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# Forty new records of aleocharine beetles, and two new species in the genera *Acrotona* Thomson and *Atheta* Thomson, for the province of Manitoba, Canada (Coleoptera: Staphylinidae: Aleocharinae)

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Forty new records of aleocharine beetles, and two new species in the genera *Acrotona* Thomson and *Atheta* Thomson, for the province of Manitoba, Canada (Coleoptera: Staphylinidae: Aleocharinae)

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**Abstract.** Forty new provincial records, including two new aleocharine species for the province of Manitoba (Coleoptera: Staphylinidae) are provided. The two new species, *Acrotona manitobensis* Klimaszewski and Godin, **new species**, and *Atheta manitobae* Klimaszewski and Godin, **new species**, are described and illustrated. Habitat information and new locality records are provided for the newly recorded species. The current number of Aleocharinae in Manitoba stands at 120 species, including 40 new records and two new species described here. A checklist of all currently recorded species from the province, with their distribution records in Canada and USA, is included.

**Key words.** Rove beetles, Nearctic, distribution, faunistics.

## Introduction

Staphylinidae are the most species-rich family of Coleoptera with more than 63,495 described species in 3,762 genera worldwide (Newton, unpublished database, December 2017). Canada has 1,774 valid species recorded (Newton, unpublished database, December 2017; Klimaszewski et al. 2018) – an increase from the 1,652 species recorded from Canada listed in Bousquet et al. (2013). There are currently 511 described Aleocharinae species in Canada (A. Davies, unpublished data). The number of aleocharine species in Manitoba has increased to 120 (Klimaszewski et al. 2015a–c, 2016a–d, 2017a–d, 2018, and present data) since 69 species recorded by Bousquet et al. (2013). Aleocharine beetles are among the most poorly known and difficult-to-identify, megadiverse groups of Coleoptera, but enormous progress has been made in understanding their taxonomy in the last 20 years, especially in eastern Canada, where 407 species were recently recognized and treated (Klimaszewski et al. 2018). Western and northern Canada, Manitoba to British Columbia, and the three territories, however, remain poorly studied except for a few recent contributions to the knowledge of aleocharines in Alberta and Saskatchewan

(Klimaszewski et al. 2015a, 2016b,c), Yukon (Klimaszewski et al. 2008, 2012), and in coastal British Columbia (Klimaszewski and Winchester 2002; McLean et al. 2009a,b). For many species the full distribution in Canada is unknown because of the large gaps in sampling intensity (Klimaszewski et al. 2012, 2015a). Nonetheless, the fauna of these provincial and territorial jurisdictions is starting to receive more attention as many studies in recent years have sampled aleocharines in a large number of habitats, particularly in Alberta and Saskatchewan (Klimaszewski et al. 2016b,c). More intensive and less patchy sampling of Staphylinidae, and especially Aleocharinae, is needed to establish baseline biodiversity composition in areas of the country where ecosystems are undergoing rapid change due to resource extraction and climate change (Klimaszewski et al. 2012). Species of this family and the subfamily Aleocharinae are known to be exceptionally good ecological indicators and are increasingly being used to assess ecosystem resistance and resilience in the wake of natural and human induced environmental changes (Pohl et al. 2007, 2008; Venier et al. 2017; Klimaszewski et al. 2018, Hammond et al., unpublished). This paper contributes to the baseline knowledge of aleocharine beetles in the poorly sampled province of Manitoba by providing 40 new provincial records and describing two new species. The current collection survey in Manitoba took place over a 10-day period and focused mainly on Aleocharinae found in mushrooms. Collecting from mushrooms is a convenient and quick approach to provide a snapshot of the Aleocharinae fauna as they are attracted to the maggots feeding in the fungal tissues or to fungal tissue and spores. A checklist of all aleocharine species reported to date from the province of Manitoba is included in Table 1, but additional surveys and taxonomic research are needed to fully document the Aleocharinae fauna of the province.

## Materials and Methods

Senescent mushrooms or moist litter of various deciduous stands in Manitoba were shaken to remove the beetles from their habitat over a coarse screen and preserved in 70-75% ethanol. The specimens were later dissected and mounted on cards. All specimens in this study were dissected to examine their genital structures. Extracted genital structures were dehydrated in absolute alcohol, mounted in Canada balsam on celluloid micro-slides, and pinned with the specimens from which they originated. Images of the entire body and the genital structures were taken using an image processing system (Nikon SMZ 1500 stereoscopic microscope; Nikon Digital Camera DXM 1200F, and Adobe Photoshop software).

Morphological terminology mainly follows that used by Seevers (1978) and Klimaszewski et al. (2018). The ventral side of the median lobe of the aedeagus is considered to be the side of the bulbus containing the foramen mediale, the entrance of the ductus ejaculatorius, and the adjacent ventral side of the tubus of the median lobe with the internal sac and its structures (this part is referred to as the parameral side in some recent publications); the opposite side is referred to as the dorsal part.

Diagnoses, collection and habitat data from Klimaszewski et al. (2018) is summarized under each species, unless specifically cited otherwise.

The following symbols are used in the text: \* Holarctic species, † adventive species, ‡ species of uncertain distribution status – adventive in Canada or Holarctic, species without marks are native; species in bold represent new taxon or new provincial record. Tribes, genera and species are listed in alphabetical order.

## Depository/institutional abbreviations

**BGC** Benoit Godin Collection, Whitehorse, Yukon, Canada.

**CNC** Canadian National Collection of Insects, Arachnids, and Nematodes, Agriculture and Agri-Food Canada, Ottawa, Ontario, Canada.

**LFC** Natural Resources Canada, Canadian Forest Service, Laurentian Forestry Centre, R. Martineau Insectarium, Quebec City, Quebec, Canada.

USA state abbreviations follow those of the US Postal Service. Canadian provincial and territorial abbreviations used in the text are:

<b>AB</b>	Alberta
<b>BC</b>	British Columbia
<b>LB</b>	Labrador
<b>MB</b>	Manitoba
<b>NB</b>	New Brunswick
<b>NF</b>	Newfoundland
<b>NS</b>	Nova Scotia
<b>NT</b>	Northwest Territories
<b>NU</b>	Nunavut
<b>ON</b>	Ontario
<b>PE</b>	Prince Edward Island
<b>QC</b>	Quebec
<b>SK</b>	Saskatchewan
<b>YT</b>	Yukon Territory

## Discussion

The western regions and habitats of western Canada are poorly sampled and documented in the literature except for a few recent contributions (Klimaszewski and Winchester 2002; Klimaszewski et al. 2008, 2012, 2015a, 2016b,c; McLean et al. 2009a,b). One of us (BG), made an extensive effort to sample aleocharines in Yukon, Manitoba, and British Columbia. This paper is one of a series in which we plan to describe new species and provide new records for the poorly sampled western provinces, including Manitoba. Recently, thanks to active sampling in the Atlantic provinces (especially New Brunswick, Newfoundland and Labrador, and Nova Scotia), coupled with large efforts to identify material and publish findings (Klimaszewski et al. 2005, 2007b, 2008, 2009a,b, 2010, 2011, 2012, 2015b,c, 2016a, 2017a–d, 2018; Webster et al. 2009, 2012, 2016; Majka and Klimaszewski 2010), a comprehensive synthesis of 407 species of Aleocharinae was published for eastern Canada (Klimaszewski et al. 2018). As a result, these eastern Canadian regions (from Ontario to Atlantic Canada), are undoubtedly the best-studied regions of the country, and possibly for North America, in terms of the aleocharine fauna. However, the large majority of central, western and northern Canada remains poorly studied. Thus, it is not surprising that examination of a relatively small number of specimens from a few sites in Manitoba resulted in 40 new provincial records and two new species. The presently known fauna of aleocharines in Manitoba stands at 120 species, 10 of these species are adventive (8%), one species is of undetermined origin (Holarctic or adventive), and 14 species are Holarctic (11.6%) (Table 1). All adventive species in Manitoba are of Palearctic origin. Klimaszewski et al. (2018) estimated a total current number of Staphylinidae (excluding Aleocharinae) for the 5 provinces of eastern Canada at 760 species, 407 species of Aleocharinae, and a total number of Staphylinidae at 1,167 species. The Aleocharinae portion of that fauna constitutes 54%. Estimating the expected number of species of aleocharines in Manitoba is challenging because Staphylinidae, including aleocharines, are poorly sampled and under-represented. The currently known species richness of aleocharines for the province of Manitoba (120 spp.) is similar to that of Saskatchewan, currently estimated at 120 species. Additional species of aleocharines are expected to be discovered in both provinces with increased sampling efforts. Despite the enormous advances in documenting Aleocharinae diversity in Canada over the last three decades, many more new species and additions to known distributions remain to be discovered, particularly in western Canada.

**Table 1.** List of aleocharine species recorded from Manitoba with their distribution records in Canada and the United States. \* Holarctic species, † adventive species, ‡ species of uncertain distribution status – adventive in Canada or Holarctic. Species without marks are native; species in bold represent new taxa and provinces in bold represents new provincial records. Tribes, genera and species are listed in alphabetical order.

Taxonomic name	Canadian distribution	United States distribution
TRIBE ALEOCHARINI FLEMING		
1. <i>Aleochara assiniboin</i> Klimaszewski	BC, MB, ON, SK, YT	not recorded
2. <i>Aleochara bilineata</i> Gyllenhal†	AB, BC, MB, NF, NS, NB, ON, PE, QC, SK	ID, IL, MA, ME, NY, OR, RI, WA, WI
3. <i>Aleochara bimaculata</i> Gravenhorst	AB, BC, LB, MB, NB, NF, NS, NT, ON, QC, SK	AL, AZ, CA, CO, CT, DC, FL, GA, IA, ID, IL, IN, KS, KY, LA, MA, MD, ME, MI, MN, MO, MT, NC, ND, NE, NH, NJ, NM, NV, NY, OK, OR, PA, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY
4. <i>Aleochara fumata</i> Gravenhorst †	AB, BC, MB, NB, NF, NS, ON, QC, PE, YT	AL, AR, AZ, CA, GA, MA, MD, ME, MN, MO, NC, NH, NJ, NM, NY, OK, OR, PA, TN, VT, WA, WI, WV, WY
5. <i>Aleochara gracilicornis</i> Bernhauer	BC, MB, NB, NF, NS, NT, ON, QC, SK	AR, AZ, CO, FL, IL, IN, KS, LA, MA, MD, ME, MI, MN, MO, MT, NH, NJ, NM, NY, OH, PA, RI, SD, UT, WI
6. <i>Aleochara lacertina</i> Sharp	AB, BC, MB, NB, NF, NS, ON, QC, SK	AZ, CA, CO, FL, MA, ME, MN, MT, ND, NH, NM, NV, NY, OK, OR, PA, RI, TN, TX, UT, WA, WI
7. <i>Aleochara lata</i> Gravenhorst †	BC, MB, ON, QC, SK, YT	AL, AR, AZ, CA, CO, CT, DC, FL, GA, IA, IL, IN, KS, KY, LA, MA, ME, MD, MI, MN, MO, NC, NE, NH, NJ, NY, OH, OK, PA, RI, SC, TN, TX, VA, VT, WV, WI
8. <i>Aleochara ocularis</i> Klimaszewski	MB, NB, ON, QC	IA, IN, KY, MA, MO, PA
9. <i>Aleochara rubripes</i> Blatchley	MB, NB, ON, QC	CA, IN, KY, MA, ME, NH, PA, WA
10. <i>Aleochara sekanai</i> Klimaszewski	AB, LB, MB, NB, NT, ON, SK, YT	AK
11. <i>Aleochara suffusa</i> (Casey)*	AB, BC, MB, QC, SK	AK, AZ, CO, ID, NM, WA, WY
12. <i>Aleochara tahoensis</i> Casey	AB, BC, MB, NB, NF, NS, NT, ON, SK, YT	AR, CA, CO, MT, NH, NM, NV, OR, SD, WA, WI
13. <i>Aleochara verna</i> Say	AB, BC, LB, MB, NB, NF, NS, ON, PE, QC, SK, YT	AK, AZ, CA, CO, DC, FL, GA, IA, ID, IL, IN, KS, MA, ME, MI, MN, MO, MT, NH, NC, NJ, NM, NY, NV, OR, PA, SC, SD, TN, TX, UT, VT, WA, WI, WY
TRIBE ATHETINI CASEY		
14. <i>Acrotona brachyoptera</i> Klimaszewski and Webster	<b>MB</b> , NB, ON	not recorded
15. <i>Acrotona manitobae</i> Klimaszewski and Godin, <b>sp. nov.</b>	<b>MB</b>	not recorded
16. <i>Acrotona smithi</i> (Casey)	<b>MB</b> , NB, ON, QC	NY

