN	-	-	-	-	-	-	SK	-	ON	-	NB	-	-	-	-	-	
Genus Di cladocerus Westwood, 1832																		
Nearctic revision – Yoshimoto 1976																		
<i>D. alaskensis</i> Yoshimoto, 1976	-	AK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>D. betulae</i> Yoshimoto, 1976	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	NF	-	
<i>D. epinothae</i> Yoshimoto, 1976	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	NF	-	Yoshimoto 1976
<i>D. exoteliae</i> Yoshimoto, 1976	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
<i>D. nearcticus</i> Yoshimoto, 1976	CAN	-	-	-	BC	AB	SK	-	-	ON	QC	NB	-	-	-	-	-	
<i>D. occidentalis</i> Yoshimoto, 1976	CAN	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-	-	
<i>D. pacificus</i> Yoshimoto, 1976	CAN	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-	-	
<i>D. terrae novae</i> Yoshimoto, 1976	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	NF	-	
<i>D. vulgaris</i> Yoshimoto, 1976	CAN	-	-	-	-	-	-	-	-	ON	QC	NB	-	-	-	-	-	
<i>D. westwoodii</i> Westwood, 1832	CAN	-	-	-	BC	-	-	-	-	ON	-	-	-	-	-	-	-	Andrews and Geistlinger 1969
Genus Diglyphus Walker, 1844																		
<i>D. begini</i> (Ashmead, 1904)	CAN	-	YT	-	-	BC	AB	SK	MB	ON	QC	NB	-	NS	-	-	-	
<i>D. intermedius</i> (Girault, 1916)	CAN	-	-	-	-	BC	AB	-	MB	ON	QC	-	-	NS	-	-	-	
<i>D. isaea</i> (Walker, 1838)	CAN	-	-	-	-	-	AB	-	-	ON	-	-	-	-	-	-	GL	Fry 1989; Baur 2005
<i>D. pulchripes</i> (Crawford, 1912)	CAN	-	-	-	BC	AB	SK	MB	ON	QC	-	-	-	-	-	-	-	
<i>D. websteri</i> (Crawford, 1912)	CAN	AK	-	NT	-	-	-	SK	-	ON	QC	-	-	NS	-	-	-	
Genus Dimmockia Ashmead, 1904																		
World review – Ikeda and Huber 1996																		
<i>D. incongrua</i> (Ashmead, 1898)	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
<i>D. pallipes</i> Muesebeck, 1927	CAN	-	-	-	-	-	-	-	-	MB	ON	QC	NB	-	-	-	-	
Genus Elachertus Spinola, 1811																		
Nearctic revision – Schauff 1985a																		
<i>E. atus</i> Schauff, 1985	CAN	-	-	-	-	-	-	-	MB	ON	QC	NB	-	-	-	NF	-	
<i>E. caecoeciae</i> Howard, 1885	CAN	AK	-	-	BC	AB	SK	MB	ON	QC	NB	-	-	NS	-	NF	-	
<i>E. cidariae</i> Ashmead, 1898	CAN	AK	-	NT	-	BC	-	-	-	ON	QC	NB	-	NS	-	-	-	
<i>E. fenestratus</i> Nees, 1834	CAN	-	YT	NT	NU	BC	AB	SK	MB	ON	QC	NB	-	NS	-	-	GL	Baur 2005
<i>E. loh</i> Schauff, 1985	CAN	-	-	-	-	-	-	-	-	-	-	-	-	NS	-	-	-	
Genus Elasmus Westwood, 1833																		
Nearctic review – Coote 1997; Nearctic key – Burks 1965																		
<i>E. albicoxa</i> Howard, 1885	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	
<i>E. apanteli</i> Gahan, 1913	CAN	-	-	-	-	-	-	SK	-	ON	QC	-	-	-	-	-	-	Burks 1979c
<i>E. aspidiscae</i> Girault, 1917	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Thompson 1955
<i>E. atratus</i> Howard, 1897	CAN	-	-	-	BC	-	-	-	-	-	QC	NB	-	-	-	-	-	
<i>E. marylandicus</i> Girault, 1915	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
<i>E. mordax</i> Girault, 1917	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Thompson 1955
Genus Eulophus Geoffroy, 1762																		
<i>E. anomocerus</i> (Crawford, 1912)	CAN	-	-	-	-	-	-	SK	MB	ON	QC	NB	-	-	-	-	-	
<i>E. basalis</i> Say, 1836	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
<i>E. brevicapitatus</i> Cook & Davis, 1891	CAN	-	-	-	-	-	-	SK	MB	ON	QC	-	-	-	-	-	-	
<i>E. koebeleii</i> (Crawford, 1912)	CAN	-	-	-	-	-	-	SK	-	-	-	-	-	-	-	-	-	
<i>E. larvarium</i> (Linnaeus, 1758)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	NS	-	-	-	
<i>E. nebulosus</i> (Provancher, 1887)	CAN	-	-	-	BC	-	-	-	-	ON	QC	NB	PE	-	-	NF	-	
<i>E. orgyiae</i> (Fitch, 1856)	CAN	-	-	-	BC	AB	SK	MB	ON	QC	NB	PE	NS	-	-	NF	-	
<i>E. ramosus</i> Provancher, 1881	CAN	-	-	-	-	-	-	-	-	-	QC	-	-	-	-	-	-	Provancher 1881
<i>E. smerinthi</i> (Ashmead, 1898)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	
Genus Euplectrus Westwood, 1832																		
European revision – Hansson and Schmidt 2018; China species – Zhu and Huang 2003																		
<i>E. bicolor</i> (Swederus, 1795)	CAN	-	-	-	-	-	-	-	-	MB	ON	QC	-	-	-	-	-	Zhu and Huang 2002
<i>E. frontalis</i> Howard, 1885	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	Chittenden 1901; Fyles 1897

Genus *Oomyzus* Rondani, 1870

<i>O. incertus</i> (Ratzeburg, 1844)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	QC	-	-	NS	-	-	-
<i>O. scaposus</i> (Thomson, 1878)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-
<i>O. sokolowskii</i> (Kurdjumov, 1912)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-

Genus *Peckelachertus* Yoshimoto, 1970

<i>P. diprioni</i> Yoshimoto, 1970	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-
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Genus *Quadrastichus* Girault, 1913

