

# Spiders of the Southern Taiga Biome of Labrador, Canada

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Perry, R. C., J. R. Pickavance, and S. Pardy. 2014. Spiders of the southern Taiga biome of Labrador, Canada. *Canadian Field-Naturalist* 128(4): 363–376.

Ad hoc collections of spiders were made in August and early September 2003 and pitfall trap collections were conducted from June to October in 2004 and 2005 in southern Labrador. These collections represent the first systematic spider sampling for the most easterly area of mainland Canada. In total, 161 species in 15 families were identified to genus and species and 16 were indeterminate. Of the identified species, 89 were new records for Labrador and, of those, 16 species were new records for the province. In total, 94 species (58.4%) have Nearctic distributions and 67 species (41.6%) are Holarctic. No Palearctic species were found. Our study brings the number of spider species recorded in the province of Newfoundland and Labrador to 377 (213 in Labrador).

Key Words: Arachnids; Spiders; Eastern Canada; Labrador; species distribution

## Introduction

The distribution of the flora and fauna of Labrador is largely undocumented, and this is particularly true for spiders. Provincial spider lists have been limited to the Newfoundland portion of the province (Hackman 1954; Pickavance and Dondale 2005), where Paquin *et al.* (2010) reported 361 species; in Labrador, only 124 species have been identified.

The completion of the Trans-Labrador Highway in 2003 created an east–west corridor transecting southern Labrador and allowing access to vast tracts of previously inaccessible old-growth forest (Figure 1). Given the absence of biodiversity data for this territory, under the auspices of the Government of Newfoundland and Labrador, we took advantage of this opportunity to collect and identify spiders and insects in the area. Our work resulted in the first systematically collected data on the diversity of spiders in Labrador, important baseline data to which the results of future studies may be compared.

## Study Area

Labrador is the mainland portion of the Canadian province of Newfoundland and Labrador. It is situated in northeastern North America between 52° and 60°N and 56° and 64°W and encompasses approximately 293 000 km<sup>2</sup>, about 3% of Canada's total land mass (Anderson 1985). The current Labrador spider fauna likely colonized Labrador after the Wisconsin Glacial Episode (the last retreat of the Laurentide glacier) approximately 24 000 years ago (Dyke *et al.* 2002). The prevailing winds move from west to east and colonization probably occurred primarily through wind dispersal (i.e., ballooning) from elsewhere in North America as well as through introductions associated with the arrival of Europeans on the Labrador coast.

Labrador is contained within two distinct biomes: tundra and taiga. Northern Labrador is found in the tundra biome, while southern Labrador, the area where our

sampling occurred, is part of the taiga biome, which is typified by very cold winter temperatures, a lengthier growing season and more precipitation relative to the tundra biome. In general, the soils in the taiga biome are acidic and lack important nutrients such as nitrogen and phosphorus. It is dominated by coniferous trees, especially Balsam Fir (*Abies balsamea* [L.] Miller) and Black Spruce (*Picea mariana* [Miller] Britton, Sterns & Poggenburgh). Paper Birch (*Betula papyrifera* Miller), Trembling Aspen (*Populus tremuloides* Michaux), and American Mountain-Ash (*Sorbus americana* Marshall) are the most common deciduous trees. There are also large expanses of wetlands, especially bogs and fens, as well as numerous rivers, lakes, and ponds. Nested within the taiga biome are seven distinct ecological regions (Meades 1990). We ensured each was represented when spider trap-sampling stations were chosen (Table 1, Figure 1). Descriptions of each ecoregion, based on Meades (1990) follow, along with brief descriptions of sampling sites within each ecoregion.

### *Forteau Barrens*

This ecoregion is located at the southeastern tip of Labrador, near the Strait of Belle Isle (Figure 1). The region is characterized by low hills covered by Black Spruce, slope bogs, and barrens. The area is subject to strong winds, frequent storms, cool, rainy summers, and relatively mild winters. Annual precipitation is about 1000–1250 mm and annual snowfall averages 3.5–4.5 m. July temperatures average 12°C and the growing season ranges between 100 and 120 days. Wet soils and climate limit the growth of trees. Barrens are thickly covered with lichens.

For trap sampling in this ecoregion, we chose an alpine heath with dwarfed black spruce and some boggy areas. Traps were placed in areas with clumps of lichens (*Cladina* spp.), laurels (*Kalmia* spp.), and Labrador Tea (*Rhododendron groenlandicum*).