Taxonomic name	Canadian distribution	United States distribution
17. <i>Aloconota sulcifrons</i> (Stephens) †	MB, NB, NF, ON, QC	AL, IL, IN, KY, MO, NH, NY, TN, VA, WA, WV
18. <i>Amischa analis</i> (Gravenhorst) †	LB, <b>MB</b> , NB, NF, NS, ON, PE, QC, SK	CA, CO, IN, MA, ME, MI, NH, NY, PA, VT, WA
19. <i>Anatheta planulicollis</i> (Casey)	MB	KS
20. <i>Anatheta surrufa</i> (Casey)	MB	KS
21. <i>Atheta brunswickensis</i> Klimaszewski	<b>MB</b> , NB, NS, ON, QC, YT	not recorded
22. <i>Atheta capsularis</i> Klimaszewski	LB, <b>MB</b> , NB, NF, ON, QC, YT	not recorded
23. <i>Atheta crenuliventris</i> Bernhauer	LB, <b>MB</b> , NB, NF, ON, QC, SK	ME
24. <i>Atheta dadopora</i> C.G. Thomson*	AB, BC, LB, <b>MB</b> , NB, NF, NS, ON, PE, QC, SK, YT	AK, NY, PA, RI
25. <i>Atheta districta</i> Casey	AB, BC, LB, <b>MB</b> , NB, NF, NS, ON, QC, SK	not recorded
26. <i>Atheta frosti</i> Bernhauer	BC, LB, <b>MB</b> , NB, NS, ON, QC, SK	MA, NC, NH, NY, PA, RI, VT, WV
27. <i>Atheta graminicola</i> (Gravenhorst)*	AB, BC, LB, <b>MB</b> , NB, NF, NT, ON, QC, SK, YT	AK, OR
28. <i>Atheta hampshirensis</i> Bernhauer	AB, BC, LB, <b>MB</b> , NB, NF, NS, ON, QC	AK, CA, NC, NH, NY, OR, PA, RI, WA
29. <i>Atheta klagesi</i> Bernhauer	AB, <b>MB</b> , NB, NF, QC	ME, PA
30. <i>Atheta manitobae</i> Klimaszewski and Godin, sp. n.	<b>MB</b>	not recorded
31. <i>Atheta modesta</i> (Melsheimer)	AB, <b>MB</b> , NB, NS, ON, QC	CT, DC, ME, MI, NY, PA, RI, VT, WV
32. <i>Atheta munsteri</i> Bernhauer*	MB, NT, YT	AK
33. <i>Atheta pennsylvanica</i> Bernhauer	LB, <b>MB</b> , NB, NF, NS, ON, QC	IN, MA, MN, NY, PA, RI, VA, VT
34. <i>Atheta pseudoklagesi</i> Klimaszewski and Webster	AB, <b>MB</b> , NB, NF, QC, SK, YT	not recorded
35. <i>Atheta remulsa</i> Casey	AB, BC, LB, <b>MB</b> , NB, NF, NS, ON, QC, SK, YT	AK, NY
36. <i>Atheta riparia</i> Klimaszewski and Godin	MB, SK, YT	not recorded
37. <i>Atheta smetanai</i> (Lohse)	LB, <b>MB</b> , NT, QC, YT	AK
38. <i>Atheta strigosula</i> Casey	BC, LB, <b>MB</b> , NB, NF, ON, QC, SK, YT	AK, NY
39. <i>Atheta terranova</i> Klimaszewski and Langor	LB, <b>MB</b> , NB, NF, ON, QC, SK, YT	not recorded
40. <i>Boreophilia eremita</i> (Rye)*	LB, <b>MB</b> , NB	AK
41. <i>Boreophilia gelida</i> (J.R. Sahlberg)*	MB, NT, QC, YT	AK
42. <i>Boreophilia insecuta</i> (Eppelsheim)*	MB, YT	AK
43. <i>Boreophilia manitobensis</i> Lohse	MB	AK



Taxonomic name	Canadian distribution	United States distribution
44. <i>Boreophilia nearctica</i> Lohse	LB, MB, NF, QC, YT	AK
45. <i>Dochmonota rudiventris</i> (Eppelsheim) ‡	<b>MB</b> , NB, NF, NT, QC, YT	ID, MA
46. <i>Earota dentata</i> (Bernhauer)	AB, BC, MB, NB, NF, NS, ON, QC, SK, YT	AK, AL, CA, CO, DC, IA, ID, IL, IN, KS, MA, ME, MD, MT, NC, NH, NJ, NM, NV, NY, OH, OR, PA, VA, WA
47. <i>Goniusa caseyi</i> Gusarov	AB, BC, MB	DC, MA, NH, NJ, NY, TX
48. <i>Lypoglossa franclemonti</i> Hoebeke	AB, MB, NB, NF, NS, NT, ON, QC, SK, YT	ME, NH, NY, VT
49. <i>Lypoglossa manitobae</i> Gusarov	MB	not recorded
50. <i>Mocyta amblystegii</i> (Brundin)*	NT, NU, MB, YT	AK
51. <i>Mocyta breviscula</i> (Mäklin)	AB, BC, LB, <b>MB</b> , NB, NF, NS, ON, QC, SK, YT	AK, CA, NV, OR
52. <i>Mocyta discreta</i> (Casey)	<b>MB</b> , ON, QC, SK	IA, MN
53. <i>Mocyta fungi</i> (Gravenhorst) †	AB, BC, LB, <b>MB</b> , NB, NF, NS, NU, ON, PE, QC, SK, YT	AK, CA, ME, MA, MN, NH, NY, OR, RI, WA
54. <i>Mocyta luteola</i> (Erichson)	<b>MB</b> , NB, NF, ON, QC	DC, IA, IN, MA, MI, MN, MO, MS, NC, NY, PA, RI, WI
55. <i>Philhygra clemens</i> (Casey)	BC, MB, NB, NS, ON, QC, YT	OH, WI
56. <i>Philhygra criddlei</i> (Casey)	MB	not recorded
57. <i>Philhygra falcifera</i> Lohse	MB, SK	not recorded
58. <i>Philhygra jarmilae</i> Klimaszewski and Langor	<b>MB</b> , NB, NF, ON, SK, YT	not recorded
59. <i>Philhygra laevicollis</i> (Mäklin)	BC, MB, NB, NS, ON	AK, WA
60. <i>Philhygra leechi</i> Lohse	MB, NT, YT	not recorded
61. <i>Philhygra malleoides</i> Lohse	MB, NF, NT, QC, YT	AK
62. <i>Philhygra manitobae</i> (Casey)	MB	not recorded
63. <i>Philhygra palustris</i> (Kiesenwetter) †	MB	IA, ME, NH, NY, PA, WI
64. <i>Philhygra pseudopolaris</i> Klimaszewski and Langor	MB, NF, NT, QC, YT	AK, CA
65. <i>Philhygra varula</i> (Casey)	LB, MB, NB, NF, QC	not recorded
66. <i>Philhygra wisconsinica</i> (Casey)	MB	WI
67. <i>Schistoglossa blatchleyi</i> (Bernhauer and Scheerpeltz)	MB, NB, NT, ON, QC, SK, YT	AK, IN
68. <i>Seeveriella globicollis</i> (Bernhauer)	AB, BC, <b>MB</b> , NB, NF, NS, ON, QC, SK	AZ, CO, ID, MI, MN, MT, NH, NM, SD, WI
69. <i>Strophogastra pencillata</i> Fenyés	AB, MB, NB, NS, ON, QC	not recorded

Taxonomic name	Canadian distribution	United States distribution
TRIBE FALAGRIINI MULSANT AND REY		
70. <i>Falagria dissecta</i> Erichson	AB, BC, MB, NB, NS, ON, QC, SK	AL, AZ, CA, CO, CT, DC, FL, GA, IA, IL, IN, KS, KY, LA, ME, MA, MD, MI, MN, MO, MS, MT, NC, ND, NE, NH, NJ, NM, NY, OH, OR, PA, RI, SC, SD, TN, TX, UT, VA, VT, WA, WI, WV, WY
TRIBE GYMNUSINI HEER		
71. <i>Deinopsis harringtoni</i> Casey	LB, MB, NB, NF, NS, ON, QC	AR, CA, MA, ME, MI, NH, WI
72. <i>Gymnusa atra</i> Casey*	AB, BC, LB, MB, NB, NF, NS, NT, ON, QC, YT	AK, IL, IA, MA, ME, MI, MN, NH, NY
73. <i>Gymnusa campbelli</i> Klimaszewski	MB, NB, NF, NT, ON, QC, SK, YT	AK, MA
74. <i>Gymnusa grandiceps</i> Casey	LB, MB, NB, NF, NS, ON, QC	CT, IL, MA, MD, ME, MI, NH, NY, RI, VT
75. <i>Gymnusa konopackii</i> Klimaszewski	MB, NT, NU, YT	AK
76. <i>Gymnusa pseudovariegata</i> Klimaszewski	AB, BC, LB, MB, NB, NF, NS, NT, ON, QC, YT	AK, CA, MA, OR, WA
77. <i>Gymnusa smetanai</i> Klimaszewski*	MB, NF, NT, ON, YT	AK
TRIBE HOMALOTINI HEER		
78. <i>Cyphea wallisi</i> Fenyés	MB	not recorded
79. <i>Gyrophæna affinis</i> Mannerheim †	BC, MB, NB, NF, NS, ON, QC, SK	AZ, DC, IL, IN, IA, KY, MA, ME, MI, MN, MO, NC, NH, NJ, NM, NY, OH, PA, TN, WA, WI, WV
80. <i>Gyrophæna caseyi</i> Seevers	<b>MB</b> , NB, ON, QC	MI, NC, NY, PA
81. <i>Gyrophæna criddlei</i> Casey	LB, MB, NB, ON, SK (YT tentative)	not recorded
82. <i>Gyrophæna flavicornis</i> Melsheimer	<b>MB</b> , NB, NS, ON, QC	CT, DC, IL, IN, KY, MA, MD, ME, MI, NC, NH, NJ, NY, PA, RI, TN, VA, VT, WI, WV
83. <i>Gyrophæna gaudens</i> Casey	AB, <b>MB</b> , ON, PE	IL, IN, MA, MI, PA, WI
84. <i>Gyrophæna gilvicollis</i> Casey	<b>MB</b> , NB, ON	DC, IL, IN, KS, MI, NC, NY, PA, VA, WV
85. <i>Gyrophæna insolens</i> Casey	LB, MB, NB, NF, ON, SK	MI
86. <i>Gyrophæna keeni</i> Casey	AB, BC, LB, <b>MB</b> , NB, NF, NS, ON, QC, SK, YT	FL, MA, ME, MT, NH, NY, OR, TN, WA, WY
87. <i>Gyrophæna laetula</i> Casey	<b>MB</b> , NB, NF	DC, IL, IN, KY, MA, NY, PA, TN, VA, WI
88. <i>Gyrophæna modesta</i> Casey	AB, <b>MB</b> , NB, NF, NS, ON	IL, IN, MI, MN, NH, NY