<i>Q. baldufi</i> (Burks, 1943)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	QC	-	-	-	-	-	-	-
<i>Q. solidaginis</i> (Burks, 1943)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	QC	-	-	-	-	-	-	Burks 1979c
<i>Q. whitmani</i> (Girault, 1916)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	QC	NB	-	NS	-	-	-	-

Genus *Signophora* Rondani, 1867

<i>S. brevicornis</i> (Panzer, 1804)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	Burks 1979c
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Genus *Tetrastichomyia* Girault, 1916

<i>T. clisiocampae</i> (Ashmead, 1894)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-
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Genus *Tetrastichus* Haliday, 1844

Nearctic revision – Burks 1943																											
<i>T. alaskensis</i> Ashmead, 1902	-	AK	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Ashmead 1902
<i>T. clito</i> (Walker, 1840)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
<i>T. coeruleus</i> (Nees, 1834)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	MB	ON	QC	NB	-	-	-	-	MB,NB-Peck 1951; QC-Beaulne 1935

<i>T. johnsoni</i> Ashmead, 1896	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
<i>T. julis</i> (Walker, 1839)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	NB	-	-	-	-	-	
<i>T. paracholus</i> Burks, 1943	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	
<i>T. pompilicola</i> Graham, 1960	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	LB	-	-	
<i>T. productus</i> Riley, 1885	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	QC	-	PE	-	-	-	-	Beaulne 1949; Fletcher 1900
<i>T. saundersii</i> (Packard, 1881)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	Scudder 1889	
<i>T. setifer</i> Thomson, 1878	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	Cappuccino et al. 2013	
<i>T. sinope</i> (Walker, 1839)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Wilkinson 1966	
<i>T. tibialis</i> (Ashmead, 1894)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	Burks 1943	
<i>T. trisulcatus</i> Provancher, 1887	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	MB	ON	QC	NB	-	-	-	Burks 1943

FAMILY EUPELMIDAE

Nearctic generic key – Gibson 1997; Nearctic catalogue – Burks 1979d

SUBFAMILY CALOSOTINAE

World generic revision – Gibson 1989

Genus *Balcha* Walker, 1862

Revision – Gibson 2005a																											
<i>B. indica</i> (Mani & Kaul, 1973)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-

Genus *Calosota* Curtis, 1836

Nearctic revision – Gibson 2010																											
<i>C. acron</i> (Walker, 1848)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
<i>C. aestivalis</i> Curtis, 1836	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	MB	-	QC	-	-	-	-	
<i>C. metallica</i> (Gahan, 1922)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	

SUBFAMILY EUPELMINAE

World generic revision – Gibson 1995

Genus *Anastatus* Motschulsky, 1859

Nearctic key – Burks 1967a																											
Subgenus <i>Anastatus</i> Motschulsky, 1859																											
<i>A. ashmeadi</i> (Melander & Brues, 1903)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	
<i>A. japonicus</i> Ashmead, 1904	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	NB	-	-	-	-	
<i>A. pearsalli</i> Ashmead, 1898	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BC	-	-	ON	-	-	-	
<i>A. reduvii</i> (Howard, 1880)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	-	-	-	
<i>A. ruficollis</i> (Cameron, 1905)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	BC	-	-	-	-	-	-	

Genus *Arachnophaga* Ashmead, 1896

Key to subgenera – Gibson 1995; New World key – Gahan 1943

Subgenus *Arachnophaga* Ashmead, 1896

<i>A. aldrichi</i> Gahan, 1943	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-
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Subgenus *Shedocremna* Gibson, 1995

<i>A. eucnemina</i> Gibson, 1995	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	AB	-	ON	-	-	-	-
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Genus *Brasema* Cameron, 1884

<i>B. allynii</i> (French, 1882)	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	MB	ON	-	PE	-	-	-	Criddle 1922; Fletcher 1900
<i>B. leucothysana</i> Gibson, 1995	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	