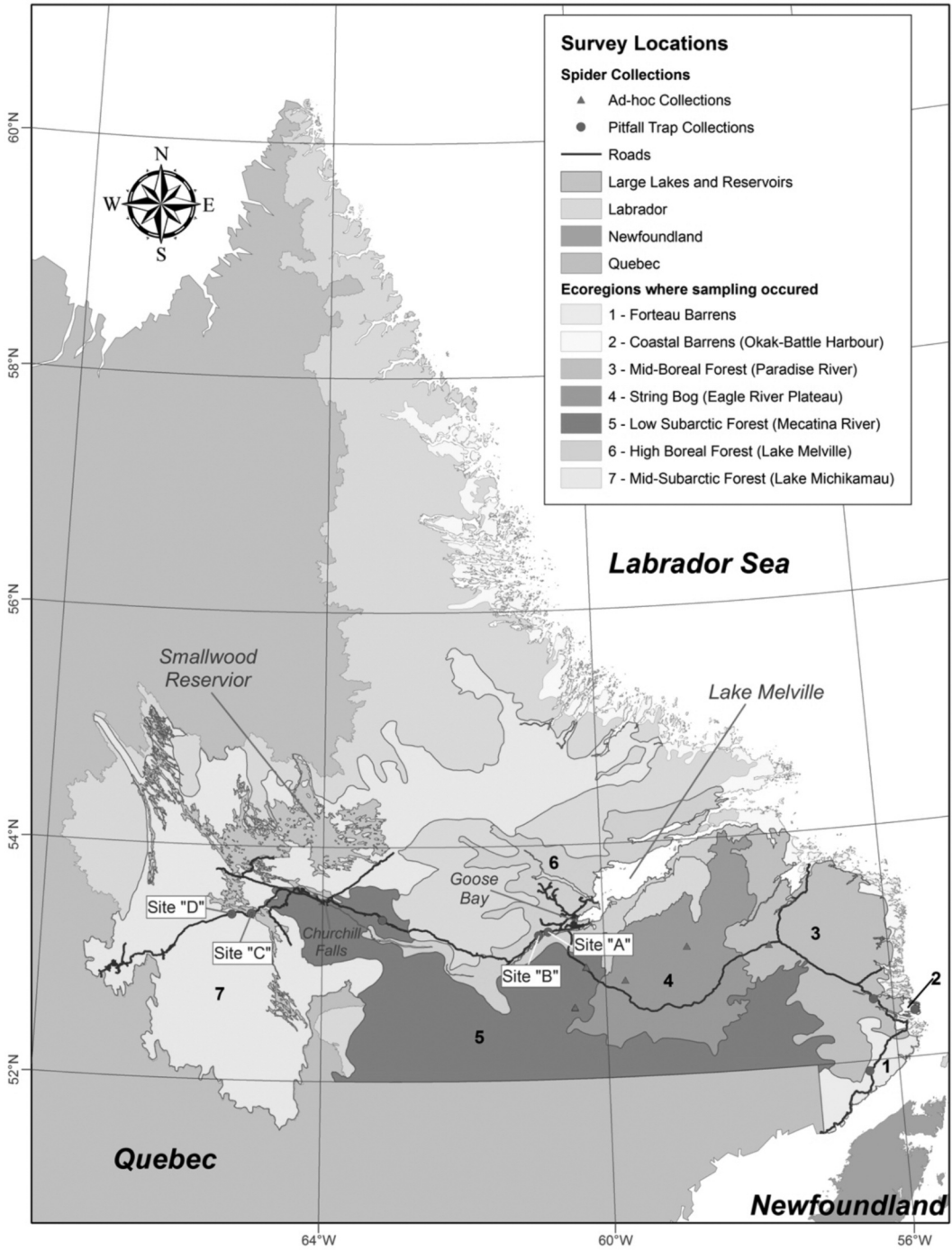


FIGURE 1: Ecoregions and sites where spiders were collected in southern Labrador in 2003 using ad hoc methods (triangles) and in 2004 and 2005 using pitfall traps (circles).

TABLE 1. Locations and ecoregions where spiders were collected using ad hoc methods (2003) and pitfall traps (2004 and 2005) in southern Labrador.

Location (site)	Ecoregion	Longitude, °N	Latitude, °W
Red Bay	Forteau Barrens (1)	56.4069	51.9106
St.Lewis	Coastal Barrens (2)	55.7057	52.3960
Port Hope Simpson	Mid-Boreal Forest (3)	56.2660	52.5185
Muskat Falls (A)	High Boreal Forest (6)	60.7844	53.2606
Birch Stand (B)	High Boreal Forest (6)	60.9197	53.2294
Middle Brook	Low Subarctic Forest (5)	63.1429	53.3785
Ossak Camp (C)	Mid-Subarctic Forest (7)	65.0129	53.4233
Labrador West (D)	Mid-Subarctic Forest (7)	65.2952	53.4125
Ad hoc site 1	Low Subarctic Forest (5)	60.4374	52.6097
Ad hoc site 2	Low Subarctic Forest (5)	60.2627	52.9495
Ad hoc site 3	String Bog (4)	59.7182	52.8255
Ad hoc site 4	String Bog (4)	58.8275	53.0876
Ad hoc site 5	Mid-Boreal Forest (3)	57.6660	53.056

### Coastal Barrens

This ecoregion is found on a narrow band of the coast extending from Napaktok Bay south to the Strait of Belle Isle and containing exposed headlands, some sheltered inlets, and several islands (Figure 1). It has a low subarctic climate with cool summers and a growing season of approximately 100–120 days. Annual precipitation is 1000–1300 mm. Winters are very cold, with an average snowfall of 3.0–4.0 m. The dominant vegetation is *Empetrum* spp., and forest stands occur only in valleys.

Our trap-sampling station was located at the southern end of the ecoregion in a dwarf shrub barren dominated by lichens, some laurels, and Labrador Tea as well as stunted Black Spruce. Traps were placed near boggy sites, in areas with lichen, and at the bottom of rock outcrops.

### Mid-Boreal Forest

This ecoregion is located in southeastern Labrador, near the Paradise River (Figure 1). It is characterized by bedrock outcrops and productive, closed-crown forests composed of Black Spruce and Balsam Fir. Hardwoods, such as Paper Birch and Pin Cherry (*Prunus pensylvanica* L. f.), can also be found, as well as raised bogs in valleys. A boreal climate prevails with cool to warm summers, short cold winters, a growing season of 120–140 days, and annual precipitation between 1000 and 1300 mm (mean snowfall 4.0–5.0 m).

In this ecoregion both trap sampling and ad hoc collection were carried out. Trap-sampling plots were located near the town of Port Hope Simpson in mixed stands of Balsam Fir and Black Spruce. Some hardwoods were also present. Traps were set in moss.

### String Bog

This ecoregion corresponds largely with the Eagle River Plateau, which is 500–600 m above sea level and consists of extensive string bogs containing numerous open pools surrounded by fen vegetation. Summers are cool and winters are very cold. Annual precipitation is 1000–1200 mm (mean snowfall approximately 5.0 m).

Vegetation in the area consists of scrub black spruce, Labrador Tea, and Splendid Feather Moss (*Hylocomium splendens* [Hedw.] Schimp. in B.S.G.). Sporadic eskers support open lichen woodlands dominated by Black Spruce. Speckled Alder (*Alnus incana* [L.] Moench) can be found along most watercourses and lakes. Only ad hoc sampling of spiders was done in this ecoregion.

### Low Subarctic Forest

This ecoregion, located primarily in southern Labrador, is characterized by broad river valleys and rolling hills covered by shallow till, drumlins, and eskers. Summers are short and cool and winters are long and very cold. The growing season is approximately 120–140 days and annual precipitation is 1000–1300 mm (annual snowfall 3.5–5.0 m). Open Black Spruce forests are the dominant vegetation. String bog complexes cover extensive areas throughout the region.

Ad hoc and trap sampling were done in this ecoregion. The trap-sampling site was an open Black Spruce forest with a thick mat of lichens covering the forest floor. Understory plants included Labrador Tea, laurels, and other small shrubs. Traps were set in the lichens and often did not penetrate into the soil because of the thickness of the lichens.

### High Boreal Forest

This ecoregion encompasses the Churchill River valley and the coastal plain surrounding Lake Melville (Figure 1). Alluvial soils can be found in river terraces, while the uplands have shallow, well-drained soils. Summers are cool and winters very cold. The growing season is 120–140 days, and annual precipitation is 800–1100 mm. Annual snowfall averages approximately 4.0 m. Forests in the area have closed canopies and are highly productive. Richer slopes contain Balsam Fir, Paper Birch, and Trembling Aspen. Black Spruce is present in most stands and dominates upland areas and lichen woodlands. Ribbed fens and plateau bogs occur in upland depressions and coastal plains, respectively.

In this ecoregion we chose two trap-sampling sites, characterized by different types of vegetation. The first was near the town of Goose Bay, on the branch road to Muskrat Falls (Site A, Figure 1). The area consists of large sand hills with intermittent Black Spruce and large areas of *Cladina* spp. Traps were placed in open sandy and lichen-dominated areas. The second site, also located close to Goose Bay, was on a southeast facing slope dominated by hardwoods, such as Paper Birch, Red Maple (*Acer rubrum* L.), Pin Cherry and Trembling Aspen (Site B, Figure 1). The understory contained clubmosses (*Lycopodium* spp.), broom mosses (*Dicranum* spp.), ferns, small Red Alders (*Alnus rubra* Bongard), American Mountain-Ash, and a thick layer of leaf litter.

