

Additional File 5. Summary of collection habitats for specimens with species determinations in the Churchill Coleoptera barcode library.

Species	Collected Habitats in Churchill Region*
Buprestidae	
<i>Chrysobothris trinervia</i>	Rocky seashore (1), spruce burn (1)
<i>Melanophila fulvoguttata</i>	Town (1)
<i>Melanophila acuminata</i>	Spruce forest (1)
Byrrhidae	
<i>Byrrhus concolor</i>	Rocky seashore (2), tundra (2)
<i>Byrrhus fasciatus</i>	Tundra lakeshore (1), town (1)
<i>Simplocaria metallica</i>	Sandy seashore (2), forested lakeshore (2)
Carabidae	
<i>Agonum affine</i>	Tundra lakeshore (1)
<i>Agonum nigriceps</i>	Spruce burn pond (1)
<i>Agonum placidum</i>	Tundra lakeshore (1)
<i>Amara alpina</i>	Tundra (7), riparian (4), rocky seashore (3), spruce burn (2), other (3)
<i>Amara glacialis</i>	Sandy seashore (1)
<i>Amara hyperborea</i>	Sandy seashore (2), tundra lakeshore (1)
<i>Amara pseudobrunnea</i>	Tundra (1)
<i>Amara quenseli</i>	Sandy seashore (11), tundra (7), town (4), riparian (3), forested lakeshore (3), rocky seashore (1)
<i>Amara sinuosa</i>	Tundra (5), forested lakeshore (3)
<i>Amara torrida</i>	Town (2), sandy seashore (1), town (1)
<i>Bembidion carinula</i>	Forested lakeshore (1), Churchill R. riparian (1)
<i>Bembidion hastii</i>	Churchill R. riparian (2), tundra (2), sandy seashore (1)
<i>Bembidion morulum</i>	Riparian (1), rocky seashore (1)
<i>Bembidion nigripes</i>	Churchill R. riparian (3), town (1)
<i>Bembidion sordidum</i>	Churchill R. riparian (4), tundra (1)
<i>Bembidion transversale</i>	Forested lakeshore (1)
<i>Calathus ingratus</i>	Churchill R. riparian (4), tundra (4), forested lakeshore (2), open wetland (1)

<i>Carabus chamissonis</i>	Tundra (6), krummholz (3), ditch (3), sandy seashore (1), open wetland (1)
<i>Carabus maender</i>	Churchill R. riparian (5), rocky seashore (3), ditch (2), open wetland (1)
<i>Carabus taedatus agassii</i>	Sandy seashore (233), forested lakeshore (61), krummholz (61), tundra (48), other (47)
<i>Cicindela longilabris</i>	Open sand (3)
<i>Cymindis cribricollis</i>	Forested lakeshore (2)
<i>Cymindis unicolor</i>	Riparian (6), krummholz (5), tundra (3), bluff pond (1)
<i>Diacheila arctica</i>	Riparian (2)
<i>Dicheirotichus cognatus</i>	Spruce forest (1)
<i>Dicheirotichus mannerheimii</i>	Town (1)
<i>Dyschiriodes integer</i>	Tundra (1)
<i>Dyschirius hiemalis</i>	Rocky seashore (3), krummholz (2)
<i>Elaphrus americanus americanus</i>	Churchill R. riparian (21), open wetland (2)
<i>Elaphrus clairvillei</i>	Churchill R. riparian (1), tundra (1)
<i>Elaphrus lapponicus</i>	Open wetland (3), rocky seashore (2), riparian (1), tundra (1), open wetland (1)
<i>Harpalus nigritarsis</i>	Tundra (3), tundra lakeshore (1)
<i>Loricera pilicornis</i>	Churchill R. riparian (1), tundra (1)
<i>Notiophilus aquaticus</i>	Forested lakeshore (7), riparian (1), tundra (1)
<i>Notiophilus borealis</i>	Tundra (4), sandy seashore (1), krummholz (1)
<i>Patrobis foveocollis</i>	Churchill R. riparian (3)
<i>Patrobis stygicus</i>	Churchill R. riparian (1), rocky seashore (1), tundra (1)
<i>Pelophila borealis</i>	Churchill R. riparian (2)
<i>Platynus mannerheimii</i>	Open wetland (2), tundra (1)
<i>Pterostichus adstrictus</i>	Tundra (2)
<i>Pterostichus brevicornis brevicornis</i>	Tundra (6), town (4), forested lakeshore (2), tundra lakeshore (2), other (2)
<i>Pterostichus caribou</i>	Tundra (4), riparian (3), sandy seashore (3)
<i>Pterostichus pinguedineus</i>	Rocky seashore (3), sandy seashore (1), tundra (1)
<i>Pterostichus punctatissimus</i>	Tundra (10), open wetland (5), rocky seashore (3), tundra lakeshore (2), other (8)
<i>Stereocerus haematopus</i>	Krummholz (16), riparian (6), rocky seashore (3), forested lakeshore (3), other (3)
<i>Trechus apicalis</i>	Churchill R. riparian (2)