<i>E. gigantea</i> Walsh, 1870	CAN	-	-	-	-	BC	AB	SK	MB	ON	QC	NB	-	-	LB	-	-
<i>E. hecale</i> Walker, 1843	CAN	-	-	-	-	BC	-	-	-	ON	-	-	-	-	-	-	-
<i>E. illinoisensis</i> Girault, 1920	CAN	-	-	-	-	BC	AB	-	-	ON	QC	-	-	NS	-	-	-
<i>E. imminuta</i> Bugbee, 1951	CAN	-	-	-	-	BC	AB	-	MB	ON	QC	-	-	-	-	-	Zhang et al. 2017
<i>E. incerta</i> Fullaway, 1912	CAN	-	-	-	-	BC	AB	SK	-	ON	-	-	-	-	-	-	-
<i>E. iniquus</i> Bugbee, 1951	CAN	-	-	-	-	BC	AB	-	-	ON	QC	-	PE	-	-	-	Zhang et al. 2017
<i>E. juniperina</i> Marcovitch, 1915	CAN	-	-	-	-	BC	-	SK	-	ON	-	-	-	-	-	-	-
<i>E. longavena</i> Bugbee, 1951	CAN	-	-	-	-	BC	AB	SK	-	ON	QC	-	-	-	-	-	BC-Bugbee 1951; SK,ON, QC-Zhang et al. 2017
<i>E. magdalis</i> Ashmead, 1894	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	Burks 1979e
<i>E. minnesota</i> Girault, 1916	CAN	AK	YT	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-
<i>E. neomexicana</i> Girault, 1920	CAN	-	-	-	-	-	AB	SK	-	ON	QC	-	-	-	-	-	-
<i>E. nigricosa</i> Provancher, 1887	CAN	-	-	-	-	BC	AB	-	MB	ON	QC	-	-	-	-	-	-
<i>E. obtusiventris</i> Gahan, 1934	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-
<i>E. onobrychidis</i> Nikol'skaya, 1933	CAN	-	-	-	-	-	AB	SK	-	-	-	-	-	-	-	-	Richards 1989
<i>E. orchidearum</i> (Westwood, 1869)	CAN	-	-	-	-	BC	-	-	-	ON	QC	-	-	-	-	-	Essig 1926; Gibson 1914; Burks 1979e
<i>E. pachyneuron</i> Girault, 1916	CAN	AK	YT	NT	-	BC	AB	SK	MB	ON	QC	-	PE	NS	LB	-	-
<i>E. parva</i> Phillips, 1918	CAN	-	-	-	-	BC	AB	SK	MB	ON	QC	-	PE	-	-	-	-
<i>E. phloeotribi</i> Ashmead, 1894	CAN	-	-	-	-	-	-	-	-	QC	-	-	-	-	-	-	Bugbee 1970
<i>E. picea</i> Bugbee, 1967	CAN	-	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-
<i>E. pini</i> Bugbee, 1958	CAN	-	-	-	-	BC	-	-	MB	ON	QC	-	-	-	-	-	Bugbee 1958
<i>E. pissodis</i> Girault, 1917	CAN	-	-	-	-	BC	AB	-	MB	ON	QC	NB	-	NS	-	-	Peck 1963
<i>E. profunda</i> Bugbee, 1967	CAN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	Ashmead 1887
<i>E. prunicola</i> Walsh, 1870	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-
<i>E. querciglobuli</i> (Fitch, 1859)	CAN	AK	YT	-	-	BC	-	-	MB	ON	-	-	-	-	-	-	-
<i>E. rhois</i> Crosby, 1909	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-
<i>E. shorthousei</i> Zhang & Gates, 2017	CAN	-	-	-	-	BC	-	-	MB	-	-	-	-	-	-	-	Zhang et al. 2017
<i>E. solenozopheriae</i> Ashmead, 1887	CAN	-	-	-	-	-	-	-	-	ON	QC	-	NS	-	-	-	Burks 1979e; Hayman et al. 2003
<i>E. spongiosa</i> Bugbee, 1951	CAN	-	-	-	-	BC	AB	SK	MB	ON	-	-	-	-	-	-	Bugbee 1951
<i>E. studiosa</i> Say, 1836	CAN	-	-	-	-	BC	-	-	-	ON	QC	-	-	-	-	-	BC, QC-Burks 1979e; ON-Harrington 1895
<i>E. tomici</i> Ashmead, 1894	CAN	-	-	-	-	-	AB	-	-	-	-	-	-	-	-	-	-
<i>E. tylodermatis</i> Ashmead, 1896	CAN	-	-	-	-	BC	AB	SK	-	ON	QC	NB	-	-	-	-	Haye et al. 2013
<i>E. verticillata</i> (Fabricius, 1798)	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-
<i>E. vitis</i> (Saunders, 1869)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	Saunders 1869
Genus <i>Mangoma</i> Subba Rao, 1986																	
<i>M. salicis</i> (Walker, 1834)	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-
Genus <i>Masneroma</i> Bouček, 1983																	
<i>M. angulifera</i> Bouček, 1983	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-
Genus <i>Sycophila</i> Walker, 1871																	
Nearctic revision – Balduf 1932 (as <i>Decatoma</i> Spinola)																	
<i>S. dubia</i> (Walsh, 1870)	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-
<i>S. marylandica</i> (Girault, 1916)	CAN	-	-	-	-	-	-	-	-	-	-	-	NS	-	-	-	Balduf 1932
<i>S. mellea</i> (Curtis, 1831)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	PE	-	-	-	Beaulne 1949
<i>S. nigriceps</i> (Walsh, 1870)	CAN	-	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-
<i>S. novascotiae</i> (Balduf, 1932)	CAN	-	-	-	-	-	-	-	-	-	-	-	NS	-	-	-	-
<i>S. nubilistigma</i> (Walsh, 1870)	CAN	-	-	-	-	-	-	-	MB	-	QC	-	-	-	-	-	Balduf 1932
<i>S. quercilanae</i> (Fitch, 1859)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	Peck 1963
<i>S. subimmaculata</i> (Girault, 1917)	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-
<i>S. vaccinicola</i> (Balduf, 1932)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	NS	-	-	-	Balduf 1932; Hayman et al. 2003
<i>S. varians</i> (Walsh, 1870)	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-
Genus <i>Systole</i> Walker, 1832																	
<i>S. albipennis</i> Walker, 1832	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-

Genus *Tenuipetiolus* Bugbee, 1951

<i>T. medicaginis</i> (Gahan, 1919)	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	-	-
<i>T. ruber</i> Bugbee, 1951	CAN	-	-	-	-	BC	-	SK	MB	ON	QC	-	-	NS	-	-	-	-	-
Genus <i>Tetramesa</i> Walker, 1848																			
Nearctic revision – Phillips and Emery 1919, Phillips 1936																			
<i>T. bordei</i> (Harris, 1830)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	PE	NS	-	-	-	-	Webster 1903
<i>T. kingi</i> (Phillips, 1927)	CAN	-	-	-	-	-	AB	SK	-	-	-	-	-	-	-	-	-	-	-
<i>T. linearis</i> (Walker, 1832)	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	-	-
<i>T. longipetiolatum</i> (Phillips, 1836)	CAN	-	-	-	-	-	AB	-	-	-	-	-	-	-	-	-	-	-	-
<i>T. madrae</i> (Walker, 1849)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	-	Burks 1979e; Peck 1963
<i>T. oregon</i> (Phillips, 1836)	CAN	-	-	-	-	-	AB	-	-	-	-	-	-	-	-	-	-	-	-
<i>T. secale</i> (Fitch, 1861)	CAN	-	-	-	-	-	AB	-	-	ON	-	-	-	-	-	-	-	-	Holmes and Blakeley 1971; Peck 1963
<i>T. tritici</i> (Fitch, 1859)	CAN	-	-	-	-	-	-	-	-	ON	QC	NB	PE	-	-	-	-	-	ON,PE-Fletcher 1906; QC-Peck 1963
<i>T. vaginicolum</i> (Doane, 1916)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	-	Phillips and Emery 1919; Peck 1951 Burks 1979e
<i>T. websteri</i> (Howard, 1896)	CAN	-	-	-	-	-	AB	-	-	ON	QC	-	-	-	-	-	-	-	Burks 1979e

SUBFAMILY RILEYINAE

World revision – Gates 2008

Genus *Neorileya* Ashmead, 1904

<i>N. flavipes</i> Ashmead, 1904	CAN	-	-	-	-	-	-	-	-	MB	-	-	-	-	-	-	-	-	-
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Genus *Rileya* Ashmead, 1888

<i>R. cecidomyiae</i> Ashmead, 1888	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	-	-
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<i>R. insularis</i> (Ashmead, 1894)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	-	-
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FAMILY LEUCOSPIDAE

Nearctic review – Bouček 1997a; world revision – Bouček 1974; Nearctic catalogue – Burks 1979f

Genus *Leucospis* Fabricius, 1775

<i>L. affinis</i> Say, 1824	CAN	-	-	-	-	-	BC	AB	SK	MB	ON	QC	NB	PE	NS	-	-	-	AB-PMAE; SK-RSKM; Westwood 1834
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FAMILY MEGASTIGMIDAE