#### *Mid-Subarctic Forest:*

This ecoregion encompasses the upland plateaus of central and western Labrador and is characterized by eskers and drumlin ridges. The climate is continental and subarctic with cool, short summers and long, cold winters. The growing season is 100–120 days, annual precipitation is 900–1110 mm, and annual snowfall averages 4.0 m. White Spruce (*Picea glauca* [Moench] Voss) dominates in the north, Black Spruce elsewhere in this ecoregion. Trembling Aspen, open lichen woodlands, and, in areas with flat topography, string bog complexes surrounded by Black Spruce– sphagnum forests are also characteristic of the area.

In this ecoregion two sites with different types of vegetation were chosen for trap sampling. The first, near the Ossakmanuan Reservoir (Site C, Figure 1), was dominated by closed-canopy Black Spruce/*Kalmia* and Black Spruce/*Cladina*, with some leaf litter and mosses also present. The second sampling site was in a recently severely burned forest near Labrador City (Site D, Figure 1). Most of the trees were fire killed, and a thin layer of charred humus remained on the ground. Some areas were beginning to be colonized by Blueberry (*Vaccinium* L. spp.), laurels, and mosses.

## Methods

### *Sampling*

Ad hoc collections (random, non-systematic collection of spiders by hand) were carried out between 7 August and 3 September 2003, before construction of the last phase of the Trans-Labrador Highway, as preliminary surveys at two sites in each of the String Bog and Low Subarctic Forest ecoregions and one site in the Mid-Boreal Forest ecoregion (Figure 1). They were conducted by two survey teams of four Newfoundland government conservation officers. Each person was directed to look for spiders by exploring shorelines, turning over rocks, and examining plants and debris during their spare time. When found, spiders were placed in sample jars and preserved with ethyl alcohol.

Trap sampling was conducted in the summers of 2004 and 2005 between early June and early Octo-

ber. In 2004, the Forteau Barrens, Coastal Barrens, Mid-Boreal Forest and Mid-Sub Arctic Forest ecoregions were sampled. In 2005, collections were made in the High Boreal Forest and Low Subarctic Forest ecoregions (Figure 1).

Pitfall traps were placed at eight sites in the six ecoregions (Table 1). Sampling sites were chosen based on whether they contained vegetation typical for an ecoregion. At each site, seven plots were established, each containing 10 pitfall traps (for a total of 70 traps per site and 560 for the entire study) placed in a circle with a diameter of about 10 m. Samples were retrieved from pitfall traps at each site from one to seven times (average four), depending on weather conditions and collector schedules, from June through early October. Collecting was done by regional biologists from the Wildlife Division, Department of Environment and Conservation, and conservation officers from the Department of Natural Resources, Government of Newfoundland and Labrador.

Each pitfall trap consisted of a 10-cm diameter flower pot (450 mL volume) set in the ground. An ice cream sundae cup (250 mL) was half filled with propylene glycol and placed in the flower pot. This system allowed for simple collection of contents and resetting of traps. Each trap was covered with a white plastic card held in place with four large nails (Spence and Niemelä 1994) to exclude rainwater. Samples from each plot were placed in a single jar, labeled by plot and site number.

### *Spider sorting and curation*

Specimens and other materials were removed from the collected samples using a sieve. Spiders were then separated and placed, with data labels, in clean vials containing 95% ethanol. The spiders were subsequently sent for identification to Memorial University of Newfoundland and Labrador.

### *Checklist*

Specimens that could not be identified are shown as indeterminate in the checklist and housed for future examination at either The Rooms Provincial Museum (marked NF in the checklist) or at the Canadian National Collection of Insects and Arachnids, Agriculture and Agri-Food Canada, Ottawa (marked CNC). If they have been catalogued, a number is also listed.

Species nomenclature follows Platnick (2014). The number of species identified in each family is given in parentheses after each family heading. Collection locality is expressed as numbers 1 through 7, corresponding to the ecoregions (Figure 1). Ecoregions 6 and 7 each contained two sampling sites and, therefore, location is further divided into A and B or C and D, respectively. Collection dates are presented as month and day. The total number of each species is presented, separated into male (♂) and female (♀) specimens. Comments are primarily limited to general species distribution (Holarctic or Nearctic). In some instances,

comments also include species abundance and state whether the record is new for Labrador or the entire province.

**Results**

In total, ad hoc and trap-sampling collections produced 14 964 spider specimens (including indeterminates) representing 161 species in 15 families (see checklist and Table 2). The five ad hoc collections produced 136 spiders representing 29 species in 11 families (73 of these were immature and identified only to family). Nineteen species were represented by only a single specimen. From the pitfall trap samples, 14 901 specimens were collected, representing 147 species in 15 families.

**Checklist of Labrador Spiders**

AGELENIDAE (1 spp.)

*Agelenopsis utahana* (Chamberlin & Ivie, 1933)

Ecoregions: 6A

Collection date: Sept. 13

Total samples: ♀ = 1, ♂ = 1

Comment: Nearctic; new record for Labrador

AMAUROBIIDAE (5 spp.)

*Arctobius agelenoides* (Emerton, 1919)

Ecoregions: 5, 7C

Collection dates: July 18; Oct. 8

Total samples: ♀ = 1, ♂ = 1

Comment: Nearctic; new record for both the province and Eastern Canada

*Callobius bennetti* (Blackwall, 1846)

Ecoregion: 6B

Collection dates: June 17; July 4, 5; Aug. 3, 12, 25; Sept. 13

Total samples: ♀ = 17, ♂ = 41

Comment: Nearctic

*Callobius nomeus* (Chamberlin, 1919)

Ecoregions: 5, 6A

Collection date: Aug. 25

Total samples: ♀ = 3, ♂ = 1

Comment: Nearctic

*Cybaeopsis euopla* (Bishop & Crosby, 1935)

Ecoregions: 1, 2, 3, 5, 6A and B, 7C

Collection dates: June; July; Aug.; Sept.; Oct.

Total samples: ♀ = 52, ♂ = 82

Comment: Nearctic; good representation across all sampling stations

*Cybaeopsis tibialis* (Emerton, 1888)

Ecoregion: 6A and B

Collection dates: June 17; July 4; Aug. 3, 12; Oct. 27.

Total samples: ♀ = 32, ♂ = 2

Comment: Nearctic; majority (31) found at site B

ARANEIDAE (8 spp. and 1 indeterminate)

*Araneus nordmanni* (Thorell, 1870)

Ecoregion: 4

Collection date: Aug. 3

Total samples: ♀ = 1, ♂ = 1

Comment: Holarctic

*Araneus saevus* (L. Koch, 1872)

Ecoregion: 6B

Collection date: Sept. 13

Total samples: ♀ = 1, ♂ = 0

Comment: Holarctic

*Araneus trifolium* (Hentz, 1847)

Ecoregion: 2

Collection date: Aug. 7

Total samples: ♀ = 1, ♂ = 0

Comment: Nearctic

*Araneus* sp. Clerck, 1757 (indeterminate; NF)

Ecoregion: 3

Collection date: Aug. 25

Total samples: ♀ = 0, ♂ = 1

TABLE 2: Orders and composition of the spider fauna sampled by ad hoc (2003) and pitfall trap (2004 and 2005) collection in southern Labrador.