Taxonomic name	Canadian distribution	United States distribution
89. <i>Gyrophana nana</i> (Paykull)*	AB, BC, MB, NB, NF, ON, YT	AK, CA, MA, ME, MI, MT, WI, WY
90. <i>Gyrophana nanoides</i> Seevers	<b>MB</b> , NB, NF, ON, QC	DC, IA, IN, KS, MA, NC, TN, VA, WI
91. <i>Gyrophana subnitens</i> Casey	MB, NB, NS, ON, SK	IL, KS, ME, MI, MN, MO, NY, WI
92. <i>Gyrophana vitrina</i> Casey	<b>MB</b> , NB, ON, PE, QC	AL, IL, IN, KY, ME, MI, NC, NH, NY, PA, TN, WV, WI
93. <i>Homalota plana</i> (Gyllenhal) †	AB, MB, NB, NF, NS, ON	AK, CA, CO, IA, ID, IN, MT, NY, OH, PA, TX
94. <i>Neotobia alberta</i> Ashe	AB, MB, NB, ON, QC	ME, NH, WI
95. <i>Silusa californica</i> (Bernhauer)	AB, BC, LB, <b>MB</b> , NB, NF, NS, ON, PE, QC, SK, YT	AK, CA, MN
96. <i>Pella criddlei</i> (Casey)	AB, MB, QC	not recorded
97. <i>Pella gesneri</i> Klimaszewski	AB, MB, NB, ON	not recorded
99. <i>Xenodusa reflexa</i> (Walker)	AB, BC, MB, NB, NS, ON, QC, SK	AZ, CA, CO, CT, IL, IA, MA, MD, MI, MN, MT, ND, NE, NH, NM, NV, NY, OR, RI, SC, UT, VT, WA, WI, WY
99. <i>Zyras obliquus</i> (Casey)	AB, BC, LB, MB, NB, NF, NS, ON, QC, SK	MI, MO, NH, NY, OR
TRIBE MYLLAENINI GANGLBAUER		
100. <i>Myllaena arcana</i> Casey	AB, LB, <b>MB</b> , NB, NF, NS, ON, QC, SK	AL, FL, IA, IL, MA, ME, NH, NJ, TN, WV
101. <i>Myllaena insomnis</i> Casey	AB, BC, LB, MB, NB, NF, NS, NT, ON, QC, SK, YT	AK, ID, MA, MI, MN, MT, NY, WI
TRIBE OXYPODINI C.G. THOMSON		
102. <i>Devia prospera</i> (Erichson) *	AB, BC, LB, MB, NB, NT, ON, QC, SK, YT	AK, CA, CO, MA, MI, MN, MT, NH, NM, OR, SD, UT, WA, WI, WY
103. <i>Oxypoda amica</i> Casey	MB, NB, NS, ON, QC, YT	IA, IN, KS, KY, LA, MA, MO, NC, NJ, NY, TN
104. <i>Oxypoda canadensis</i> Klimaszewski	AB, LB, MB, NF, NT, ON, QC, YT	AK, NH
105. <i>Oxypoda convergens</i> Casey	AB, LB, <b>MB</b> , NB, NF, NS, ON, QC	IA, MO, NY
106. <i>Oxypoda gnara</i> Casey	<b>MB</b> , NB, ON, QC	RI
107. <i>Oxypoda hiemalis</i> Casey	AB, LB, <b>MB</b> , NB, NF, NS, NT, ON, QC, YT	AK, NH
108. <i>Oxypoda lacustris</i> Casey	AB, BC, LB, MB, NB, NF, NT, ON, QC, SK, YT	AK, WA
109. <i>Oxypoda lucidula</i> Casey	AB, LB, MB, NB, NF, NT, ON, QC, YT	AK, IA, MO, NH, NY

Taxonomic name	Canadian distribution	United States distribution
110. <i>Oxypoda manitobae</i> Casey	BC, MB, SK	CO
111. <i>Oxypoda pseudolacustris</i> Klimaszewski	AB, MB, NB, NF, NS, ON, QC, SK	NH
112. <i>Oxypoda sylvia</i> Casey	AB, BC, LB, MB, NB, NF, NS, ON, QC, SK, YT	AK, ME, NH
TRIBE TACHYUSINI C.G. THOMSON		
113. <i>Gnypeta ashei</i> Klimaszewski	MB, NT, NU, YT	AK
114. <i>Gnypeta caerulea</i> (C.R. Sahlberg)*	AB, BC, LB, MB, NF, NS, NB, NT, ON, PE, QC, SK, YT	AK
115. <i>Gnypeta carbonaria</i> (Mannerheim)*	AB, MB, NB, NF, NT, ON, QC, SK	AK
116. <i>Gnypeta groenlandica</i> Lohse	MB, NU, YT	AK, [type from Greenland]
117. <i>Gnypeta manitobae</i> Casey	MB	not recorded
118. <i>Gnypeta sellmani</i> Brundin*	LB, MB, NF, NT QC, SK, YT	AK
119. <i>Tachyusa americanoides</i> Pašnik	AB, BC, MB, NB, NF, NS, NT, ON, QC	IL, MA, MT, NH, NY, PA, VT
120. <i>Tachyusa smetanai</i> Pašnik	QC, MB	AZ, CO, KY, NM, TX

**Review of new records and description of new species (tribes and species within tribes are in alphabetic order)**

**Tribe Athetini Casey**

***Acrotona brachyoptera* Klimaszewski and Webster**

**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> MB, NB, ON; <b>USA:</b> not recorded
New provincial records	Canada: Manitoba: Moose Lake, 2016-IX-19, 49.2018°N, 95.3423°W, 353 m, mushroom, sifting, B. Godin & D. Horwood (BGC) 1 male, 5 females; same locality data (LFC) 2 females; Adam Lake, 2016-IX-11, 49.0508° N, 100.0666°W, 689 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 male, 3 females.
References	Webster et al. 2016, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In old red maple (*Acer rubrum* L.) forest, mixed forests, a wet alder (*Alnus* sp.) swamp, a mature red spruce (*Picea rubens* Sarg.) and red maple forest, a rich Appalachian hardwood forest, in a *Carex* marsh, small sedge marsh, marsh with scattered alders, in old-growth eastern white cedar (*Thuja occidentalis* L.) swamps and forests, and in 8.5-year-old regenerating mixed forests. Adults in moss and litter near brooks, in moss and litter at the base of cedar, in moss and litter in red spruce and cedar forests, in leaf litter under alders near a stream, in leaf litter and grass on hummocks in a wet alder swamp, in grass litter and sphagnum in marshes, moist leaves on the margin of a vernal pool, in sphagnum and leaf litter at the bottom of old tire depressions, and one specimen was collected from a gilled mushroom. *Collecting period.* III–IX. *Collecting method.* Sifting various kinds of litter.

***Acrotona manitobensis* Klimaszewski and Godin, new species**

Fig. 1–8

**Holotype.** Canada: Manitoba, Max Lake, 2016-IX-10, 49.0714°N, 100.1384°W, 686 m, mushrooms, sifting, coll. B. Godin & D. Horwood (CNC) 1 male.

**Paratype.** Canada: Manitoba, Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, litter, sifting, coll. B. Godin & D. Horwood (LFC) 1 female.

**Etymology.** Named after the Canadian province of Manitoba, where the type specimens were found.

**Description.** Body narrow and subparallel (Fig. 1), moderately convex; length 2.8–2.9 mm, width at middle of pronotum 0.9 mm, width at base of elytra 0.6 mm; colour dark brown with elytra and apical segments of abdomen slightly paler rufobrunneous, appendages brunneotestaceous; punctuation on forebody fine, moderately dense and slightly asperate, particularly on pronotum (Fig. 1); head distinctly narrower than pronotum, ratio of maximum width of head to maximum width of pronotum 0.7; antennomeres VII–X subquadrate; pronotum broad and shield-shaped, sides evenly arcuate, maximum width of pronotum greater than width of elytra at base, ratio of maximum width to length 1.4; elytra at suture shorter than pronotum; abdomen slightly tapering posteriorly. *Male.* Tergite VIII moderately transverse, apical margin arcuate (Fig. 4); sternite VIII elongate, broadly parabolically rounded from base to apex, base slightly sinuate (Fig. 5); tubus of median lobe of aedeagus in lateral view short, with ventral margin curved obliquely ventrad in basal half and almost straight in apical half, with apex narrow and rounded, internal sac with narrow, sclerotized, curved subapical structure (Fig. 2); in dorsal view median lobe with tubus narrow, subparallel, broadly rounded apically, bulbous very wide, subovoid, internal sac with two narrow arcuate structures (Fig. 3). *Female.* Tergite VIII similar to that of male (Fig. 6); sternite VIII elongate, apex rounded, base evenly arcuate (Fig. 7); spermatheca with capsule kidney-shaped, stem narrow, with single broad coil posteriorly (Fig. 8).

**Distribution.** Known only from the type locality in Manitoba.

**Collection and habitat data.** Captured in September by sifting organic litter in deciduous forest and mushrooms.

**Comments.** This species differs from all other Nearctic *Acrotona* species known to us in combination of the following characters: broad and shield-shaped pronotum that is wider than base of elytra, elytra at suture shorter than pronotum, unique shape of median lobe of aedeagus with large bulbous and two elongate narrow structures of internal sac (Fig. 2, 3), distinct shape of tergite and sternite VIII of male and female (Fig. 4–7), and the distinct shape of spermatheca (Fig. 8).

***Acrotona smithi* (Casey)****Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> MB, NB, ON, QC; <b>USA:</b> NY
New provincial record	Canada: Manitoba: Birds Hill [Prov. Park] - bur oak [trail], 2016-IX-16, 50.0083°N, 96.9216°W, 264 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male, 3 females; same locality data (LFC) 1 male, 3 females.
References	Casey 1910, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In ON, a common species in various kinds of deciduous forests, mixed forests, and a semi-open habitat (e.g. oak savannah); adults sifted from grass pile and leaves and captured in Malaise pans and Lindgren funnel traps. In NB, adults collected from decaying sea wrack under alders (*Alnus* sp.) and gravel and sand on the margin of a sea beach where it was common. *Collecting period.* V–IX. *Collecting method.* Pitfall traps, Lindgren funnel traps, flight intercept traps, Malaise pan traps, sifting litter, car net.

***Amischa analis* (Gravenhorst) †****Distribution**

Origin	Palaearctic, adventive in North America
Distribution	<b>Canada:</b> MB, LB, NB, NF, NS, ON, PE, QC, SK. <b>USA:</b> CA, CO, IN, MA, ME, MI, NH, NY, PA, VT, WA
New provincial record	Canada: Manitoba: Souris River, 2016-IX-9, 49.5022°N, 99.9915°W, 402 m, river bank, oak litter, sifting, B. Godin & D. Horwood (BGC) 1 female; same locality data (LFC) 2 females.
References	Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In many open and forested habitats; agricultural fields, pasture/meadow (commonly collected by sweeping grasses), urban fields, in grass litter in garden and lawn, coastal sand dunes amidst vegetation, river margins in flood debris and drift material, old-growth eastern white cedar swamp in moist sphagnum, black spruce bog in sphagnum, and red spruce forest in pitfall traps. *Collecting period.* IV–IX. *Collecting method.* Sifting various kinds of litter and moss, pitfall traps, sweeping grasses.