World catalogue – Grissell 1999; Nearctic catalogue – Grissell 1979; phylogenetics – Janšta et al. 2018

Genus *Megastigmus* Dalman, 1820

Nearctic key – Hedlin et al. 1980; Nearctic revision and key – Milliron 1949

<i>M. aculeatus</i> (Swederus, 1795)	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	-	-
<i>M. albifrons</i> Walker, 1869	CAN	-	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-	-	Hedlin et al. 1980
<i>M. amelanchieris</i> Cushman, 1918	CAN	-	-	-	-	BC	AB	-	MB	-	-	-	-	-	-	-	-	-	-
<i>M. americanus</i> Milliron, 1949	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	NS	-	-
<i>M. atedius</i> Walker, 1851	CAN	AK	-	-	-	BC	-	-	-	ON	QC	NB	-	-	-	-	-	-	Werner 1964
<i>M. brevicaudis</i> Ratzeburg, 1852	CAN	-	-	-	-	-	-	-	MB	-	-	-	-	-	-	-	-	-	-
<i>M. capentus</i> Milliron, 1949	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	-	-
<i>M. formosus</i> Milliron, 1949	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	-	-
<i>M. gabani</i> Milliron, 1949	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	-	-
<i>M. hoffmeyer</i> Walley, 1932	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	-	-
<i>M. laricis</i> Marcovitch, 1914	CAN	AK	YT	NT	NU	BC	AB	SK	MB	ON	QC	NB	PE	NS	LB	NF	-	-	Hedlin et al. 1980
<i>M. lasiocarpae</i> Crosby, 1913	CAN	-	-	-	-	BC	AB	-	-	-	-	-	-	-	-	-	-	-	-
<i>M. melanus</i> Milliron, 1949	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	-	-	-	-	-	-
<i>M. milleri</i> Milliron, 1949	CAN	-	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>M. nigrovariegatus</i> Ashmead, 1890	CAN	AK	YT	NT	-	BC	AB	SK	-	ON	QC	-	PE	NS	-	NF	-	-	-
<i>M. physocarp</i> Crosby, 1913	CAN	-	-	-	-	-	-	-	-	ON	QC	-	-	-	-	-	-	-	-
<i>M. pinus</i> Parfitt, 1857	CAN	-	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>M. nrfui</i> Hoffmeyer, 1929	CAN	-	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>M. specularis</i> Walley, 1932	CAN	-	-	-	-	-	-	SK	MB	ON	QC	NB	-	NS	LB	-	-	-	Hedlin 1956
<i>M. spermotrophus</i> Wachtl, 1893	CAN	-	-	-	-	BC	AB	-	-	-	-	-	-	-	-	-	-	-	-
<i>M. tsugae</i> Crosby, 1913	CAN	-	-	-	-	BC	-	-	-	-	-	-	-	-	-	-	-	-	-

FAMILY MYMARIDAE

World genera – Anneck and Douth 1961; Holarctic genera – Schauf 1984; Nearctic generic key – Huber 1997, Huber et al. 2020; New World genera –

Yoshimoto 1990; Nearctic catalogue – Burks 1979g, Huber et al. 2020

Genus *Acmopolynema* Ogloblin, 1946

Nearctic review – Schauf 1981

<i>A. immaculatum</i> Schauf, 1981	CAN	-	-	-	-	-	-	-	-	ON	-	-	-	NS	-	-	-	-	-
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Genus *Cratomus* Dalman, 1820

C. leucophthalmus Ashmead, 1888 CAN - - - - - - - - - ON - - - - - - - - - Ashmead 1888
C. megacephalus (Fabricius, 1793) CAN - - - - - BC - - - - - ON - - - - - NS - - - - -