Family	Nearctic	Holarctic	Introduced	Total species	% of total
Agelenidae	1	0	0	1	0.6
Amaurobiidae	5	0	0	5	3.1
Araneidae	2	6	0	8	5.0
Clubionidae	2	2	0	4	2.5
Dictynidae	2	2	0	4	2.5
Gnaphosidae	5	11	0	16	9.9
Hahniidae	3	1	0	4	2.5
Linyphiidae	50	30	0	80	49.7
Liocranidae	0	1	0	1	0.6
Lycosidae	9	6	0	15	9.3
Philodromidae	2	2	0	4	2.5
Salticidae	3	0	0	3	1.9
Tetragnathidae	1	1	0	2	1.2
Theridiidae	3	1	0	4	2.5
Thomisidae	5	5	0	10	6.2
Total	93	68	0	161	100

*Araniella displicata* (Hentz, 1847)

Ecoregion: 3  
 Collection date: Aug. 25  
 Total samples: ♀ = 1, ♂ = 0  
 Comment: Holarctic

*Araniella proxima* (Kulczynski, 1885)

Ecoregion: 6B  
 Collection date: Aug. 3  
 Total samples: ♀ = 0, ♂ = 1  
 Comment: Holarctic; new record for Labrador

*Cyclosa conica* (Pallas, 1772)

Ecoregion: 4  
 Collection date: Aug. 7  
 Total samples: ♀ = 1, ♂ = 0  
 Comment: Holarctic

*Hypsosinga rubens* (Hentz, 1847)

Ecoregion: 6A  
 Collection date: July 5  
 Total samples: ♀ = 0, ♂ = 1  
 Comment: Nearctic; new record for Labrador

*Larinioides patagiatus* (Clerck, 1757)

Ecoregion: 4  
 Collection dates: Aug. 7; Sept. 3  
 Total samples: ♀ = 2, ♂ = 1  
 Comment: Holarctic

## CLUBIONIDAE (4 spp.)

*Clubiona bryantae* Gertsch, 1941

Ecoregion: 1  
 Collection dates: Aug. 6, 23; Sept. 7; Oct. 26  
 Total samples: ♀ = 9, ♂ = 6  
 Comment: Nearctic; new record for Labrador

*Clubiona canadensis* Emerton, 1890

Ecoregions: 1, 2, 3, 6B, 7C and D  
 Collection dates: June 17; July 4, 11, 22; Aug. 5, 6, 10, 25  
 Total samples: ♀ = 7, ♂ = 16  
 Comment: Nearctic

*Clubiona kulczynskii* Lessert, 1905

Ecoregions: 1, 2, 5, 6B, 7D  
 Collection dates: July 4, 5, 11, 22; Aug. 3, 6, 25  
 Total samples: ♀ = 6, ♂ = 5  
 Comment: Holarctic

*Clubiona trivialis* C. L. Koch, 1843

Ecoregions: 1, 2, 6A, 7D  
 Collection dates: June 17; Aug. 1, 6, 25; Sept. 7; Oct. 26  
 Total samples: ♀ = 5, ♂ = 3  
 Comment: Holarctic

## DICTYNIDAE (4 spp.)

*Dictyna brevitarsa* Emerton, 1915

Ecoregion: 2  
 Collection date: Aug. 7  
 Total samples: ♀ = 0, ♂ = 1  
 Comment: Nearctic; new record for Labrador

*Emblyna annulipes* (Blackwall, 1846)

Ecoregion: 2  
 Collection date: Aug. 7  
 Total samples: ♀ = 1, ♂ = 0  
 Comment: Holarctic

*Emblyna manitoba* (Ivie, 1947)

Ecoregions: 4, 5  
 Collection date: Aug. 7  
 Total samples: ♀ = 1, ♂ = 1  
 Comment: Holarctic; new record for the province

*Hackmania prominula* (Tullgren, 1948)

Ecoregions: 6A, 7C  
 Collection dates: July 5, 19; Aug. 13, 29  
 Total samples: ♀ = 0, ♂ = 18  
 Comment: Nearctic; new to Eastern Canada and the province

## GNAPHOSIDAE (16 spp.)

*Drassodes mirus* Platnick and Shadab, 1976

Ecoregion: 2  
 Collection dates: July 22; Aug. 10; Oct. 27  
 Total samples: ♀ = 1, ♂ = 3  
 Comment: Nearctic; new record for the province

*Drassodes neglectus* (Keyserling, 1887)

Ecoregions: 2, 6A  
 Collection dates: June 17; July 5, 11, 22  
 Total samples: ♀ = 1, ♂ = 4  
 Comment: Holarctic; new record for Labrador

*Gnaphosa borea* Kulczynski, 1908

Ecoregions: 1, 2, 3, 4, 5, 6A, 7C and D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 109, ♂ = 365  
 Comment: Holarctic; the large majority were found in ecoregion 3 in July

*Gnaphosa brumalis* Thorell, 1875

Ecoregions: 2, 7C and D  
 Collection dates: July 11, 22; Aug. 1, 29  
 Total samples: ♀ = 7, ♂ = 31  
 Comment: Nearctic; the majority came from ecoregion 7, site D

*Gnaphosa microps* Holm, 1939

Ecoregions: 1, 2, 3, 5, 6A and B, 7C and D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 49, ♂ = 100  
 Comment: Holarctic; the majority were found in ecoregion 7, sites C and D

*Gnaphosa muscorum* (L. Koch, 1866)

Ecoregions: 1, 2, 3, 4, 5, 6A and B, 7D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 70, ♂ = 215  
 Comment: Holarctic; the majority were found in ecoregion 6, site A and ecoregion 7, site D

*Gnaphosa parvula* Banks, 1896

Ecoregion: 1  
 Collection dates: Aug. 6, 7, 23; Sept. 7  
 Total samples: ♀ = 1, ♂ = 5  
 Comment: Nearctic; new record for Labrador

*Haplodrassus eunis* Chamberlin, 1922

Ecoregions: 5, 6A  
 Collection dates: June 17; July 5, 19; Aug. 3, 25  
 Total samples: ♀ = 24, ♂ = 70  
 Comment: Nearctic; only one specimen from ecoregion 5; new record for the province

*Haplodrassus hiemalis* (Emerton, 1909)

Ecoregion: 2  
 Collection dates: July 22; Aug. 25; Sept. 7; Oct. 4, 27  
 Total samples: ♀ = 0, ♂ = 5  
 Comment: Holarctic; new record for Labrador

*Haplodrassus signifer* (C. L. Koch, 1839)

Ecoregions: 1, 2, 3, 5, 6A, 7C and D  
 Collection dates: June 17; July 4, 5, 11, 18, 20, 22; Aug 1, 2, 29; Oct. 8  
 Total samples: ♀ = 49, ♂ = 66  
 Comment: Holarctic; the majority came from ecoregion 7, site D; new record for Labrador