***Atheta* (subgenus undetermined) *brunswickensis* Klimaszewski****Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> MB, NB, NS, ON, QC, YT. <b>USA:</b> not recorded.
New provincial record	Canada: Manitoba: Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218 m, mushroom, sifting, B. Godin & D. Horwood (LFC) 1 female.
References	Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In NB, from various forest types; upland black spruce forest, red spruce and yellow birch forest, mature red spruce and eastern white cedar forest, balsam fir stand, red pine forest, jack pine forest, various mixed forests, red oak forest, and various hardwood forests. Adults in various kinds of mushrooms (mostly gilled mushroom species) in various stages of decay (fresh to well rotten) on forest floor; also found in forest litter (moldy conifer duff, leaf litter), some from pitfall traps in regenerating red spruce forest and yellow birch forest. Others from decaying (moldy) corncobs and cornhusks near mixed forest. *Collecting period.* V–IX. *Collecting method.* Sifting fungi and forest litter, pitfall traps.

***Atheta* (subgenus undetermined) *manitobae* Klimaszewski and Godin, new species**

Fig. 1–16

**Holotype.** Canada: Manitoba, Moose Lake, 2016-IX-19, 49.2018°N, 95.3423°W, 353 m, Birch litter, sifting, B. Godin & D. Horwood (CNC) 1 female.

**Paratype.** Canada: Manitoba, Moose Lake, 2016-IX-19, 49.2018°N, 95.3423°W, 353 m, Birch litter, sifting, B. Godin & D. Horwood (LFC) 1 male.

**Etymology.** Named after the Canadian province of Manitoba, where the type specimens were found.

**Description.** Body narrow, subparallel, length 2.7–2.8 mm; head, antennae, pronotum, and abdomen (except for its apex), dark brown, elytra and legs light brown or light reddish-brown (Fig. 9); antennomeres V–VI elongate, and VII–X subquadrate; pronotum transverse (maximum width 0.6 mm), evenly arcuate laterally, slightly narrower than maximum width of elytra, arcuate basally (Fig. 9); elytra strongly transverse (maximum width 0.7 mm), distinctly shorter than pronotum (Fig. 9); abdomen

subparallel, with very coarse macrosetae apically; legs very long (Fig. 9). *Male*. Tergite VIII transverse, arcuate apically (Fig. 12); sternite VIII broadly parabolic, slightly truncate apically, with numerous strong macrosetae in apical part of disc except medially, antecostal suture almost straight and narrowly separated from basal margin medially (Fig. 13); median lobe of aedeagus in dorsal view with bulbous narrowly oval, tubus long and broad, slightly tapering to triangular apex (Fig. 11), in lateral view ventral margin of tubus strongly curved ventrad in basal half, almost straight to narrowly elongate subapical part, apex narrowly rounded (Fig. 10). *Female*. Tergite VIII, transverse, truncate medially at apex (Fig. 14); sternite VIII broadly parabolic from base to apex, with numerous strong macrosetae in apical part of disc, antecostal suture sinuate, moderately separated from basal margin (Fig. 15); spermatheca with capsule small, pear-shaped with deep apical invagination, stem long, thin and arcuate medially, narrowly recurved posteriorly (Fig. 16).

**Distribution.** Known only from the type locality in Manitoba.

**Collection and habitat data.** *Habitat.* associated with birch forest; adults found in litter. *Collecting period.* IX. *Collecting method.* sifting forest litter.

**Comments.** This species differs from other *Atheta* species in having a broad and shield-shaped pronotum, evenly arcuate laterally, slightly wider than the maximum width of the elytra; elytra shorter than the pronotum; macrosetae of the apical part of the abdomen strong; antennomeres VII–X subquadrate; legs very long (middle and hind legs each as long as length of pronotum and elytra combined); and the shape of the median lobe of the aedeagus and spermatheca are distinctive (Fig. 10, 11). The shape of median lobe of the aedeagus is similar to some species of the subgenus *Dimetrota* of *Atheta*, but all species of this subgenus known to us have the apical margin of male tergite VIII modified, with lateral teeth and a median emargination, which is lacking in this species.

In Benick and Lohse (1974) this species would key to “Mischgruppe II” [= mixed group] of *Atheta*. A female was designated as a holotype for this species because of the unique shape of the spermatheca.

### *Atheta (Dimetrota) capsularis* Klimaszewski

#### Distribution

Origin	Nearctic
Distribution	<b>Canada:</b> LB, MB, NB, NF, ON, QC, YT. <b>USA:</b> not recorded.
New provincial record	Canada: Manitoba: Bead Lake, 2016-IX-13, 50.7868°N, 99.9928°W, 620 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male.
References	Klimaszewski et al. 2005, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In red spruce, balsam fir, jack pine, mixed and riparian type forests. Most specimens were from pitfall traps and flight intercept traps; some from forest litter. This species feeds on several species of yeasts and fungal spores based on contents in the posterior gut. *Collecting period.* VI–VIII. *Collecting method.* Sifting litter, pitfall traps, flight intercept traps.

### *Atheta (Dimetrota) crenuliventris* Bernhauer

#### Distribution

Origin	Nearctic
Distribution	<b>Canada:</b> LB, MB, NB, NF, ON, QC, SK. <b>USA:</b> ME
New provincial record	Canada: Manitoba: Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male.
References	Bernhauer 1907, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In NB, found in various forested and open habitats, often in decaying organic materials; in compost near mixed forest, in dung in entrance to fox den in a pasture, in decaying sea wrack on sea beach, under dung on margin of lake, in litter of roof of an abandoned beaver lodge occupied by muskrats, in decaying moist litter in *Carex* marsh, and from unbaited pitfall traps in a red spruce forest. In SK, in compost, wrack on lakeshore; in NF, captured in carrion-baited pitfall traps and flight intercept traps in conifer-dominated and mixed forests and on coastal barrens in LB. *Collecting period.* IV–IX. *Collecting method.* Sifting litter, pitfall traps, flight intercept traps.

***Atheta (Datomicra) dadopora* Thomson \***

**Distribution**

Origin	Holarctic, recorded from Europe, China, India, Japan and South Korea
Distribution	<b>Canada:</b> AB, BC, LB, MB, NB, NF, NS, ON, PE, QC, SK, YT. <b>USA:</b> AK, NY, PA, RI
New provincial records	Canada: Manitoba: Birds Hill [Prov. Park] - bur oak [trail], 2016-IX-16, 50.0083°N, 96.9216°W, 264 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male, 1 female; Georges Creek, 2016-IX-15, 50.6729°N, 99.6212°W, 696 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male, 1 female; same locality data (LFC) 1 male, 1 female; Adam Lake, 2016-IX-11, 49.0508°N, 100.0666°W, 689 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 male, 1 female.
References	Thomson 1867, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In various mixed, coniferous, and hardwood forest types, usually in decaying materials such as decaying fungi and carrion; from Lindgren funnel trap in red spruce forest with red maple and balsam fir, unbaited pitfall traps in red spruce forest, spruce forest in decaying fleshy fungi, mixed forests on *Pleurotus* sp. on *Populus* log, red oak and red maple forest in gilled mushrooms, alder swamp on remains of dead deer, hardwood forests in gilled fungi, and rich Appalachian hardwood forest in fleshy fungi in various stages of decay. Also in compost, poplar/spruce litter, carrion, bison and caribou dung, and under the bark of decaying spruce logs. *Collecting period.* V–IX. *Collecting method.* Sifting various kinds of organic materials, flight intercept traps, Lindgren funnel traps, unbaited and carrion-baited pitfall traps.

***Atheta (Dimetrota) districta* Casey**

**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> AB, BC, LB, MB, NB, NF, NS, ON, QC, SK. <b>USA:</b> not recorded
New provincial records	Canada: Manitoba: Adam Lake, 2016-IX-11, 49.0508°N, -100.0666°W, 689 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male, 2 females; Birds Hill [Prov. Park] - bur oak [trail], 2016-IX-16, 50.0083°N, 96.9216°W, 264 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 3 males, 3 females; Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male, 1 female.
References	Casey 1911, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In NB, in various forest types usually in dung or decaying mushrooms; eastern white cedar swamp in moose dung, mature red spruce and eastern white cedar forest in deer dung, mixed forest in bear dung, in decaying (moldy) corncobs and cornhusks near mixed forest, regenerating mixed forest in decaying mushrooms, near lakeshore in decaying fungi, old jack pine forest in rotten *Boletus* mushrooms, red maple swamp in leaf litter near stream, in unbaited pitfall traps in red spruce forest, and a few collected at u.v. light. Elsewhere,



captured in flight intercept traps and carrion-baited pitfall traps in coniferous and mixed forests (NL) and on coastal barrens (LB); also from spruce litter, and dry and decaying mushrooms. *Collecting period.* VI–IX. *Collecting method.* Sifting litter, dung, and fungi, pitfall traps, flight intercept traps.

### *Atheta (Tetropla) frosti* Bernhauer

#### Distribution

Origin	Nearctic
Distribution	<b>Canada:</b> BC, LB, MB, NB, NS, ON, QC, SK. <b>USA:</b> MA, NC, NH, NY, PA, RI, VT, WV
New provincial records	Canada: Manitoba: Betula Lake, 2016-IX-20, 50.0667°N, 95.5887°W, 306 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 4 males, 2 females; Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 5 males, 2 females; Max Lake, 2016-IX-10, 49.0714°N, 100.1384°W, 686 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male, 1 female; Birds Hill [Prov. Park] - bur oak [trail], 2016-IX-16, 50.0083°N, 96.9216°W, 264 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 4 males, 2 females; Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218 m, mushroom, sifting, B. Godin & D. Horwood (LFC) 3 males, 3 females; Adam Lake, 2016-IX-11, 49.0508°N, 100.0666°W, 689 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 7 males, 5 females; West Lake, 2016-IX-20, 49.7468°N, 95.2098°W, 341 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 male, 1 female; Moose Lake, 2016-IX-19, 49.2018°N, 95.3423°W, 353 m, mushroom, sifting, B. Godin & D. Horwood (LFC) 1 male, 1 female.
References	Bernhauer 1909, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In NB, in various coniferous, mixed, and hardwood forests in decaying fungi where it is often common; white pine and spruce forest in decaying mushrooms, old-growth eastern hemlock forest in decaying mushrooms, red spruce and eastern white cedar forest in decaying mushrooms, red pine forest in decaying mushrooms, jack pine forest in decaying mushrooms, mixed forests in decaying mushrooms, red oak forest in gilled mushrooms, rich Appalachian hardwood forest in decaying/rotten fleshy fungi; one from pitfall trap in red spruce forest and some in decaying (moldy) corncobs and cornhusks near a mixed forest. Elsewhere, from pitfall traps in open spruce forest with sandy soil and *Cladina* lichen cover (LB), birch-dominated forests (QC), in polypore fungus in coniferous forest, and on forest floor in red oak and deciduous forests (NS). *Collecting period.* VII–X. *Collecting method.* Sifting fungi and forest litter, pitfall traps.