Genus *Cryptopygma* Förster, 1856

Nearctic review and key – Heydon 1988a

C. atra (Walker, 1833) CAN - - - - - BC - - - - - ON QC NB - - - - -

Genus *Cyclogastrella* Bukovskii, 1938

C. simplex (Walker, 1834) CAN - - - - - - - - - ON - - - - -

Genus *Cyrtogaster* Walker, 1833

C. britteni Askew, 1965 CAN - - - - - - - - - MB ON QC - - - - -

C. capitanea Heydon, 1989 CAN - - - NT - BC - - - - - ON - - - - -

C. reburra Heydon, 1989 CAN - - - - - - - - - ON - - - - -

C. trypherus (Walker, 1843) CAN - YT NT - BC - - - - - ON QC - - - - -

C. vulgaris Walker, 1833 CAN AK YT - - - BC AB - - - ON QC NB - NS LB NF -

Genus *Dibrachys* Förster, 1856

D. confusus (Girault, 1916) CAN - YT NT - BC AB SK MB ON - NB - - - - -

D. fuscicornis (Walker, 1836) CAN - - - - - - - - - ON - - - - -

D. hians Bouček, 1965 CAN - - - - - BC - - - - -

D. maculipennis Szelenyi, 1957 CAN - - - - - AB SK - - - - - Peck 1969

D. microgastri (Bouché, 1834) CAN AK - - - BC AB - - - ON QC NB PE NS - NF* - Burks 1979h

D. relativus Doğanlar, 1987 CAN - - - - - AB - - - - -

Genus *Diglochis* Förster, 1856

D. occidentalis (Ashmead, 1896) CAN AK YT NT - BC AB SK MB ON QC NB - NS - - - - -

Genus *Dimachus* Thomson, 1878

D. cingulum (Nees, 1834) CAN - - - - - BC - - - - -

Genus *Dinarmus* Thomson, 1878

D. acutus (Thomson, 1878) CAN - - - - - - - - - - - - - - - Rasplus 1989

D. basalis (Rondani, 1877) CAN - - - - - - - - - QC - - - - -

Genus *Dinotiscus* Ghesquière, 1946

D. aponius (Walker, 1848) CAN - - - - - BC - - - - - ON QC - - - NS - - - - -

D. colon (Linnaeus, 1758) CAN - - - - - BC - - - - - ON - - - - - Essig 1926; Schedl 1932

D. dendroctoni (Ashmead, 1894) CAN - - - - - BC AB - - - ON QC - - - - -

D. eupterus (Walker, 1836) CAN - - - - - BC - - - - - ON QC NB - NS - - - - -

D. thomsoni (Crawford, 1912) CAN - - - - - BC - - - - - - - - - NF -

Genus *Doganlaria* Koçak & Kemal, 2008

D. daphne (Girault, 1917) CAN - - - - - BC - - - - -

Genus *Endomychobius* Ashmead, 1896

E. flavipes Ashmead, 1896 CAN - - - - - - - - - QC - - - - -

Genus *Epipteromalus* Ashmead, 1904

E. algonquinensis Ashmead, 1904 CAN - - - - - - - - - ON - - - - -

Genus *Eulonchetron* Graham, 1966

E. torymoides (Thomson, 1878) CAN AK - NT - - - AB - - - ON QC - - - - - Peck 1951

Genus *Eumacepolus* Graham, 1957

E. salicis Bouček, 1993 CAN - - - - - - - - - MB ON - - - - -

Genus *Euneura* Walker, 1844

E. lachni (Ashmead, 1887) CAN - - - NT - BC AB - MB ON QC NB - - - NF -

E. sopolis (Walker, 1844) CAN AK - - - BC - SK MB ON QC NB - - - - -

Genus *Eurydinoteloides* Girault, 1913

E. incerta (Ashmead, 1893) CAN - - - - - AB SK - ON - - - - -

E. perdubia (Girault, 1916) CAN - - - - - AB SK - ON QC - - - - -

Genus *Gastracanthus* Westwood, 1933

G. conicus (Girault, 1917) CAN AK - - - BC - - - MB ON QC - - - NS - - - - -

Genus *Gbelcia* Bouček, 1961

G. cordilunae Bouček, 1993 CAN - - - - - - - - - QC - - - - - Bouček 1993

Genus *Grisellium* Bouček, 1993

G. hirtulum Bouček, 1993 CAN - - - - - - - - - ON QC - - - - - Bouček 1993

Genus *Guolina* Heydon, 1994

G. psenophaga Heydon, 1994 CAN - - - - - BC - - - - - Heydon 1994

Genus *Gyrinophagus* Ruschka, 1914

G. aper (Walker, 1839) CAN - - - - - - - - - SK - ON QC NB - - - - -

Genus *Habritys* Thomson, 1878

H. brevicornis (Ratzeburg, 1844) CAN - - - NT - BC - - - - - ON QC - - - - -

H. latrus Wallace, 1954 CAN - - - - - - - - - ON QC - - - - - Burks 1979h

Genus *Hemitrachus* Thomson, 1878

H. seniculus (Nees, 1834) CAN - - - - - - - - - ON QC - - - - - Burks 1979h

SUBFAMILY UNDETERMINED**Genus *Erixestus* Crawford, 1910**

E. winnemana Crawford, 1910 CAN - - - - - SK MB ON QC - - - - -

FAMILY SIGNIPHORIDAE

Nearctic generic keys – Woolley 1988, 1990, 1997b; Nearctic catalogue – Gordh 1979b

Genus *Signiphora* Ashmead, 1880

Key to species groups – Woolley 1988, *S. flavopalliatata* species group – Woolley and Dal Molin 2017

S. pulchra Girault, 1913 CAN - - - - - ON - - - - -

FAMILY TETRACAMPIDAE

Nearctic key to genera – Bouček 1993; Nearctic generic key – Bouček 1997b; World catalogue – Bouček 1958

SUBFAMILY PLATYNOCHEILINAE**Genus *Platynocheilus* Westwood, 1837**

Holarctic key – Bouček 1993

P. aeneus Bouček, 1993 CAN - - - - - AB - - ON - - - - -

SUBFAMILY TETRACAMPINAE**Genus *Dipriocampe* Bouček, 1957**

World key – Ferrière 1935

D. diprioni (Ferrière, 1935) CAN - - - - - ON QC NB - - - - - Baird 1938

Genus *Epiclerus* Haliday, 1844

New World revision – Yoshimoto 1978

E. acutus Bouček, 1993 CAN - - - - - ON QC - - - - -

E. nearcticus Yoshimoto, 1978 CAN - - - - - ON QC - - - - -

FAMILY TORYMIDAE

Nearctic generic key – Grissell 1997; Nearctic catalogue – Grissell 1979; world catalogue and key to bee parasitoids – Grissell 2007; family group reclassification – Janšta et al. 2018

SUBFAMILY GLYPHOMERINAE**Genus *Glyphomerus* Förster, 1856**

G. stigma (Fabricius, 1793) CAN AK YT NT - BC AB SK MB ON QC - - - - - Provancher 1881

SUBFAMILY MICRODONTOMERINAE**Genus *Eridontomerus* Crawford, 1907**

E. biroi Ruschka, 1923 CAN - - - - - AB - - ON - - - - - Janšta et al. 2018

Genus *Idiomacromerus* Crawford, 1914

I. perplexus (Gahan, 1914) CAN - - - - - AB - - - - - Richards and Hanna 1982

I. terebrator (Masi, 1916) CAN - - - - - ON - - - - -

Genus *Microdontomerus* Crawford, 1907

M. antbonomi (Crawford, 1907) CAN - - - - - BC - - - - -

SUBFAMILY MONODONTOMERINAE**Genus *Monodontomerus* Westwood, 1833**

New World revision – Grissell 2000; World revision – Gahan 1941

M. aeneus (Fonscolombe, 1832) CAN - - - - - BC - - - ON - - - - -

M. aereus Walker, 1834 CAN - - - - - - - - - NS - - - - -

M. bakeri Gahan, 1941 CAN - - - - - BC AB - - - - - Grissell 1995

M. dentipes (Dalman, 1820) CAN - - - - - MB ON QC NB - - - - - Baird 1941; Baird 1938

M. mandibularis Gahan, 1941 CAN - - - - - SK - - QC - - - - -

M. menticle Grissell, 2000 CAN - - - - - AB - - - - -

M. minor (Ratzeburg, 1848) CAN - - - - - BC - - - ON - NB - - - - - Coppel 1951

M. montivagus Ashmead, 1890 CAN - - - - - BC AB SK MB ON QC - - - - -

M. obscurus Westwood, 1833 CAN - - - - - AB - - - ON - - - - - Hobbs 1968

M. osmiae Kamijo, 1963 CAN - - - - - BC - - - - -

M. parkeri Grissell, 2000 CAN - - - - - AB - - - - -

M. torchioi Grissell, 2000 CAN - - - - - BC - - - QC - - - - -

M. viridiscapus Gahan, 1941 CAN - - - - - BC - - - - - Grissell 2000

Genus *Zaglyptonotus* Crawford, 1914

Z. mississippiensis Breland, 1938 CAN - - - - - AB SK - - - - - Sharkey et al. 1987

Genus *Zdenekius* Grissell, 1993

Nearctic revision – Grissell (1993)