*Micaria aenea* Thorell, 1871

Ecoregions: 3, 5, 6A and B  
 Collection dates: June 17; July 4, 5, 19, 22; Sept. 13  
 Total samples: ♀ = 46, ♂ = 30  
 Comment: Holarctic. The majority (70) were found in ecoregion 6, site A; new record for Labrador

*Micaria constricta* Emerton, 1894

Ecoregion: 7D  
 Collection dates: July 11; Aug. 1  
 Total samples: ♀ = 0, ♂ = 3  
 Comment: Holarctic

*Micaria pulicaria* (Sundevall, 1831)

Ecoregions: 1, 2, 3, 5, 6A, 7D  
 Collection dates: June; July; Aug.; Sept.  
 Total samples: ♀ = 23, ♂ = 19  
 Comment: Holarctic; new record for Labrador

*Orodassus canadensis* Platnick & Shadab, 1975

Ecoregion: 5  
 Collection date: Aug. 7  
 Total samples: ♀ = 0, ♂ = 1  
 Comment: Nearctic

*Zelotes fratris* Chamberlin, 1920

Ecoregions: 2, 3, 5, 6A  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 25, ♂ = 50  
 Comment: Holarctic; the majority were found in ecoregions 5 and 6

*Zelotes sula* Lowrie and Gertsch, 1955

Ecoregions: 6A, 7C  
 Collection dates: July 19; Aug. 3, 25, 29  
 Total samples: ♀ = 0, ♂ = 4  
 Comment: Holarctic

## HAHNIIDAE (4 spp.)

*Cryphoea montana* Emerton, 1909

Ecoregions: 5, 6B  
 Collection dates: June 17; July 4, 5, 19, 22; Aug. 1  
 Total samples: ♀ = 5, ♂ = 55  
 Comment: Nearctic

*Hahnina cinerea* Emerton, 1890

Ecoregion: 6A  
 Collection date: June 17  
 Total samples: ♀ = 0, ♂ = 1  
 Comment: Nearctic; new record for Labrador

*Hahnina glacialis* Sørensen, 1898

Ecoregions: 1, 2, 3, 7C and D  
 Collection dates: July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 78, ♂ = 124  
 Comment: Holarctic; specimens were plentiful at all of the listed sites

*Neoantistea magna* (Keyserling, 1887)

Ecoregions: 2, 3, 5, 6B, 7C and D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 383, ♂ = 511  
 Comment: Nearctic; specimens were plentiful at all of the listed sites

## LINYPHIIDAE (80 spp. and 15 indeterminate)

*Agyneta allosubtilis* Loksa, 1965

Ecoregions: 1, 3, 6A  
 Collection dates: June 17; July 5, 11, 19, 22, Aug. 7, 23; Sept. 7  
 Total samples: ♀ = 8, ♂ = 30  
 Comment: Holarctic

*Agyneta dynica* Saaristo & Koponen, 1998

Ecoregion: 2  
 Collection date: July 22  
 Total samples: ♀ = 0, ♂ = 2  
 Comment: Nearctic; new record for Labrador

*Agyneta olivacea* (Emerton, 1882)

Ecoregions: 1, 2; 5, 6A and B, 7C and D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 129, ♂ = 139  
 Comment: Holarctic; the majority were found in ecoregions 5 and 6, site A; new record for Labrador

*Agyneta simplex* (Emerton, 1926)

Ecoregions: 1, 2, 3, 5, 6A, 7C and D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 52, ♂ = 172  
 Comment: Nearctic; only 13 specimens from the combined sites at ecoregions 1, 2, and 3; new record for Labrador

*Allomengea dentisetis* (Grube, 1861)

Ecoregion: 6B  
 Collection dates: Aug. 12, 25; Sept. 13  
 Total samples: ♀ = 1, ♂ = 2  
 Comment: Holarctic

*Bathyphantes eumenis* (L. Koch, 1879)

Ecoregions: 1, 2, 3, 6B, 7C and D  
 Collection dates: July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 12, ♂ = 10  
 Comment: Holarctic

*Bathyphantes pallidus* (Banks, 1892)

Ecoregions: 3, 6A and B, 7C  
 Collection dates: June; July; Aug.; Sept.  
 Total samples: ♀ = 91, ♂ = 44  
 Comment: Nearctic; the majority were found in ecoregion 6, site A; only two were found at site B

*Carorita limnaea* (Crosby & Bishop, 1927)

Ecoregion: 6A  
 Collection dates: June 17; July 5, 19; Aug. 3  
 Total samples: ♀ = 0, ♂ = 13  
 Comment: Holarctic; new record for Labrador

*Centromerus longibulbus* (Emerton, 1882)

Ecoregions: 1, 5, 7C  
 Collection dates: June 17; July 11, 20  
 Total samples: ♀ = 0, ♂ = 5  
 Comment: Nearctic; new record for Labrador

*Centromerus sylvaticus* (Blackwall, 1841)

Ecoregions: 3, 6B  
 Collection dates: Aug. 25; Sept. 13, 27; Oct. 27  
 Total samples: ♀ = 13, ♂ = 23  
 Comment: Holarctic

*Ceraticelus atriceps* (O. P.-Cambridge, 1874)

Ecoregions: 1, 2, 7C and D  
 Collection dates: Aug. 1, 23; Sept. 7  
 Total samples: ♀ = 4, ♂ = 1  
 Comment: Nearctic

*Ceraticelus crassiceps* Chamberlin & Ivie, 1939

Ecoregions: 1, 3  
 Collection dates: Aug. 10, 23; Sept. 7; Oct. 27  
 Total samples: ♀ = 5, ♂ = 2  
 Comment: Nearctic

*Ceraticelus fissiceps* (O. P.-Cambridge, 1874)

Ecoregions: 5, 6A and B  
 Collection dates: June; July; Aug.; Sept.  
 Total samples: ♀ = 17, ♂ = 3  
 Comment: Nearctic

*Ceratinella brunnea* Emerton, 1882

Ecoregions: 1, 2, 3, 5, 6A  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 28, ♂ = 4  
 Comment: Nearctic

*Ceratinella ornatula* (Crosby & Bishop, 1925)

Ecoregion: 7D  
 Collection date: July 11  
 Total samples: ♀ = 0, ♂ = 1  
 Comment: Nearctic

*Cnephalocotes obscurus* (Blackwall, 1834)

Ecoregions: 3, 6A, 7D  
 Collection dates: June; July; Aug.; Sept.  
 Total samples: ♀ = 27, ♂ = 27  
 Comment: Holarctic; new record for the province

*Diplocentria bidentata* (Emerton, 1882)

Ecoregions: 1, 3, 5, 6A and B, 7C and D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 63, ♂ = 295  
 Comment: Holarctic; good representation from all sites in listed ecoregions; new record for Labrador

*Diplocentria rectangulata* (Emerton, 1915)