### *Atheta (Dimetrota) hampshirensis* Bernhauer

#### Distribution

Origin	Nearctic
Distribution	<b>Canada:</b> AB, BC, LB, MB, NB, NF, NS, ON, QC. <b>USA:</b> AK, CA, NC, NH, NY, OR, PA, RI, WA
New provincial records	Canada: Manitoba: Adam Lake, 2016-IX-11, 49.0508°N, 100.0666°W, 689 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 3 males; Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218 m, mushroom, sifting, B. Godin & D. Horwood (BGC) 1 female; Georges Creek, 2016-IX-15, 50.6729°N, 99.6212°W, 696 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male; Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male, 1 female; Birds Hill [Prov. Park] - bur oak [trail], 2016-IX-16, 50.0083°N, 96.9216°W, 264 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 4 males, 3 females.
References	Bernhauer 1909, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). It occurs in various coniferous, mixed, and hardwood forests, usually in decaying organic materials such as rotting fungi, dung, and carrion; in NB, specimens from black spruce forest on gilled mushrooms, jack pine forest in decaying mushrooms, from pitfall traps in red spruce forest, old-growth hemlock forest in decaying bracket fungi (polypore), various mixed forests in gilled mushrooms and decaying fleshy and gilled mushrooms in various stages of decay, in decaying corncobs and cornhusks near mixed forest, alder swamp on remains of dead deer, rich Appalachian hardwood forest in fleshy fungi of various stages of decay, some from leaf litter and scat under great horned owl nest in hardwood forest; in NS, in compost, carrion, and mushrooms in coniferous and deciduous forests and open habitats. In NL, captured in carrion traps and flight intercept traps in mixed and coniferous forests. *Collecting period.* V-IX. *Collecting method.* sifting fungi and litter, unbaited and carrion-baited pitfall traps, flight intercept traps.

### *Atheta (Pseudota) klagesi* Bernhauer

#### Distribution

Origin	Nearctic
Distribution	<b>Canada:</b> AB, MB, NB, NF, QC. <b>USA:</b> ME, PA [all other previously published records (Klimaszewski et al. 2007a, Dollin et al. 2008, Majka and Klimaszewski 2008b, 2008d, 2010, Bishop et al. 2009, Klimaszewski et al. 2011, Majka et al. 2011, Klimaszewski et al. 2012, 2013, 2015c) of this species need to be reassessed]
New provincial records	Canada: Manitoba: Adam Lake, 2016-IX-11, 49.0508°N, -100.0666°W, 689 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 2 males; same locality data (LFC) 1 female; Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218 m, mushroom, sifting, B. Godin & D. Horwood (BGC) 6 males, 5 females; Birds Hill [Prov. Park] - bur oak [trail], 2016-IX-16, 50.0083°N, 96.9216°W, 264 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male; Max Lake, 2016-IX-10, 49.0714°N, 100.1384°W, 686 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 5 males, 1 female; Bead Lake, 2016-IX-13, 50.7868°N, 99.9928°W, 620 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 2 males, 2 females; same locality data (BGC) 1 female; Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 female.
References	Bernhauer 1909, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In NB, this species occurred in various forest types; hemlock forests, eastern white cedar swamps, red spruce and yellow birch forests, various mixed forests, a red oak forest, red pine forest, hardwood forests, and northern hardwood forests. Adults were found in various fungi, including fleshy polypore fungi, inside birch polypore (*Piptoporus betulinus* (Bull.) Karst.), gilled mushrooms, and decaying coral fungi. Some were found in compost (moldy corncobs and cornhusks, decaying vegetables) and inside a well rotted fungus-covered log. In NL, specimens from pitfall traps in boreal conifer forests. *Collecting period.* IV-X. *Collecting method.* Sifting fungi and litter, unbaited and carrion-baited pitfall traps, flight intercept traps.

***Atheta (Dimetrota) modesta* (Melsheimer)****Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> AB, MB, NB, NS, ON, QC. <b>USA:</b> CT, DC, ME, MI, NY, PA, RI, VT, WV
New provincial records	Canada: Manitoba: Betula Lake, 2016-IX-20, 50.0667°N, 95.5887°W, 306 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 2 males; Georges Creek, 2016-IX-15, 50.6729°N, 99.6212°W, 696 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male, 1 female; Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 8 males, 11 females; Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218 m, mushroom, sifting, B. Godin & D. Horwood (BGC) 4 females; same locality data (LFC) 3 males; Moose Lake, 2016-IX-19, 49.2018°N, 95.3423°W, 353 m, mushroom, sifting, B. Godin & D. Horwood (LFC) 1 male, 1 female; Max Lake, 2016-IX-10, 49.0714°N, 100.1384°W, 686 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 2 males, 1 female; Adam Lake, 2016-IX-11, 49.0508°N, 100.0666°W, 689 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 3 males, 4 females; Birds Hill [Prov. Park] - bur oak [trail], 2016-IX-16, 50.0083°N, 96.9216°W, 264 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 8 males, 7 females.
References	Melsheimer 1844, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In NB, found in various coniferous and hardwood forest types, usually in decaying fungi on forest floor; red oak forest in decaying gilled mushrooms, rich Appalachian hardwood forest in gilled mushrooms, and in entrance to mammal burrow in dung, various mixed forests in decaying gilled mushrooms and fleshy fungi, balsam fir forest in decaying *Boletus* mushrooms and gilled mushrooms, black spruce forest in *Russula* sp. mushrooms, mature red spruce and eastern white cedar forest in decaying mushrooms, and from unbaited pitfall traps in a red spruce forest (abundant); also from pitfall and flight intercept traps in yellow birch/balsam fir forest, mixed forest (*Acer*, *Betula*, *Quercus*, *Ulmus*, *Tsuga*, *Pinus* sp.), and a maple forest. *Collecting period.* V–IX. *Collecting method.* Sifting fungi and litter, pitfall traps, flight intercept traps.

***Atheta (Microdota) pennsylvanica* Bernhauer****Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> LB, MB, NB, NF, NS, ON, QC. <b>USA:</b> IN, MA, MN, NY, PA, RI, VA, VT
New provincial records	Canada: Manitoba: Birds Hill [Prov. Park] - bur oak [trail], 2016-IX-16, 50.0083°N, 96.9216°W, 264 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 2 males, 1 female; same locality data (LFC) 2 males, 2 females; Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218 m, mushroom, sifting, B. Godin & D. Horwood (BGC) 1 female.
References	Bernhauer, 1907, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). This species is found in various conifer, mixed and hardwood/deciduous forests such as red spruce dominated forests, black spruce forests, balsam fir-spruce forests, jack pine forests, red pine forests, old-growth hemlock forests, riparian forests, red oak and maple forests, red oak forests, various mixed forests, northern hardwood forests, rich Appalachian hardwood forest, *Populus* stands, and yellow birch forests. Adults are often abundant in various kinds of decaying and fresh mushrooms (gilled, polypore; *Polyporus varius* on side of log, stalked polypores) on forest floor and also occur in forest litter, especially in the spring; often captured in abundance in pitfall traps. *Collecting period.* IV–X. *Collecting method.* Sifting forest litter, pitfall traps.

*Atheta (Pseudota) pseudoklagesi* Klimaszewski and Webster**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> AB, QC, MB, NB, NF, SK, YT. <b>USA:</b> [all published records of <i>A. klagesi</i> need to be re-examined because they may contain mixed series with <i>A. pseudoklagesi</i> ]
New provincial records	Canada: Manitoba: Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218 m, mushroom, sifting, B. Godin & D. Horwood (BGC) 1 male; Georges Creek, 2016-IX-15, 50.6729°N, 99.6212°W, 696 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male; Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male; Bead Lake, 2016-IX-13, 50.7868°N, 99.9928°W, 620 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 male, 1 female; Max Lake, 2016-IX-10, 49.0714°N, 100.1384°W, 686 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 male, 1 female.
References	Webster et al. 2016, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In NB, in mature mixed forest, old-growth and old white spruce and balsam fir forests, a mature red spruce forest, and in a wet alder swamp; adults in coral fungi on a *Populus* log, fleshy polypore fungi at base of a dead standing *Populus*, in decaying gilled mushrooms, in gilled mushrooms, and under bark of red spruce and dead aspen. In NF, from pitfall traps in boreal forests. In QC, in yellow birch/balsam fir forest, using pitfall traps, Luminoc pit/light traps, and intercept traps. In SK, in aspen woodland, in bracket/gilled fungi, under bark of dead aspen, and on fungus on dead lodgepole pine stump. In YT, in mushrooms. *Collecting period.* V–X. *Collecting method.* Sifting mushrooms.

*Atheta (Dimetrota) remulsa* Casey**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> AB, BC, LB, MB, NB, NF, NS, ON, QC, SK, YT. <b>USA:</b> AK, NY
New provincial records	Canada: Manitoba: Birds Hill [Prov. Park] - bur oak [trail], 2016-IX-16, 50.0083°N, 96.9216°W, 264 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male; Georges Creek, 2016-IX-15, 50.6729°N, 99.6212°W, 696 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 2 males, 1 female; Betula Lake, 2016-IX-20, 50.0667°N, 95.5887°W, 306 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 2 females; Adam Lake, 2016-IX-11, 49.0508°N, 100.0666°W, 689 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 male; Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 2 males, 3 females.
References	Casey 1910, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In various forest types, usually in mushrooms; yellow birch/balsam fir forest, red spruce forest, old-growth hemlock forest, mixed forests, deciduous forests, and a red oak forest; most individuals in gilled mushrooms and fleshy fungi in various stages of decay. Also from leaf litter and moss in *Carex* marsh and forest litter. *Collecting period.* V–X. *Collecting method.* Sifting litter and fungi, pitfall traps, pitfall Luminoc traps, flight intercept traps.

***Atheta (Microdota) riparia* Klimaszewski and Godin****Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> MB, SK, YT. <b>USA:</b> not recorded
New provincial records	Canada: Manitoba: Bead Lake, 2016-IX-13, 50.7868°N, 99.9928°W, 620 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 2 males; Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218 m, mushroom, sifting, B. Godin & D. Horwood (LFC) 1 male; Max Lake, 2016-IX-10, 49.0714°N, 100.1384°W, 686 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 2 males.
References	Klimaszewski et al. 2012, 2016

**Collection and habitat data.** *Habitat* (outside of the study area). In various forest types, usually in mushrooms; red spruce forest, old-growth hemlock forest, mixed forests, deciduous forests, and a red oak forest; most individuals were found in gilled mushrooms and fleshy fungi in various stages of decay. Also from leaf litter and moss in *Carex* marsh and forest litter. *Collecting period.* VI–IX. *Collecting method.* Sifting litter and fungi, pitfall traps.

***Atheta (Dimetrota) strigosula* Casey****Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> BC, LB, MB, NB, NF, ON, QC, SK, YT. <b>USA:</b> AK, NY
New provincial record	Canada: Manitoba: Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 female; same locality data (LFC) 1 female.
References	Casey 1910, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). It occurs in various forest types such as red spruce, mature red spruce and eastern white cedar, yellow birch and balsam fir, mixed, red oak, rich Appalachian hardwood, northern hardwood, and other deciduous forests. Adults usually found in decaying mushrooms (often common) on forest floor but also in leaf litter and possibly carrion. *Collecting period.* VI–X (most common in IX in NB). *Collecting method.* Sifting mushrooms and litter, carrion-baited and unbaited pitfall traps, flight intercept traps.

***Atheta (Dimetrota) terranova* Klimaszewski and Langor****Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> LB, MB, NB, NF, ON, QC, SK, YT. <b>USA:</b> not recorded
New provincial records	Canada: Manitoba: Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218 m, mushroom, sifting, B. Godin & D. Horwood (BGC) 3 males; same locality data (LFC) 4 males, 1 female; Bead Lake, 2016-IX-13, 50.7868°N, 99.9928°W, 620 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male; same locality data (LFC) 1 male, 1 female.
References	Klimaszewski et al. 2011, 2018

**Collection and habitat data.** *Habitat* (outside of the study area). It occurs in many coniferous, mixed and hardwood/deciduous forest types in Canada. Adults commonly found in decaying mushrooms (polypore and gilled) and sometimes in fresh mushrooms. In NB, in an oak forest, rich Appalachian hardwood forest, northern hardwood forest, various mixed forests, red spruce forest, mature red spruce

forest with red maple or yellow birch, black spruce forest, and eastern white cedar forests and swamps; specimens in fresh and decaying gilled mushrooms of various species, rotting lobster mushrooms, and a coral mushroom on spruce log. Also captured in unbaited and carrion-baited pitfall traps and flight intercept traps in various coniferous (spruce-feathermoss, spruce-lichen forests), mixed (spruce/aspens, riparian), and deciduous forests in NF and LB including some from decaying mushrooms; also from red maple, pine/willow, balsam fir/white birch forests, elsewhere. *Collecting period.* VI–X (most common in VIII and IX). *Collecting method.* Sifting litter and mushrooms, carrion-baited and unbaited pitfall traps, flight intercept traps, Lindgren funnel traps.