Cerambycidae

<i>Acmaeops proteus</i>	Spruce forest (1)
<i>Arhopalus foveicollis</i>	Forested lakeshore (2), Churchill R. riparian (1)
<i>Gnathacmaeops pratensis</i>	Open wetland (2), krummholz (1), spruce burn (1)
<i>Monochamus scutellatus</i>	Open wetland (1), riparian (1), tundra (1)
<i>Xestoleptura tibialis</i>	Spruce forest (1)

Chrysomelidae

<i>Altica tombacina</i>	Rocky seashore (48), spruce burn (46), tundra lakeshore (21), forested lakeshore (17), other (2)
<i>Bromius obscurus</i>	Spruce burn (1)
<i>Galerucella nymphaeae</i>	Tundra (2)
<i>Gonioctena linnaeana</i>	Willow thicket (17), bare ground (11), spruce burn (7), riparian (6), other (7)

Coccinellidae

<i>Adalia bipunctata</i>	Spruce burn (11), rocky seashore (2), tundra (2), willow thicket (1)
<i>Anisosticta bitriangularis</i>	Rocky seashore (3), spruce burn (2), other (4)
<i>Calvia quatuordecimguttata</i>	Churchill R. riparian (1)
<i>Coccinella septempunctata</i>	Tundra (6), other (4)
<i>Hippodamia convergens</i>	Tundra (2), spruce burn (1)
<i>Mulsantina hudsonica</i>	Willow thicket (1)

Cucujidae

<i>Pediacus fuscus</i>	Spruce burn (1)
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Curculionidae

<i>Acalyptus carpini</i>	Spruce burn (5), open wetland (4), tundra lakeshore (4), tundra (3), other (8)
<i>Anthonomus signatus</i>	Forested lakeshore (1)
<i>Auletes epilobii</i>	Spruce burn (1)
<i>Dendroctonus rufipennis</i>	Spruce burn (2)
<i>Elleschus ephippiatus</i>	Tundra (4)
<i>Euhrychiopsis lecontei</i>	Churchill R. riparian (1), forested lakeshore (1)

<i>Hypera seriata</i>	Rocky seashore (1)
<i>Lepyrus labradorensis</i>	Town (1)
<i>Lepyrus stefanssoni</i>	Town (2)
<i>Polygraphus rufipennis</i>	Spruce forest (2)

Dytiscidae

<i>Acilius canaliculatus</i>	Tundra pond (3), bluff pond (1)
<i>Agabus adpressus</i>	Spruce burn pond (1)
<i>Agabus ajax</i>	Tundra pond (24), bluff pond (10), Churchill R. (6), river/stream (6), other (5)
<i>Agabus antennatus</i>	Tundra pond (15), Churchill R. (7), spruce burn pond (6), bluff pond (4), other (3)
<i>Agabus arcticus</i>	Churchill R. (21), tundra pond (11), river/stream (7), other (13)
<i>Agabus audeni</i>	Tundra pond (5), Churchill R. (2), other (2)
<i>Agabus bicolor</i>	Bluff pond (8), other (2)
<i>Agabus bifarius</i>	Bluff pond (1), spruce burn pond (1), tundra pond (1)
<i>Agabus clavicornis</i>	Bluff pond (5), Churchill R. (2), spruce burn pond (2)
<i>Agabus colymbus</i>	Bluff pond (23), tundra pond (5), Churchill R. (4)
<i>Agabus infuscatus</i>	Bluff pond (83), Churchill R. (4), tundra pond (3), other (3)
<i>Agabus seriatus</i>	Spruce burn pond (1)
<i>Agabus phaeopterus</i>	Churchill R. (9), river/stream (5), tundra pond (3), other (5)
<i>Agabus thomsoni</i>	River/stream (6), ditch (1), tundra pond (1)
<i>Carrhydrus crassipes</i>	Tundra pond (3), bluff pond (2), other (2)
<i>Colymbetes dahuricus</i>	Ditch (3), tundra pond (2)
<i>Colymbetes dolabratus</i>	Bluff pond (82), tundra pond (45), river/stream (14), lake (8), spruce forest pond (8), spruce burn pond (7), other (16)
<i>Dytiscus alaskanus</i>	Tundra pond (6), river/stream (2), bluff pond (1)
<i>Dytiscus dauricus</i>	Bluff pond (19), tundra pond (11), spruce burn pond (2), river/stream (2), other (2)
<i>Graphoderus perplexus</i>	Tundra pond (9), bluff pond (3), spruce forest pond (2), other (2)
<i>Hydrocolus rubyae</i>	Tundra pond (3)
<i>Hydroporus columbianus</i>	Spruce forest pond (1), tundra pond (1)
<i>Hydroporus dentellus</i>	Tundra pond (4), bluff pond (2), ditch (2), spruce burn pond (1)
<i>Hydroporus erythrocephalus</i>	Tundra pond (5), river/stream (3), Churchill R. (2), spruce burn pond (1)
<i>Hydroporus fuscipennis</i>	Tundra pond (3), bluff pond (1), town (1)