Ecoregions: 2, 5, 6A and B, 7C and D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 45, ♂ = 205  
 Comment: Holarctic; large majority sampled from ecoregion 5; new record for Labrador

*Diplocentria retinax* (Crosby & Bishop, 1936)

Ecoregion: 6A  
 Collection dates: June 17; July 5  
 Total samples: ♀ = 1, ♂ = 3  
 Comment: Nearctic; new record for the province

*Diplocephalus subrostratus* (O. P.-Cambridge, 1873)

Ecoregion: 6B  
 Collection dates: June 17; July 5, 19; Aug. 3, 12, 25  
 Total samples: ♀ = 19, ♂ = 27  
 Comment: Holarctic; new record for Labrador

*Erigone blaesa* Crosby & Bishop, 1928

Ecoregions: 4, 5  
 Collection date: Aug. 7  
 Total samples: ♀ = 0, ♂ = 2  
 Comment: Nearctic

*Estrandia grandaeva* (Keyserling, 1886)

Ecoregions: 3, 6B  
 Collection dates: July 19; Aug. 5  
 Total samples: ♀ = 1, ♂ = 1  
 Comment: Holarctic

*Gonatium crassipalpus* Bryant, 1933

Ecoregions: 1, 2, 3, 5, 6A, 7C and D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 68, ♂ = 62  
 Comment: Nearctic; well represented in all sampled ecoregions

*Grammonota angusta* Dondale, 1959

Ecoregions: 2, 5, 6A  
 Collection dates: June 17; Aug. 7; Sept. 13; Oct. 27  
 Total samples: ♀ = 7, ♂ = 0  
 Comment: Nearctic

*Helophora insignis* (Blackwall, 1841)

Ecoregions: 2, 3, 6B, 7C  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 15, ♂ = 14  
 Comment: Holarctic

*Hilaira herniosa* (Thorell, 1875)

Ecoregions: 1, 2, 3, 5, 6A, 7C  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 103, ♂ = 75  
 Comment: Holarctic; well represented at all sites in listed ecoregions

*Hybauchenidium gibbosum* (Sørensen, 1898)

Ecoregions: 3; 5; 6, Sites A and B; 7, Site C  
 Collection dates: July 5, 18, 19, 22; Aug. 3; Sept. 13, 27; Oct. 27  
 Total samples: ♀ = 8, ♂ = 2  
 Comment: Holarctic

*Improphantes complicatus* (Emerton, 1882)

Ecoregions: 1, 2, 3, 5, 6A and B, 7C and D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 49, ♂ = 54  
 Comment: Holarctic

*Incestophantes washingtoni* (Zorsch, 1937)

Ecoregions: 1, 2, 3, 4, 6B, 7C and D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 30, ♂ = 3  
 Comment: Nearctic

*Islandiana flaveola* (Banks, 1892)

Ecoregion: 6A  
 Collection date: June 17  
 Total samples: ♀ = 0, ♂ = 1  
 Comment: Nearctic; new record for Labrador

*Islandiana* sp. Braendegaard, 1932 (indeterminate; NF)

Ecoregions: 1, 5, 7D  
 Collection dates: June 17; July 11, 20  
 Total samples: ♀ = 2, ♂ = 5

*Lepthyphantes alpinus* (Emerton, 1882)

Ecoregions: 1, 2, 3, 5, 6A and B, 7C  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 57, ♂ = 24  
 Comment: Holarctic; new record for Labrador

*Lepthyphantes turbatrix* (O. P.-Cambridge, 1877)

Ecoregion: 6A  
 Collection date: Aug. 12  
 Total samples: ♀ = 1, ♂ = 0  
 Comment: Nearctic; new record for Labrador



- Lepthyphantes* sp. Menge, 1866 (indeterminate; CNC #7)  
Ecoregions: 5, 6A and B  
Collection date: June 17  
Total samples: ♀ = 0, ♂ = 7
- Macrargus multesimus* (O. P.-Cambridge, 1875)  
Ecoregions: 3, 6A  
Collection dates: June 17; Aug. 25; Sept. 13; Oct. 27  
Total samples: ♀ = 8, ♂ = 0  
Comment: Holarctic; new record for the province
- Maro amplus* Dondale & Buckle, 2001  
Ecoregion: 6B  
Collection date: June 17  
Total samples: ♀ = 0, ♂ = 8  
Comment: Nearctic; new record for Labrador
- Maro nearcticus* Dondale & Buckle, 2001  
Ecoregion: 6B  
Collection date: June 17  
Total samples: ♀ = 0, ♂ = 2  
Comment: Nearctic; new record for Labrador
- Mermessus entomologicus* (Emerton, 1911)  
Ecoregion: 3  
Collection date: July 22  
Total samples: ♀ = 0, ♂ = 1  
Comment: Nearctic; new record for Labrador
- Mermessus trilobatus* (Emerton, 1882)  
Ecoregion: 6A  
Collection dates: July 5, 19  
Total samples: ♀ = 0, ♂ = 3  
Comment: Holarctic; new record for Labrador
- Mermessus undulatus* (Emerton, 1914)  
Ecoregion: 1  
Collection dates: July 20; Aug. 23  
Total samples: ♀ = 0, ♂ = 2  
Comment: Nearctic; new record for Labrador
- Metopobactrus prominulus* (O. P.-Cambridge, 1872)  
Ecoregion: 6A  
Collection date: July 5  
Total samples: ♀ = 0, ♂ = 1  
Comment: Holarctic; new record for the Province
- Microlinyphia mandibulata* (Emerton, 1882)  
Ecoregions: 3, 7C  
Collection date: Sept. 27  
Total samples: ♀ = 4, ♂ = 0  
Comment: Nearctic; new record for Labrador
- Microneta viaria* (Blackwall, 1841)  
Ecoregion: 6A  
Collection date: June 17  
Total samples: 2 (sex not reported)  
Comment: Holarctic; new record for the province
- Oreoneta brunnea* (Emerton, 1882)  
Ecoregions: 1, 2  
Collection dates: July 20; Aug. 25; Sept. 7; Oct. 26  
Total samples: ♀ = 26, ♂ = 24  
Comment: Nearctic; new record for Labrador
- Oreoneta* sp. Kulczynski, 1894 (indeterminate; NF 167)  
Ecoregion: 7D  
Collection date: July 11  
Total samples: ♀ = 0, ♂ = 1
- Oreonetides flavescens* (Crosby, 1937)  
Ecoregion: 6A  
Collection date: June 17  
Total samples: ♀ = 0, ♂ = 2  
Comment: Nearctic; new record for Labrador
- Oreonetides vaginatus* (Thorell, 1872)  
Ecoregions: 1, 2, 3, 5, 6B, 7C and D  
Collection dates: June; July; Aug.; Sept.; Oct  
Total samples: ♀ = 6, ♂ = 11  
Comment: Holarctic
- Oreophantes recurvatus* (Emerton, 1913)  
Ecoregion: 3  
Collection date: Oct. 27  
Total samples: ♀ = 0, ♂ = 2  
Comment: Nearctic
- Pelecopsis mengei* (Simon, 1884)  
Ecoregions: 3, 6B  
Collection dates: June; July; Aug.; Sept.; Oct.  
Total samples: ♀ = 19, ♂ = 9  
Comment: Holarctic; only one spider collected from ecoregion 3; new record for Labrador
- Pelecopsis moesta* (Banks, 1892)  
Ecoregion: 6A  
Collection date: July 5  
Total samples: ♀ = 0, ♂ = 1  
Comment: Nearctic; new record for the province
- Pityohyphantes subarcticus* Chamberlin & Ivie, 1943  
Ecoregions: 1, 2, 3, 4, 5, 6A, 7C  
Collection dates: June; July; Aug.; Sept.; Oct.  
Total samples: ♀ = 14, ♂ = 3  
Comment: Nearctic
- Pocadicnemis americana* Millidge, 1976  
Ecoregions: 1, 2, 3, 5, 6A, 7C and D  
Collection dates: June; July; Aug.; Sept.; Oct.  
Total samples: ♀ = 392, ♂ = 405  
Comment: Nearctic; 11 came from ecoregions 1, 2, and 3
- Pocadicnemis pumila* (Blackwall, 1841)  
Ecoregion: 6B  
Collection date: June 17  
Total samples: ♀ = 0, ♂ = 1  
Comment: Nearctic; new record for the province
- Poecilometes calcaratus* (Emerton, 1909)  
Ecoregions: 1, 3, 4  
Collection dates: Aug. 7, 23; Oct. 27  
Total samples: ♀ = 1, ♂ = 2  
Comment: Nearctic
- Satilatlas* sp. Keyserling, 1886 (indeterminate; NF)  
Ecoregions: 3, 7D  
Collection date: July 11  
Total samples: ♀ = 0, ♂ = 3
- Satilatlas* sp. Keyserling, 1886 (indeterminate; NF)  
Ecoregion: 3  
Collection dates: July 22; Sept. 7  
Total samples: ♀ = 2, ♂ = 0
- Sciastes truncatus* (Emerton, 1882)  
Ecoregions: 3, 5, 6A and B, 7C and D  
Collection dates: June; July; Aug.; Sept.; Oct.  
Total samples: ♀ = 39, ♂ = 26  
Comment: Nearctic; new record for Labrador