### *Mocyta breviscula* (Mäklin)

#### Distribution

Origin	Nearctic
Distribution	<b>Canada:</b> AB, BC, LB, MB, NB, NF, NS, ON, QC, SK, YT. <b>USA:</b> AK, CA, NV, OR
New provincial records	Canada: Manitoba: Cyprus Creek, 2016-IX-15, 49.5774°N, 101.3645°W, 510 m, Willow litter, sifting, B. Godin & D. Horwood (BGC) 1 male, 2 females; Souris River, 2016-IX-9, 49.5022°N, 99.9915°W, 402 m, river bank, oak litter, sifting, B. Godin & D. Horwood (BGC) 2 males, 1 female; Souris River, 2016-IX-9, 49.5022°N, 99.9915°W, 402 m, river bank, oak litter, sifting, B. Godin & D. Horwood (LFC) 3 males, 3 females.
References	Mäklin 1852, Klimaszewski et al. 2011, 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In NF, frequently captured in pitfall traps in various forest types such as birch, spruce-lichen, spruce-poplar, fir; also in vegetation on coastal dunes, in disturbed fields among grass and weeds, and on shrubby limestone barrens. In QC, from pitfall traps in yellow birch/balsam fir forests, and sifted from litter in an oak savanna/alvar in ON. One individual from sphagnum and litter in an eastern white cedar swamp and another captured in Lindgren funnel trap in an old red pine forest in NB. *Collecting period.* IV–IX. *Collecting method.* Pitfall traps, Lindgren funnel trap, sifting forest litter.

### *Mocyta discreta* (Casey)

#### Distribution

Origin	Nearctic
Distribution	<b>Canada:</b> MB, ON, QC, SK. <b>USA:</b> IA, MN
New provincial records	Canada: Manitoba: Souris River, 2016-IX-9, 49.5022°N, 99.9915°W, 402 m, river bank, oak litter, sifting, B. Godin & D. Horwood (BGC) 1 female; Cyprus Creek, 2016-IX-15, 49.5774°N, 101.3645°W, 510 m, willow litter, sifting, B. Godin & D. Horwood (BGC) 1 male; Birds Hill [Prov. Park] - bur oak [trail], 2016-IX-16, 50.0083°N, 96.9216°W, 264 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 5 males, 6 females; same locality data (LFC) 5 males, 4 females; Moose Lake, 2016-IX-19, 49.2018°N, 95.3423°W, 353 m, mushroom, sifting, B. Godin & D. Horwood (LFC) 2 males, 2 females.
References	Casey 1893, Klimaszewski et al. 2015b, 2018

**Collection and habitat data.** *Habitat* (outside of the study area). Associated with hardwood/deciduous forests; adults in forest litter, deciduous leaf mold, in maple/oak forest litter and other unspecified deciduous forest litter. *Collecting period.* IV–X. *Collecting method.* Pitfall traps, sifting forest litter.

*Mocyta fungi* (Gravenhorst) †**Distribution**

Origin	Palaearctic, adventive in North America
Distribution	<b>Canada:</b> AB, BC, LB, MB, NB, NF, NS, NU, ON, PE, QC, SK, YT. <b>USA:</b> AK, CA, ME, MA, MN, NH, NY, OR, RI, WA
New provincial records	Canada: Manitoba: Birds Hill [Prov. Park] - bur oak [trail], 2016-IX-16, 50.0083°N, 96.9216°W, 264 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 female; Cyprus Creek, 2016-IX-15, 49.5774°N, 101.3645°W, 510 m, willow litter, sifting, B. Godin & D. Horwood (BGC) 3 females; Souris River, 2016-IX-9, 49.5022°N, 99.9915°W, 402 m, river bank, oak litter, sifting, B. Godin & D. Horwood (LFC) 5 females; Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218 m, mushroom, sifting, B. Godin & D. Horwood (LFC) 1 female.
References	Gravenhorst 1806, Klimaszewski et al. 2015b, 2018

**Collection and habitat data.** *Habitat* (outside of the study area). Found in various forest types and wetlands, usually in litter. In NB, in silver maple swamps in leaf litter, in leaf litter in eastern white cedar swamps and forests, under alders in leaf litter and moss in a marsh, treading vegetation in boggy marsh and a cattail marsh, river margin on moist clay soil among tall grasses, a sea beach in decaying sea wrack, in pitfall traps in a red spruce forest. In NF, from pitfall traps in cut and burned balsam fir, birch, spruce-poplar and riparian forests, in agricultural fields and among vegetation on coastal sand dunes. Elsewhere, in mixed forests and yellow birch forests. *Collecting period.* V–IX. *Collecting method.* Pitfall traps, sifting forest litter, treading marsh vegetation.

*Mocyta luteola* (Erichson)**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> MB, NB, NF, ON, QC. <b>USA:</b> DC, IA, IN, MA, MI, MN, MO, MS, NC, NY, PA, RI, WI
New provincial records	Canada: Manitoba: Cyprus Creek, 2016-IX-15, 49.5774°N, 101.3645°W, 510 m, willow litter, sifting, B. Godin & D. Horwood (BGC) 1 female; same locality data (LFC) 1 female; Bead Lake, 2016-IX-13, 50.7868°N, 99.9928°W, 620 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 male.
References	Erichson 1839, Klimaszewski et al. 2015b, 2018

**Collection and habitat data.** *Habitat* (outside of the study area). Most specimens from QC were captured in pitfall traps in yellow birch and balsam fir dominated forests. In NB, under decaying seaweed on sea beach, under drift material on a riverbank, in grass, moss, and leaf litter in alder swamps, eastern white cedar swamps, and *Carex* marshes; in sphagnum moss and leaf litter in a young regenerating mixed forest, and in decaying (moldy) corncobs and cornhusks. Elsewhere, adults in litter around raspberry bushes near a bog, in a *Typha* marsh in a nest of *Microtus pennsylvanicus* (ON), on a lake shore and in a *Microtus pennsylvanicus* nest (MN), and sifting vegetable debris in a dump (IN). *Collecting period.* III–X. *Collecting method.* Sifting forest and marsh litter, pitfall traps.

*Philhygra jarmilae* Klimaszewski and Langor**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> MB, NB, NF, ON, SK, YT. <b>USA:</b> not recorded
New provincial records	Canada: Manitoba: Adam Lake, 2016-IX-11, 49.0508°N, 100.0666°W, 689 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 male.
References	Klimaszewski et al. 2011, 2018

**Collection and habitat data.** *Habitat* (outside of the study area). It occurs in various riparian and wetland habitats; adults sifted from moist leaves on vernal pond margins in mixed forests, hardwood forests, and a silver maple swamp, sifted from sedges and leaves on pond margin, treaded from *Carex* and grasses on lake margin, treaded from vegetation in seasonally flooded marsh, sifted from moss and leaves in seepage area in hardwood forest and debris on muddy soil near brook, from drift material on river margin, and sifted from leaf litter and moss under alders near brook. Also hand collected from cobblestones on partially shaded cobblestone bar along medium-sized stream and from moss near splash zone of waterfalls by splashing. In ON, one specimen from pitfall in hedgerow and flight intercept traps in a mixed forest in NF. *Collecting period.* V–VII, IX–X. *Collecting method.* Sifting mushrooms (new data), sifting litter, treading vegetation, splashing moss, flight intercept traps, pitfall traps.

*Seeveriella globicollis* (Bernhauer)**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> AB, BC, MB, NB, NF, NS, ON, QC, SK. <b>USA:</b> AZ, CO, ID, MI, MN, MT, NH, NM, SD, WI. <b>MEXICO. GUATEMALA. HONDURAS</b>
New provincial records	Canada: Manitoba: Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218m, mushroom, sifting, B. Godin & D. Horwood (BGC) 1 female; Bead Lake, 2016-IX-13, 50.7868°N, 99.9928°W, 620 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 2 males, 2 females; Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 2 males, 2 females; Max Lake, 2016-IX-10, 49.0714°N, 100.1384°W, 686m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 male.
References	Bernhauer 1907, Gusarov 2003, Ashe 1986 [as <i>S. bispinosa</i> ], Klimaszewski et al. 2011, 2018

**Collection and habitat data.** *Habitat* (outside of the study area). It was recorded from old-growth northern hardwood forest, old-growth white spruce and balsam fir forest, fir and riparian forests, mountain forests, oak forest, yellow birch dominated forest, balsam fir forest, and meadow; specimens from moose dung, soil and moss under logs, leaf litter near a body of water, river debris, humus under maple, *Populus* litter at the edge of spruce-cedar forest, pine stump buttress, litter near the sea. *Collecting period.* III–X. *Collecting method.* Sifting mushrooms (new data), sifting forest litter, pitfall traps, Lindgren funnel traps.



## Tribe Homalotini Heer

*Gyrophaena caseyi* Seevers

## Distribution

Origin	Nearctic
Distribution	<b>Canada:</b> MB, NB, ON, QC. <b>USA:</b> MI, NC, NY, PA
New provincial record	Canada: Manitoba: Bead Lake, 2016-IX-13, 50.7868°N, 99.9928°W, 620 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 4 males; same locality data (LFC) 3 males.
References	Seevers 1951, Webster et al 2012, Brunke et al. 2012, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). Found in hardwood forest, a mixed forest, black spruce, balsam fir, and eastern white cedar forests. Adults in fresh, gilled mushrooms and *Pleurotus* sp. on the side of a log. *Collecting period.* VIII-IX. *Collecting method.* Sifting mushrooms.

*Gyrophaena flavicornis* Melsheimer

## Distribution

Origin	Nearctic
Distribution	<b>Canada:</b> MB, NB, NS, ON, QC. <b>USA:</b> CT, DC, IL, IN, KY, MA, MD, ME, MI, MO, NC, NH, NJ, NY, PA, RI, TN, VA, VT, WI, WV
New provincial record	Canada: Manitoba: Moose Lake, 2016-IX-19, 49.2018°N, 95.3423°W, 353 m, mushroom, sifting, B. Godin & D. Horwood (BGC) 1 male.
References	Melsheimer 1844, Seevers 1951, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In mixed forest, hardwood forest, rich Appalachian hardwood forest, red oak forest, red oak and red maple forest, 8.5-year-old regenerating mixed forest, mature red spruce and red maple forest. Adults on/in gilled mushrooms on forest floor, in gilled mushroom on stump, on *Pleurotus* species growing on a log, on polypore (bracket) fungus on side of log, in *Porodaedalea piceina* (Peck) Niemalä on dead standing beech tree, on *Russula delica*, in decaying mushrooms, and on white fungus on white birch. *Collecting period.* VI–IX. *Collecting method.* Sifting mushrooms.

*Gyrophaena gaudens* Casey

## Distribution

Origin	Nearctic
Distribution	<b>Canada:</b> AB, MB, ON, PE. <b>USA:</b> IL, IN, MA, MI, PA, WI
New provincial records	Canada: Manitoba: Adam Lake, 2016-IX-11, 49.0508°N, 100.0666°W, 689 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male; Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218 m, mushroom, sifting, B. Godin & D. Horwood (BGC) 1 male; Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 3 males.
References	Casey 1906, Seevers 1951, Webster et al. 2012, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat.* Mushrooms. *Collecting period.* V-IX. *Collecting method.* Sifting mushrooms.