Z. smithi Grissell, 1993 CAN - - - - - - - - ON QC NB - - - - - Grissell 1993

SUBFAMILY TORYMINAE**Genus *Diomorus* Walker, 1834**

D. viridis (Provancher, 1887) CAN - - - - - - - - QC - - - - - Provancher 1887

Genus *Pseudotorymus* Masi, 1921

P. lazulellus (Ashmead, 1890) CAN - - - - - BC AB - - - ON QC NB PE NS - NF -

SUBFAMILY TRICHOGRAMMATINAE**Genus *Hydrophylita* Ghesquière, 1946**

Key to species – Querino and Pinto 2007

H. aquivolans (Matheson & Crosby, 1912) CAN – – – – – – – – ON – – – – – – – –

Genus *Pintoa* Viggiani, 1988

P. nearctica Viggiani, 1988 CAN – – – – – – – – ON QC – – – – – – – – Viggiani 1988; Pinto 2006

Genus *Soikiella* Novicki, 1934

World key – Velten and Pinto 1990

S. occidentalis Velten & Pinto, 1990 CAN – – – – – BC AB – – – – – – – – – – Pinto 2006

Genus *Trichogramma* Westwood, 1833

Nearctic revision and key – Pinto 1999

T. acutovirilia Pinto, 1999 CAN – – – – – – – – QC – – – – – – – – Pinto 1999

T. alpha Pinto, 1999 CAN – – – – – – – – MB ON QC – PE – – – – – – Pinto 1999

T. arcanum Pinto, 1999 CAN – – – – – – – – ON – – – – – – – –

T. aurosom Sugonjaev & Sorokina, 1976 CAN AK – – – – – BC AB – – – ON QC – – – – – – Pinto 1999

T. ballmeri Pinto, 1999 CAN – – – – – AB – – – – – – – – – – Pinto 1999

T. brassicae Bezdenko, 1968 CAN – – – – – AB – – – – – QC – – – – – – Yu and Byers 1994

T. canadense Pinto, 1999 CAN – – – – – – – – ON QC – – – – – – – – Pinto 1999

T. deion Pinto & Oatman, 1986 CAN – – – – – BC – – – – – – – – – – Pinto 1999

T. evanescens Westwood, 1833 CAN – – – – – BC – – – – – QC – – – – – – – – Fournier and Boivin 2000

T. exiguum Pinto & Platner, 1978 CAN – – – – – – – – QC – – – – – – – – Pinto 1999

T. fasciatum (Perkins, 1912) CAN – – – – – BC – – – – – – – – – – Pinto 1999

T. inyoense Pinto & Oatman, 1985 CAN AK – – – – – – – – SK – ON QC NB – – – – – – Pinto 1999

T. japonicum Ashmead, 1904 CAN – – – – – – – – ON – – – – – – – – Pinto 1999

T. julianoi Platner & Oatman, 1981 CAN – – – – – – – – ON – – – – – – – – Pinto 1999

T. marylandense Thorpe, 1982 CAN – – – – – – – – ON – – – – – – – – Pinto 1999

T. minutum Riley, 1871 CAN AK – – – – – BC – – – MB ON QC NB – NS – – – – – Torgersen 1970; Pinto 1999

T. nemesis Pinto, 1999 CAN – – – – – – – – MB – QC – – – – – – – – Pinto 1999

T. nomlaki Pinto & Oatman, 1985 CAN – – – – – AB – – – – – – – – – – Pinto 1999

T. parkeri Nagarkatti, 1975 CAN – – – – – BC – – – – – ON – NB – – – – – – Pinto 1999

T. pintoi Voegelé, 1982 CAN – YT NT – BC AB – – – – – – – – – – Pinto 1999

T. platneri Nagarkatti, 1975 CAN – – – – – BC – – – – – – – – – – Pinto 1999

T. pretiosum Riley, 1879 CAN – – – – – BC – – – ON QC – – – NS – – – – – Pinto 1999; Fournier and Boivin 2000; Neil and Specht 1990