*Scironis tarsalis* (Emerton, 1911)

Ecoregion: 6B

Collection dates: June 17; July 5; Sept. 13

Total samples: ♀ = 3, ♂ = 8

Comment: Nearctic; new record for Labrador

*Scotinotylus alpinus* (Banks, 1896)

Ecoregion: 3

Collection dates: Sept. 7; Oct. 27

Total samples: ♀ = 0, ♂ = 2

Comment: Nearctic; new record for the province

*Scotinotylus sacer* (Crosby, 1929)

Ecoregions: 3, 5, 7C and D

Collection dates: June 17; July 11; Aug. 1, 24, 29; Sept. 7; Oct. 8

Total samples: ♀ = 6, ♂ = 11

Comment: Holarctic; new record for Labrador

*Semljicola obtusus* (Emerton, 1915)

Ecoregion: 1

Collection date: July 20

Total samples: ♀ = 1, ♂ = 0

Comment: Nearctic; new record for Labrador

*Sisicottus montanus* (Emerton, 1882)

Ecoregions: 1, 6B, 7D

Collection dates: June 17; July 11, 20; Aug. 6; Oct. 26, 27

Total samples: ♀ = 5, ♂ = 6

Comment: Nearctic; new record for Labrador

*Sisicus penifusifer* Bishop & Crosby, 1938

Ecoregion: 6A

Collection date: July 5

Total samples: ♀ = 2, ♂ = 0

Comment: Nearctic; new record for Labrador

*Sisis rotundus* (Emerton, 1925)

Ecoregions: 5, 6A, 7C

Collection dates: June 17; July 11, 18; Aug. 1, 29

Total samples: ♀ = 12, ♂ = 7

Comment: Nearctic

*Stemonyphantes blauveltae* Gertsch, 1951

Ecoregion: 2

Collection dates: Aug. 2, 10, 25; Oct. 27

Total samples: ♀ = 3, ♂ = 6

Comment: Nearctic; new record for Labrador

*Styloctetor stativus* (Simon, 1881)

Ecoregions: 5, 6A and B, 7C and D

Collection dates: June 17; July 4, 5, 11; Aug. 1, 2, 3, 29

Total samples: ♀ = 9, ♂ = 47

Comment: Holarctic; new record for Labrador

*Tapinocyba bicarinata* (Emerton, 1913)

Ecoregions: 1, 7C

Collection dates: July 11, 20; Aug. 1, 29

Total samples: ♀ = 1, ♂ = 7

Comment: Nearctic; new record for Labrador

*Tapinocyba prima* Dupérré & Paquin, 2005

Ecoregions: 5, 6A, 7C and D

Collection dates: June; July; Aug.

Total samples: ♀ = 3, ♂ = 61

Comment: Nearctic; new record for Labrador

*Tapinocyba simplex* (Emerton, 1882)

Ecoregions: 1, 5, 6A and B

Collection dates: June; July; Aug.

Total samples: ♀ = 17, ♂ = 5

Comment: Nearctic; new record for Labrador

*Tapinocyba* sp. Simon, 1884 (indeterminate; CNC)

Ecoregion: 6A

Collection date: Aug. 3

Total samples: ♀ = 1, ♂ = 0

*Tunagyna debilis* (Banks, 1892)

Ecoregions: 1, 2, 5, 6A and B, 7C and D

Collection dates: June; July; Aug.; Sept.; Oct.

Total samples: ♀ = 14, ♂ = 31

Comment: Holarctic; new record for Labrador

*Wabasso cacuminatus* Millidge, 1984

Ecoregions: 1, 2, 7C and D

Collection dates: July 11, 20, 22; Aug. 1, 6, 29; Oct. 8, 27

Total samples: ♀ = 22, ♂ = 18

Comment: Holarctic; new record for Labrador

*Walckenaeria arctica* Millidge, 1983

Ecoregions: 1, 2, 3, 5, 7C and D

Collection dates: June; July; Aug.; Sept.; Oct.

Total samples: ♀ = 39, ♂ = 22

Comment: Nearctic; new record for Labrador

*Walckenaeria atrotibialis* (O. P.-Cambridge, 1878)

Ecoregions: 5, 6A and B, 7C

Collection dates: June; July; Aug.; Sept.

Total samples: ♀ = 51, ♂ = 46

Comment: Holarctic; new record for Labrador

*Walckenaeria castanea* (Emerton, 1882)

Ecoregions: 1, 2, 3, 5, 6A, 7C and D

Collection dates: June; July; Aug.; Oct.