*Gyrophaena gilvicollis* Casey**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> MB, NB, ON. <b>USA:</b> DC, IL, IN, KS, MI, NC, NY, PA, VA, WV
New provincial record	Canada: Manitoba: Moose Lake, 2016-IX-19, 49.2018°N, 95.3423°W, 353 m, mushroom, sifting, B. Godin & D. Horwood (BGC) 1 male.
References	Casey 1906, Seevers 1951, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). Mixed forest, hardwood forest, on ridge with red oak surrounded by a silver maple forest, red oak forest, oak and red maple forest, and spruce forest. Adults on/in fresh gilled mushrooms on forest floor, a few in decaying fleshy mushrooms. *Collecting period.* VIII–IX. *Collecting method.* Sifting mushrooms.

*Gyrophaena keeni* Casey**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> AB, BC, LB, MB, NB, NF, NS, ON, QC, YT. <b>USA:</b> FL, MA, ME, MT, NH, NY, OR, TN, WA, WY
New provincial record	Canada: Manitoba: Bead Lake, 2016-IX-13, 50.7868°N, 99.9928°W, 620 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 male; same locality data (BGC) 1 male.
References	Casey 1911, Seevers 1951, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). Mature mixed forest, 8.5-year-old regenerating mixed forest, red oak forest, eastern white cedar (*Thuja occidentalis* L.) swamps, red spruce (*Picea rubens* Sarg.) and red maple (*Acer rubrum* L.) forest (80–120 years old), black spruce *Populus* forests, recently burned coniferous forest, and an eastern hemlock forest [*Tsuga canadensis* (L.) 120+ years old. Adults in in gilled mushrooms, in gilled fungi on rotten log, in gilled mushrooms on stump, in moss near brook, on polypore fungi on dead standing *Populus* sp. *Collecting period.* VI–IX. *Collecting method.* Sifting mushrooms, sifting moss, flight intercept trap, and pitfall trap.

*Gyrophaena laetula* Casey**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> MB, NB, NF. <b>USA:</b> DC, IL, IN, KY, MA, NY, PA, TN, VA, WI
New provincial record	Canada: Manitoba: Birds Hill [Prov. Park] bur oak [trail], 2016-IX-16, 50.0083°N, 96.9216°W, 264 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male; Max Lake, 2016-IX-10, 49.0714°N, 100.1384°W, 686 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 male.
References	Casey 1906, Seevers 1951, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). Mixed forests (mature to old), regenerating mixed forest, red oak forest, red spruce and yellow birch forest, mature red spruce and red maple forest, old jack pine forest, and forested black spruce bog with red maple. Adults on/in fresh gilled mushrooms, on *Pleurotus* sp. on dead standing *Populus tremuloides* Michx, and in fresh *Boletus* mushrooms. *Collecting period.* VI–IX. *Collecting method.* Sifting mushrooms.

*Gyrophaena modesta* Casey**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> AB, MB, NB, NF, NS, ON. <b>USA:</b> IL, IN, MI, MN, NH, NY, WI
New provincial records	Canada: Manitoba: Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218 m, mushroom, sifting, B. Godin & D. Horwood (LFC) 2 males; same locality data (BGC) 2 males; Adam Lake, 2016-IX-11, 49.0508°N, 100.0666°W, 689 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 male; Bead Lake, 2016-IX-13, 50.7868°N, 99.9928°W, 620 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male; Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 4 males; same locality data (BGC) 3 males; Birds Hill [Prov. Park] - bur oak [trail], 2016-IX-16, 50.0083°N, 96.9216°W, 264 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 female; same locality data (LFC) 1 female; West Lake, 2016-IX-20, 49.7468°N, 95.2098°W, 341 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 female; Max Lake, 2016-IX-10, 49.0714°N, 100.1384°W, 686 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male.
References	Casey 1906, Seevers 1951, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). Mixed forests, hardwood forests, old-growth northern hardwood forest, red spruce forest, red spruce and yellow birch forest, mature red spruce and red maple forest, mature red spruce and eastern white cedar forest, red oak and red maple forest. Adults on/in fresh gilled mushrooms on forest floor, in decaying gilled mushroom (one occurrence), and on *Pleurotus* sp. on log. This species has also been collected in association with grasses. *Collecting period.* VIII–X. *Collecting method.* Sifting mushrooms, pitfall traps.

*Gyrophaena nanoides* Seevers**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> MB, NB, NF, ON, QC. <b>USA:</b> DC, IA, IN, KS, MA, NC, TN, VA, WI
New provincial records	Canada: Manitoba: Bead Lake, 2016-IX-13, 50.7868°N, 99.9928°W, 620 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male; Birds Hill [Prov. Park] - bur oak [trail], 2016-IX-16, 50.0083°N, 96.9216°W, 264 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 male.
References	Seevers 1951, Klimaszewski et al. 2011, Webster et al. 2012, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In various deciduous and coniferous forest types, including hardwood forests with sugar maple, American beech, and white ash (*Fraxinus americana* L.), an old red oak forest, a mixed forest with eastern hemlock, mixed forests, red spruce forests, a black spruce forest, and a black spruce, balsam fir and eastern white cedar forest. Most adults in NB were collected from fresh (not decaying) gilled mushrooms, including a *Russula* sp. Some specimens were collected from a stalked polypore fungus on forest floor, a *Boletus* sp., and a *Pleurotus* sp. on a log. *Collecting period.* VII–X. *Collecting method.* Sifting mushrooms.

*Gyrophæna vitrina* Casey**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> MB, NB, ON, PE, QC. <b>USA:</b> AL, IL, IN, KY, ME, MI, NC, NH, NY, PA, TN, WV, WI
New provincial record	Canada: Manitoba: Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218 m, mushroom, sifting, B. Godin & D. Horwood (BGC) 1 male; same locality data (LFC) 1 male.
References	Casey 1906, Seevers 1951, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In mixed forest, hardwood forest, red oak forest, rich Appalachian hardwood forest, flood plain forest, eastern white cedar swamps, black spruce forest with *Populus* sp., and mature red spruce and red maple forest. Adults on/in fresh, gilled mushrooms on forest floor, on small gilled mushrooms on side of log, on bracket fungi, and on *Trametes hirsuta* on a poplar log. *Collecting period.* VI–IX. *Collecting method.* Sifting mushrooms.

*Silusa californica* (Bernhauer)**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> MB, AB, BC, LB, NB, NF, NS, ON, PE, QC, SK, YT. <b>USA:</b> AK, CA, MN
New provincial record	Canada: Manitoba: Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 female.
References	Bernhauer 1905, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In many hardwood and conifer forest types; unspecified hardwood forest types, rich Appalachian hardwood forest, red oak forest, old mixed forest with red oak, mixed forests, northern hardwood forest, coastal red spruce and birch forest, mature red spruce forest with eastern white cedar, old red spruce forest, spruce forest, white spruce forest, yellow birch/balsam fir forest, trembling aspen forest with a small amount of eastern balsam poplar, white birch forest, white spruce, and willow forests. In NB, adults common in decaying mushrooms in late summer; in fleshy fungi, in decaying gilled mushrooms, baited with pile of decaying mushrooms, fleshy fungi in various stages of decay, in gilled mushrooms, in rotten fungi. Elsewhere, in wet moss on forest floor, marten dung on moss, and in mushrooms. *Collecting period.* VII–X. *Collecting method.* Sifting mushrooms, baiting with mushrooms, pitfall traps, Luminoc pit-light traps, malaise traps, flight intercept traps, carrion baited traps, and sifting forest litter.

**Tribe Myllaenini Ganglbauer***Myllaena arcana* Casey**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> AB, LB, MB, NB, NF, NS, ON, QC, SK. <b>USA:</b> AL, FL, IA, IL, MA, ME, NH, NJ, TN, WV. <b>MEXICO</b>
New provincial records	Canada: Manitoba: Adam Lake, 2016-IX-11, 49.0508°N, 100.0666°W, 689 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male, 1 female; same locality data (LFC) 1 female; Max Lake, 2016-IX-10, 49.0714°N, 100.1384°W, 686 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 female.
References	Casey 1911, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). Lives in debris in various riparian and wetland habitats; in leaf litter in areas with *Carex* on brook margin, river margin among cobblestones near outflow of brook, margin of large brook under alders among gravel on gravel bar, in leaf litter near seepage and brook in hardwood forest, in moist leaves on vernal pond margin in mixed forest, lake margins in wet leaf litter, inland margin of salt marsh in leaf litter, in *Carex* hummocks in marsh near small stream, in sphagnum hummocks on margin of tamarack bog, one from sifted from dead grass on pond margin, one from beaver lodge, some collected near streams, and in beaver lodge debris. *Collecting period.* II–XI (mainly V–VIII). *Collecting method.* sifting leaf litter, mushrooms (new data), turning gravel and cobblestones and aspirating specimens.

### Tribe Oxypodini C.G. Thomson

#### *Oxypoda convergens* Casey

##### Distribution

Origin	Nearctic
Distribution	<b>Canada:</b> AB, LB, MB, NB, NF, NS, ON, QC. <b>USA:</b> IA, MO, NY
New provincial record	Canada: Manitoba: Moose Lake, 2016-IX-19, 49.2018°N, 95.3423°W, 353 m, mushroom, sifting, B. Godin & D. Horwood (BGC) 1 female.
References	Casey 1893, Klimaszewski et al. 2011, 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In various forest types including white spruce, mature black spruce, red spruce, mature 50-year-old balsam fir, oak, maple, yellow birch/balsam fir white pine forests, red oak forests, mixed forests, and old eastern white cedar forest; often very common in decaying gilled mushrooms in the above forest habitats, especially those dominated hardwoods. Also in riparian habitats, and a meadow with *Salix* shrubs. Several collected from decaying corn cobs and corn husks. *Collecting period.* V–XI (most common in August and September). *Collecting method.* Unbaited and carrion-baited pitfall traps, processing forest litter through Berlese funnels, Luminoc pitfall-light traps, Lindgren traps, intercept traps, and treading leaf litter at the edge of a pond, sifting decaying mushrooms.

#### *Oxypoda gnara* Casey

##### Distribution

Origin	Nearctic
Distribution	<b>Canada:</b> MB, NB, ON, QC. <b>USA:</b> RI
New provincial record	Canada: Manitoba: Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 male.
References	Casey 1911, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). Mixed forest among moist leaves along the margin of a large (35 m × 15 m) vernal pond; also found along vernal pools in Ontario. *Collecting period.* V–X. *Collecting method.* Sifting leaf litter.

*Oxypoda hiemalis* Casey**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> AB, LB, MB, NB, NF, NS, NT, ON, QC, YT. <b>USA:</b> AK, NH
New provincial records	Canada: Manitoba: Moose Lake, 2016-IX-19, 49.2018°N, 95.3423°W, 353 m, mushroom, sifting, B. Godin & D. Horwood (BGC) 1 male, 4 females; same locality data (LFC) 1 male, 3 females; Souris River, 2016-IX-9, 49.5022°N, 99.9915°W, 402 m, river bank, oak litter, sifting, B. Godin & D. Horwood (BGC) 1 male, 1 female; same locality data (LFC) 1 male, 1 female; Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male; Adam Lake, 2016-IX-11, 49.0508°N, 100.0666°W, 689 m, mushrooms, sifting, B. Godin & D. Horwood (LFC) 1 female.
References	Casey 1911, Klimaszewski et al. 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In hardwood (silver maple, sugar maple, red oak, birch, alder) and mixed forests with some in fir, pine forests, mature spruce and eastern white cedar forest, and a tamarack bog margin. Adults in leaf litter, moss, litter and *Sphagnum* near small body of water, in moist leaves on vernal pond margins, in litter at base of tree in *Carex* marsh, in lining of deserted beaver lodge, in moist grass litter on abandoned beaver pond margin, *Microtus* nests, marmot (*Marmota* sp.) burrows, *Sphagnum* moss, litter on barren, litter around raspberry, in frass in tree holes of birch and maple, and in leaf litter on river margin. One individual in lichen on tree trunk. *Collecting period.* III-X. *Collecting method.* Sifting various kinds of litter, pitfall traps, Luminoc® pitfall-light traps, Malaise traps.