<i>Hydroporus larsoni</i>	Tundra pond (2)
<i>Hydroporus morio</i>	Bluff pond (97), tundra pond (4)
<i>Hydroporus notabilis</i>	Bluff pond (3), tundra pond (1)
<i>Hydroporus rufinasus</i>	Tundra pond (2), bluff pond (1)
<i>Hydroporus sinuatifipes</i>	Bluff pond (15), tundra pond (7), river/stream (2)
<i>Hydroporus striola</i>	Tundra pond (3), bluff pond (2), Churchill R. (1)
<i>Hydroporus tenebrosus</i>	Bluff pond (6), tundra lakeshore (2), river/stream (2), other (2)
<i>Hygrotus impressopunctatus</i>	Bluff pond (2), tundra pond (1)
<i>Hygrotus marklini</i>	Bluff pond (7), tundra pond (5), spruce forest pond (3), river/stream (1)
<i>Hygrotus novemlineatus</i>	Bluff pond (35), tundra pond (2)
<i>Hygrotus picatus</i>	Tundra pond (2), spruce forest pond (1), tundra pond (1), open wetland (1)
<i>Hygrotus sayi</i>	Spruce burn pond (3), tundra pond (2), Churchill R. (1)
<i>Hygrotus tumidiventrif</i>	Tundra pond (4)
<i>Hygrotus unguicularis</i>	Tundra pond (27), Churchill R. (10), Churchill R. riparian (9), bluff pond (7), other (4)
<i>Ilybius discedens</i>	Tundra pond (3), ditch (2), bluff pond (1)
<i>Ilybius erichsoni</i>	Spruce forest pond (4), Churchill R. (4), bluff pond (3), tundra pond (2), ditch (1)
<i>Ilybius subaeneus</i>	Tundra pond (18), spruce forest pond (6), river/stream (6), Churchill R. riparian (5), other (9)
<i>Laccophilus biguttatus</i>	Tundra pond (17), spruce forest pond (4), bluff pond (4)
<i>Nebrioporus macronychus</i>	Churchill R. (15), river/stream (5), Churchill R. riparian (2), tundra pond (2)
<i>Neoporus superioris</i>	Tundra pond (1)
<i>Neoscutoperus hornii</i>	Ditch (3), spruce burn (2)
<i>Oreodytes davisii</i>	Churchill R. (13), lake (4), river/stream (2), tundra pond (1)
<i>Rhantus gutticollis</i>	Bluff pond (4), krummholz (1)
<i>Rhantus suturellus</i>	Bluff pond (3), open wetland (1), spruce burn pond (1)
<i>Rhantus wallisi</i>	Tundra pond (19), bluff pond (16), spruce forest pond (4), spruce burn pond (3), other (5)
<i>Stictotarsus griseostriatus</i>	Bluff pond (41), tundra pond (30), rocky seashore (8), tundra lakeshore (7), other (16)

Elateridae

<i>Ampedus pullus</i>	Spruce forest (1)
<i>Ampedus quebecensis</i>	Tundra (1)
<i>Ascoliocerus sanborni</i>	Town (7), rocky seashore (5), tundra (2), riparian (2), sandy seashore (1)
<i>Eanus decoratus</i>	Spruce burn (3), forested lakeshore (2), riparian (2), spruce forest (1)