T. retortidum (Girault, 1911) CAN – – – – – BC – – – MB ON – – – – – – – – Pinto 1999

T. semblidis (Aurivillius, 1898) CAN AK – – – – – BC AB – – – MB ON – – – – – – – – Pinto 1999

T. sibiricum Sorokina, 1980 CAN – – – – – BC – – – – – – – – – – – – – – Pinto 1999

Genus *Trichogrammatomyia* Girault, 1916

T. tortricis Girault, 1916 CAN – – – – – – – – ON QC NB – – – – – – – – Girault 1916, Peck 1951

SUPERFAMILY MYMAROMMATOIDEA**FAMILY MYMAROMMATIDAE**

World generic key – Gibson et al. 2007

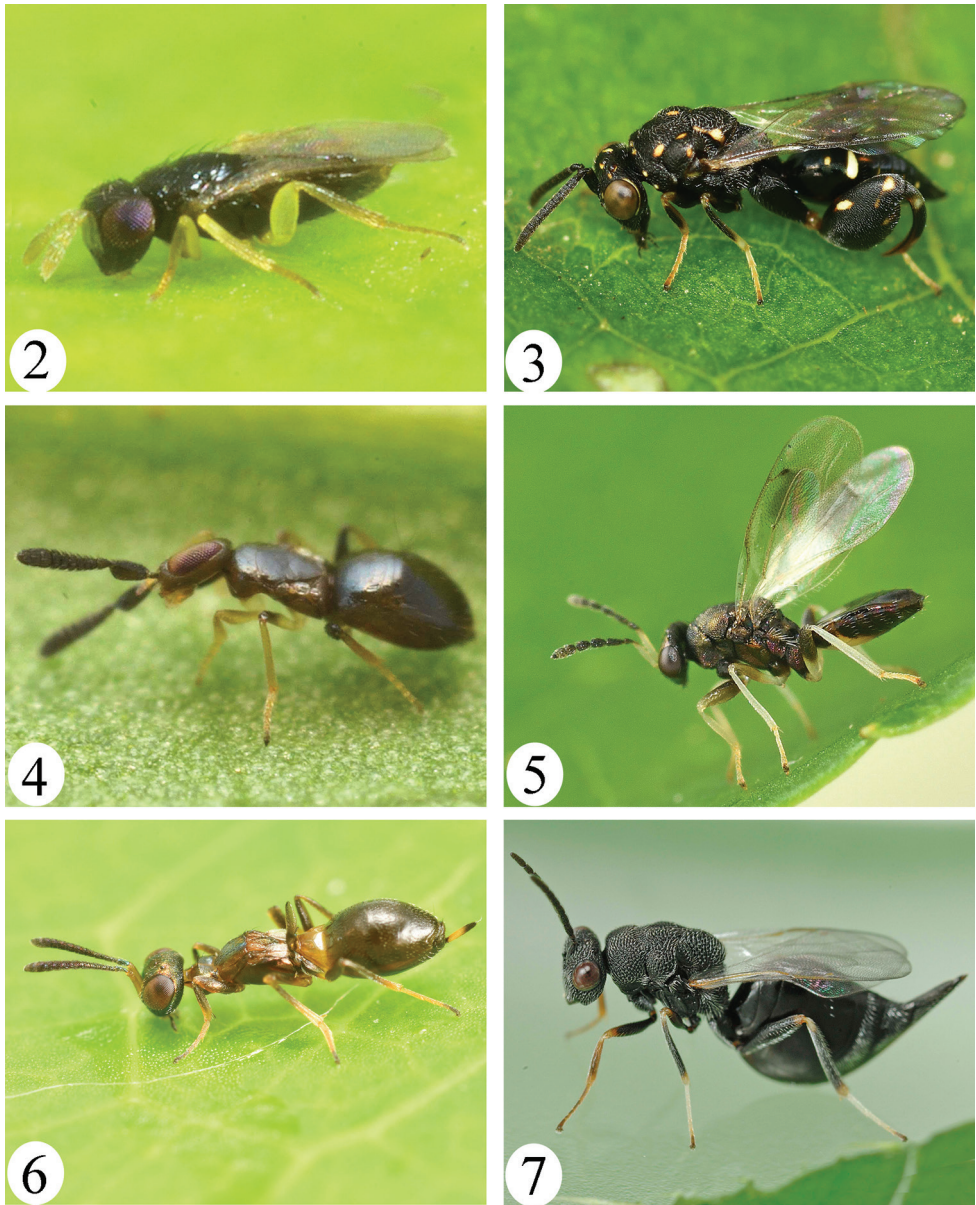
Genus *Mymaromella* Girault, 1931

World species key – Huber et al. 2008

M. pala Huber & Gibson, 2008 CAN – – – – – – – – ON – – – – – – – –

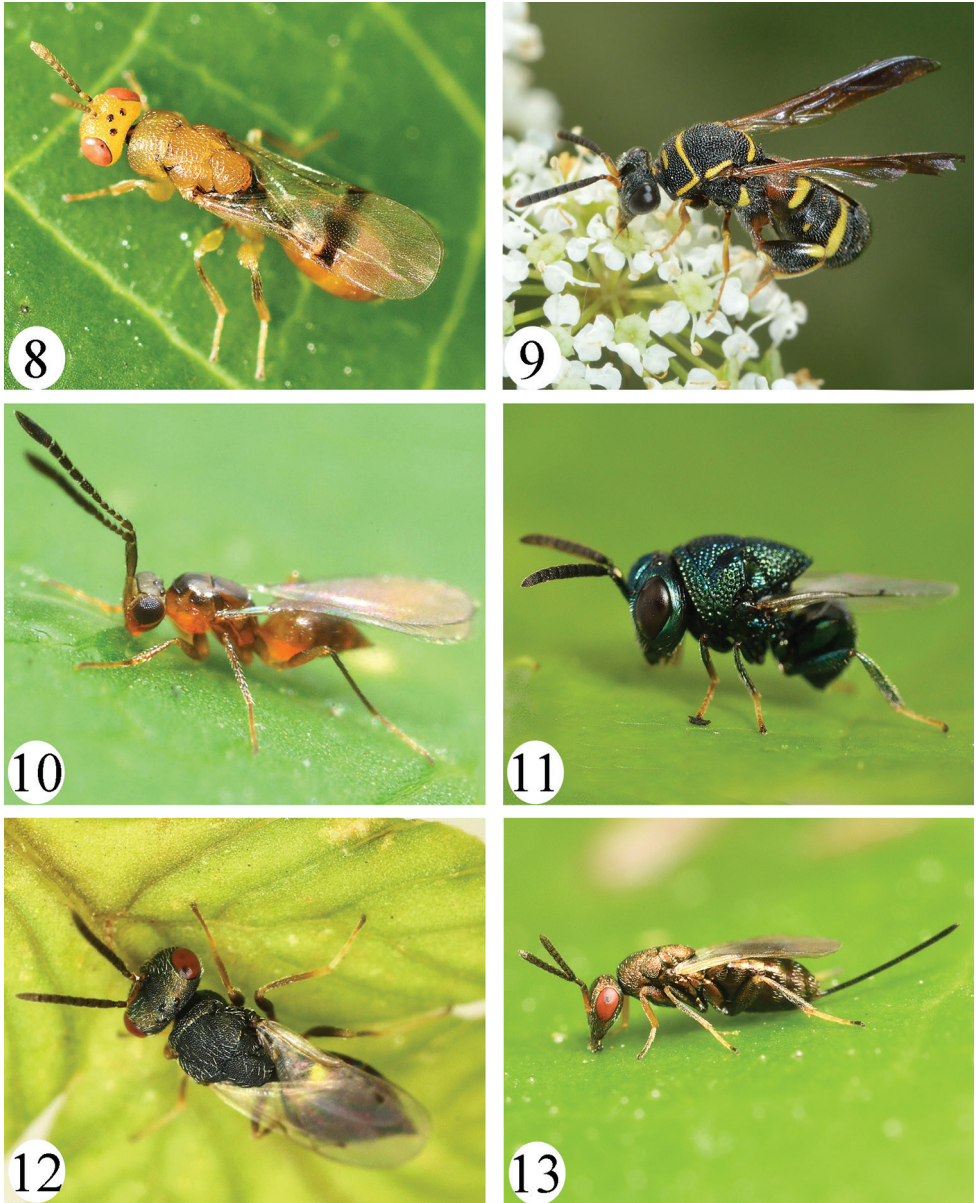
M. palella Huber & Gibson, 2008 CAN – – – – – – – – ON QC NB – – – – – – – –