*Oxypoda pseudolacustris* Klimaszewski**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> AB, MB, NB, NF, NS, ON, QC, SK. <b>USA:</b> NH
New provincial records	Canada: Manitoba: Katherine Lake, 2016-IX-14, 50.6603°N, 99.8947°W, 652 m, mushrooms, sifting, B. Godin & D. Horwood (BGC) 1 male, 2 females; Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218 m, mushroom, sifting, B. Godin & D. Horwood (LFC) 1 male, 1 female.
References	Klimaszewski et al. 2006, 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In many kinds of forests and open habitats such as mixed forests, mature hardwood forests, birch forests, red maple forests and swamps, eastern white cedar swamps, fir forests (old-growth and 50-year-old plantations), forested black spruce bogs, agricultural fields, meadow with *Salix* shrubs, and lake and river margins. Adults in *Sphagnum* moss, moss and *Sphagnum* along creek in forest, moss on tree trunks, moss and litter near vernal ponds in forests, *Sphagnum* in mist zone of waterfall, leaf litter, birch litter, litter on barren, litter in alpine and subalpine habitats, drift material along lake and river margins, and from lining of deserted beaver lodge. *Collecting period.* IV–XII, IX. *Collecting method.* Sifting mushrooms (new data), sifting moss, various kinds of forest litter, and drift material, pitfall traps.

*Oxypoda sylvia* Casey**Distribution**

Origin	Nearctic
Distribution	<b>Canada:</b> AB, BC, LB, MB, NB, NF, NS, ON, QC, SK, YT. <b>USA:</b> AK, ME, NH
New provincial record	Canada: Manitoba: Hecla, 2016-IX-17, 51.7849°N, 96.6152°W, 218 m, mushroom, sifting, B. Godin & D. Horwood (LFC) 1 female.
References	Casey 1906, Klimaszewski et al. 2006 [as <i>O. grandipennis</i> ], 2018

**Collection and habitat data.** *Habitat* (outside of the study area). In many forest types, including hardwood, red oak, mixed, mature red spruce, red spruce and birch, old red pine, spruce and balsam fir forests, and old-growth eastern white cedar forests. Adults common in decaying and rotten mushrooms in many of the above forests types. Some, in group of *Pholiota* mushrooms of trunk of dead *Populus*; another under coyote dung on forest road. *Collecting period.* V–X (most common in September). *Collecting method.* Sifting mushrooms, forest litter, dung, and moss; some of above material also processed through Berlese funnels, Luminoc® pitfall-light traps, unbaited pitfall traps.

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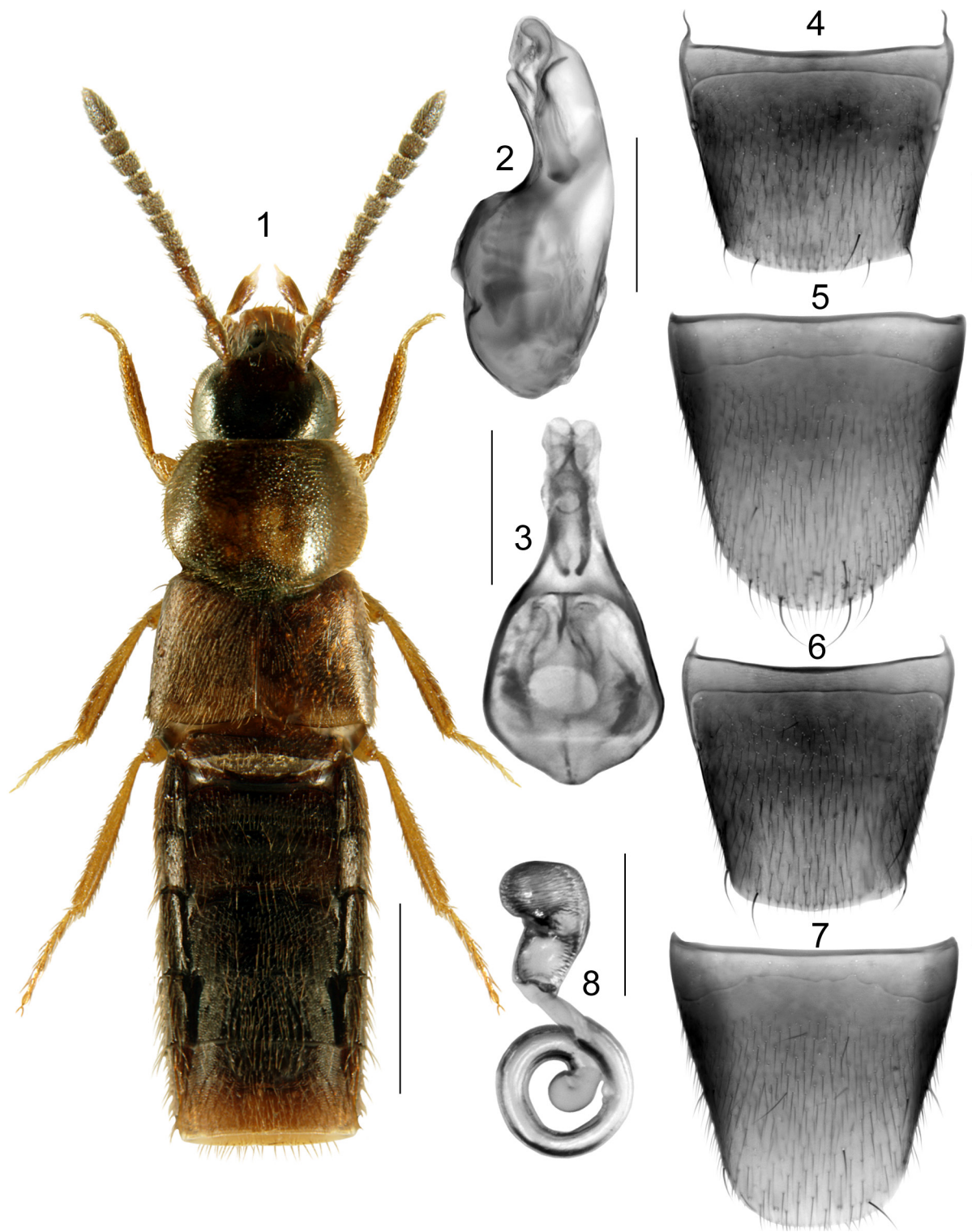


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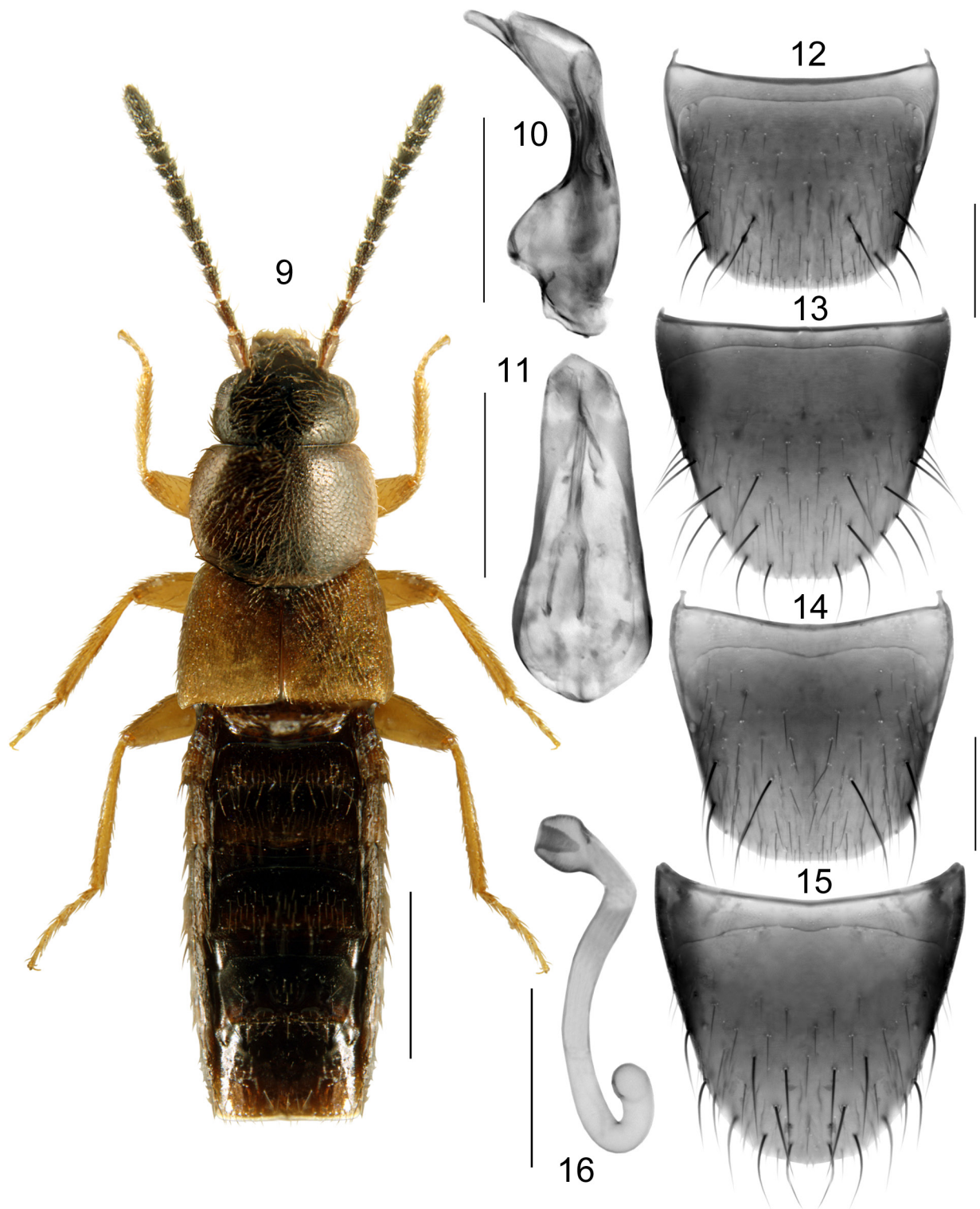
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**Figures 1–8.** *Acrotona manitobensis* Klimaszewski and Godin, sp. nov., habitus and male structures of holotype. 1) Habitus in dorsal view. 2) Median lobe of aedeagus in lateral view. 3) Median lobe of aedeagus in dorsal view. 4) Male tergite VIII. 5) Male sternite VIII. 6) Female tergite VIII. 7) Female sternite VIII. 8) Spermatheca. Scale bar for habitus = 1 mm, remaining scale bars = 0.2 mm.



**Figures 9–16.** *Atheta manitobae* Klimaszewski and Godin, sp. nov., habitus and female structures of holotype. **9)** Habitus in dorsal view. **10)** Median lobe of aedeagus in lateral view. **11)** Median lobe of aedeagus in dorsal view. **12)** Male tergite VIII. **13)** Male sternite VIII. **14)** Female tergite VIII. **15)** Female sternite VIII. **16)** Spermatheca. Scale bar for habitus = 1 mm, remaining scale bars = 0.2 mm.