Hypnoidus bicolor Forested lakeshore (4), tundra (2), other (4)
Hypnoidus impressicollis Rocky seashore (7), tundra (2), Churchill R. riparian (1)
Pseudanostirus ochreipennis Spruce burn (1)
Sericus incongruus Riparian (2), spruce burn (2), other (4)

Elmidae

Optioservus fastiditus Churchill R. (1)

Gyrinidae

Gyrinus aeratus Spruce forest pond (4), river/stream (2), spruce burn pond (1), lake (1)
Gyrinus cavatus Tundra pond (38), bluff pond (7), open wetland (5), lake (4), other (6)
Gyrinus dubius Churchill R. (2), spruce burn pond (2), bluff pond (1), tundra pond (1)
Gyrinus minutus Tundra pond (1)
Gyrinus opacus Bluff pond (6), tundra pond (5), lake (3), other (3)
Gyrinus pectoralis Open wetland (1)
Gyrinus wallisi Churchill R. (2), lake (1), tundra pond (1)

Haliplidae

Haliplus falli Bluff pond (17), Churchill R. (6), ditch (4), river/stream (2), tundra pond (1)
Haliplus immaculicollis Churchill R. (2), other (4)
Haliplus stagninus Bluff pond (5), tundra pond (1)

Heteroceridae

Explorator canadensis Town (3), Churchill R. riparian (2)

Hydrophilidae

Cercyon marinus Churchill R. riparian (3), tundra (1), town (1)
Enochrus hamiltoni Spruce burn pond (3), tundra pond (3), other (9)
Enochrus perplexus Rocky seashore (1)
Helophorus arcticus Sandy seashore (6), lake (6), bluff pond (2), Churchill R. riparian (1)
Helophorus oblongus Tundra pond (4)
Helophorus orientalis Bluff pond (1)

Hydrobius fuscipes Tundra pond (6), bluff pond (4), Churchill R. (2), other (4)
Laccobius cinereus Tundra pond (15), bluff pond (5), spruce burn pond (2), river/stream (2)
columbianus

Lampyridae

Ellychnia corrusca Open wetland (4), spruce burn (3), other (6)

Leiodidae

Catops luridipennis Spruce burn (2), tundra (2), other (2)
Leiodes longitarsus Forested lakeshore (8)

Scarabaeidae

Aegialia lacustris Churchill R. riparian (2), tundra (1)
Serica tristis Forested lakeshore (1)

Scirtidae

Cyphon kongsbergensis Tundra (3), open sand (1)
Cyphon laevipennis Churchill R. riparian (10), tundra pond (5), other (9)

Silphidae

Nicrophorus vespilloides Churchill R. riparian (1)
Thanatophilus lapponicus Tundra (4), krummholz (1)
Thanatophilus Churchill R. riparian (17), sandy seashore (6), rocky seashore (2), open sand (2), other (2)
trituberculatus

Staphylinidae

Acidota quadrata Tundra (1)
Aleochara sekanai Churchill R. riparian (1), tundra (1)
Bisnius hyperboreus Sandy seashore (16), rocky seashore (8), open sand (3)
alaskensis
Devia prospera Forested lakeshore (1)
Eucnecosum brachypterum Rocky seashore (2), sandy seashore (1)
Eucnecosum brunnescens Forested lakeshore (7), town (3), other (3)

<i>Gnypeta sellmani</i>	Tundra (2)
<i>Ischnosoma splendidum</i>	Forested lakeshore (1)
<i>Philonthus boreas</i>	Churchill R. riparian (1), town (1)
<i>Quedius brunnipennis</i>	Spruce forest (1), spruce burn (1)
<i>Quedius fellmanni</i>	Town (3), Churchill R. riparian (1), riparian (1), open wetland (1),
<i>Quedius fulvicollis</i>	Spruce forest (1)
<i>Stenus hyperboneus</i>	Spruce forest (2)
<i>Stenus niveus</i>	Tundra lakeshore (2), forested lakeshore (1), sandy lakeshore (1), town (1)
<i>Stenus tenuipes</i>	Riparian (1)
<i>Stenus umbratilis</i>	Open wetland (3), tundra lakeshore (2)

* this study only; number of barcoded specimens in parentheses. "Town" refers to the Town of Churchill. For those with multiple collected habitats, habitats of single specimens indicated as "other"