Based on sequencing of the DNA barcode region of cytochrome oxidase I (*COI*) and using the Barcode Index Number (BIN) criterion of Ratnasingham and Hebert (2013) that 2% sequence divergence is indicative of species differences, Bennett et al. (2019) estimated that there are 3301 species of Chalcidoidea from Canada in the Barcode of Life Data System (BOLD) database (Ratnasingham



Figures 2–7. **2** *Aphelinus* sp. (Aphelinidae), Clear Creek, ON **3** *Conura* sp. (Chalcidoidea), near St. Williams, ON **4** *Anusia nasicornis* (Encyrtidae), near Marmora, ON. This is the most recent record of an Old World genus and species in the New World, identified by J. Noyes in October, 2019 **5** *Eulophus* sp. (Eulophidae), Fergus, ON **6** *Eupelmus messene* (Eupelmidae) drinking from a water droplet, Forks of the Credit Provincial Park, ON. Until recently, misidentified as the common, polyphagous species *E. vesicularis*; the latter now recorded only from the Old World **7** *Eurytoma gigantea* (Eurytomidae), Fergus, ON. Photos courtesy of S. Marshall.

and Hebert 2007). This represents 2.7 times the number of recorded named species of Chalcidoidea in Canada. These BINs have not yet been reconciled against the names in the checklist so the percent congruence is unknown, but it illus-



Figures 8–13. **8** *Sycophila* sp. (Eurytomidae), near Elora, ON **9** *Leucospis affinis* (Leucospidae) sipping nectar, Ojibway Prairie, ON **10** *Lymaenon* sp. (Mymaridae) drinking from a water droplet, Fergus, ON **11** *Perilampus hyalinus* (Perilampidae), Cedar Creek, ON **12** unidentified genus (Pteromalidae), Belwood, ON **13** *Idiomacromerus* sp. (Torymidae), Ojibway Prairie, ON. Photos courtesy of S. Marshall.

trates that there are many unrecorded species. The comparison of *COI* sequences from unidentified specimens against those of named species in such databases as BOLD will certainly help to reveal yet more species to add to the checklist, e.g., *Anastatus reduvii* (Howard) (Eupelmidae), a recent, accidentally introduced parasiti-

toid of the major pest *Halyomorpha halys* Stål (Hemiptera: Pentatomidae) (Garipey and Talamas 2019).

Compared to Canada, the number of species of Chalcidoidea recorded from Alaska and Greenland is far lower (113 species in 58 genera in 10 families from Alaska and 26 described species in 22 genera in 4 families from Greenland) (Tables 1, 2). The summary of the entomofauna of Greenland (Böcher et al. 2015) included records from six chalcidoid families, but specimens of Aphelinidae and Trichogrammatidae were only identified to genus, and so are not included in our checklist. Relative to Canada, the smaller land masses and more northerly latitudes of Alaska and Greenland definitely contribute to lower species richness, but it is also probable that the numbers are lower than expected because of relatively poor sampling in Alaska and Greenland (as well as in the three Canadian territories, NT, NU and YT). In addition, one species of Chalcidoidea, *Pteromalus elevatus* (Walker, 1834) (Pteromalidae) has been recorded from the French Overseas Collectivity of Saint Pierre and Miquelon Islands (Gargominy et al. 2020). This record is derived from an online database and specimens have not been examined, but this species has been recorded previously from NB, NS and NL (Hoebeke and Wheeler 1996).

Two species of Mymarommatoidea are recorded, one known only from Ontario, and one from Ontario, Quebec and New Brunswick (see bottom of Table 2). The latter species (*Mymaromella pala* Huber and Gibson) has also been collected from Montana, USA (Hatten et al. 2011), so it is likely that future collecting in central and western Canada will reveal its presence there as well. This further illustrates the work still needed to obtain reliable records of the species and their distributions in Canada and the rest of North America.

In terms of species richness by distributional area, the political region with the highest recorded number of species of Chalcidoidea is Ontario (852, 68.4% of 1246 species), followed by Quebec (566, 45.4%) and British Columbia (440, 35.3%) (Fig. 1 and Table 1). The greater relative species richness in these areas is certainly strongly influenced by higher sampling effort compared to more northern or central regions (Langor 2019). Despite this bias, higher species diversity is expected in these three provinces relative to most other regions because of the higher number of ecozones and habitats, compared to more northern areas (Scudder 1979).

In total, 235 new species records of Chalcidoidea are reported for Canada, which represents 19.4% of the total number of described species recorded. The number of new Canadian species records by family is shown in Table 1 (in parentheses following the Canada totals). The checklist includes 53 new generic records for Canada (those for which the only Canadian records are shown in boldface in Table 2). All families in our checklist were previously recorded from Canada, although some, like Azotidae (see Heraty et al. 2013) and Megastigmidae (see Janšta et al. 2018), were not recognized as families in previous catalogues (e.g., chapters in Krombein et al. 1979), whereas some other previously recognized families have been subsumed within others, e.g., Elasmidae is now classified as part of Eulophidae (Gauthier et al. 2000). For Alaska, there were 41 new species records (36.3% of the total), 22 new generic records and the families Chalcididae and Eurytomidae are also newly recorded. There were no new records for Greenland.

The distributions given by province and territory for Canada, the state of Alaska for USA, and Greenland must be accepted with caution. Records taken from the literature, particularly pre-1980 records, could be based on misidentifications because of the difficulty in identifying all taxa reliably to species when fewer workable species keys existed. Although Yoshimoto (1984) provided a key to the families and some subfamilies of Chalcidoidea from Canada, a comprehensive key to the genera of the Nearctic region did not exist prior to 1997 (Gibson et al. 1997). The superfamily is so diverse and speciose, even in the relatively cold, mid-to-high latitude region encompassed by our checklist, that the relatively few authorities available, in the past or now, simply could not correctly identify every specimen encountered. In preparing our checklist, there was no time or sufficient expertise for exhaustive study of all specimens from various localities in Canada and comparison with previously identified CNC specimens, which may or may not have been authoritatively and correctly identified in the first place. As often occurs, cataloguing efforts greatly outpace production of taxonomic revisions, including comparative descriptions and comprehensive identification keys to genera or species. Yet, once published, past identifications are the basis of the names and distributions presented in our checklist and had to be included even if some are wrong. Nevertheless, this checklist is our best summary of the current state of knowledge. It provides baseline data for future studies on the taxonomy, natural history and distribution of chalcidoids and will be useful to more applied fields such as the biological control of insect pests.

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