Total samples: ♀ = 21, ♂ = 27

Comment: Nearctic

*Walckenaeria clavipalpis* Millidge, 1983

Ecoregion: 1

Collection date: Aug. 6

Total samples: ♀ = 1, ♂ = 0

Comment: Nearctic; new record for Labrador

*Walckenaeria communis* (Emerton, 1882)

Ecoregions: 1, 2, 3, 5, 6A and B, 7C and D

Collection dates: June; July; Aug.; Sept.; Oct.

Total samples: ♀ = 160, ♂ = 33

Comment: Nearctic; new record for Labrador

*Walckenaeria cuspidata brevicula* (Crosby & Bishop, 1931)

Ecoregion: 1

Collection date: Sept. 7

Total samples: ♀ = 1, ♂ = 0

Comment: Nearctic; new record for Labrador

*Walckenaeria directa* (O. P.-Cambridge, 1874)

Ecoregions: 1, 3, 5, 6A and B, 7D

Collection dates: June; July; Aug.; Sept.; Oct.

Total samples: ♀ = 43, ♂ = 9

Comment: Nearctic

*Walckenaeria exigua* Millidge, 1983

Ecoregions: 2, 3, 5, 6A and B, 7C and D

Collection dates: June; July; Aug.; Sept.; Oct.

Total samples: ♀ = 15, ♂ = 200

Comment: Nearctic; new record for Labrador

*Walckenaeria karpinskii* (O. P.-Cambridge, 1873)

Ecoregions: 5, 6A, 7C and D

Collection dates: June 17; July 4, 11, 18; Aug. 2; Sept. 12

Total samples: ♀ = 6, ♂ = 5

Comment: Holarctic; new record for Labrador

*Walckenaeria lepida* (Kulczynski, 1885)

Ecoregion: 4  
 Collection date: Aug. 7  
 Total samples: ♀ = 0, ♂ = 1  
 Comment: Holarctic; new record for Labrador

*Walckenaeria spiralis* (Emerton, 1882)

Ecoregions: 1, 2, 5, 6A, 7C and D  
 Collection dates: June; July; Aug.; Oct.  
 Total samples: ♀ = 1, ♂ = 50  
 Comment: Holarctic; new record for Labrador

*Walckenaeria tricornis* (Emerton, 1882)

Ecoregions: 1, 3, 5, 6A and B, 7C and D  
 Collection dates: June; July; Aug.; Sept.  
 Total samples: ♀ = 50, ♂ = 179  
 Comment: Nearctic; one found in September, but the vast majority were collected in June, July, and at the beginning of August

*Wubana pacifica* (Banks, 1896)

Ecoregion: 3  
 Collection date: Sept. 13  
 Total samples: ♀ = 0, ♂ = 1  
 Comment: Nearctic; new record for Labrador

*Zornella armata* (Banks, 1906)

Ecoregions: 1, 3, 6A, 7C  
 Collection dates: June 17; Sept. 27; Oct. 26, 27  
 Total samples: ♀ = 22, ♂ = 7  
 Comment: Nearctic; new record for Labrador  
 Indeterminate; NF 158

Ecoregion: 1  
 Collection date: July 20  
 Total samples: ♀ = 0, ♂ = 1  
 Indeterminate; NF 159

Ecoregion: 1  
 Collection date: July 20  
 Total samples: ♀ = 1, ♂ = 0  
 Indeterminate; NF 160

Ecoregion: 3  
 Collection date: Oct. 27  
 Total samples: ♀ = 1, ♂ = 0  
 Indeterminate; NF 161

Ecoregion: 3  
 Collection date: Oct. 27  
 Total samples: ♀ = 1, ♂ = 0  
 Indeterminate; NF 162

Ecoregion: 6A  
 Collection date: July 19  
 Total samples: ♀ = 1, ♂ = 0  
 Indeterminate; NF 163

Ecoregion: 1  
 Collection date: July 20  
 Total samples: ♀ = 1, ♂ = 0  
 Indeterminate; NF 164

Ecoregion: 3  
 Collection date: July 22  
 Total samples: ♀ = 1, ♂ = 0  
 Indeterminate; NF 165

Ecoregion: 7D  
 Collection date: July 11  
 Total samples: ♀ = 1, ♂ = 0  
 Indeterminate; NF 166

Ecoregion: 6A  
 Collection date: June 17  
 Total samples: ♀ = 1, ♂ = 0

## LIOCRRANIDAE (1 spp.)

*Agroeca ornata* Banks, 1892  
 Ecoregions: 1, 2, 3, 5, 6A and B, 7C and D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 71, ♂ = 56  
 Comment: Holarctic; new record for Labrador

## LYCOSIDAE (15 spp.)

*Alopecosa aculeata* (Clerck, 1757)  
 Ecoregions: 1, 2, 3, 5, 6A and B, 7C and D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 95, ♂ = 272  
 Comment: Holarctic

*Arctosa alpigena* (Doleschall, 1852)

Ecoregions: 1, 2, 5, 7C and D  
 Collection dates: July 11, 20; Aug. 1, 29, 23; Sept. 7; Oct. 8, 27  
 Total samples: ♀ = 82, ♂ = 48  
 Comment: Holarctic

*Arctosa raptor* (Kulczynski, 1885)

Ecoregion: 1  
 Collection dates: July 20; Aug. 6  
 Total samples: ♀ = 4, ♂ = 18  
 Comment: Holarctic; new record for Labrador

*Arctosa rubicunda* (Keyserling, 1877)

Ecoregion: 3  
 Collection dates: Aug. 25; Sept. 13  
 Total samples: ♀ = 2, ♂ = 0  
 Comment: Nearctic; new record for Labrador

*Hogna frondicola* (Emerton, 1885)

Ecoregions: 3, 6A  
 Collection dates: June 17; July 5, 19, 22; Aug. 25; Sept. 13  
 Total samples: ♀ = 8, ♂ = 3  
 Comment: Nearctic; new record for Labrador

*Pardosa concinna* (Thorell, 1877)

Ecoregions: 1, 2, 3, 5, 7C and D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 124, ♂ = 256  
 Comment: Nearctic

*Pardosa furcifera* (Thorell, 1875)

Ecoregions: 1, 2  
 Collection dates: July 20, 22; Aug. 6, 23; Sept. 7, 17; Oct. 26, 27  
 Total samples: ♀ = 297, ♂ = 326  
 Comment: Nearctic

*Pardosa fuscula* (Thorell, 1875)

Ecoregions: 1, 3, 7C  
 Collection dates: July 20, 22; Aug. 6, 23, 25; Sept. 27; Oct. 26  
 Total samples: ♀ = 12, ♂ = 7  
 Comment: Nearctic

*Pardosa hyperborea* (Thorell, 1872)

Ecoregions: 1, 2, 3, 5, 6A, 7C and D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 1143, ♂ = 2401  
 Comment: Holarctic

*Pardosa mackenziana* (Keyserling, 1877)

Ecoregions: 1, 3, 5, 6A and B  
 Collection dates: June 17; July 5, 20, 22; Aug. 3, 5  
 Total samples: ♀ = 26, ♂ = 72  
 Comment: Nearctic; new record for Labrador

*Pardosa uintana* Gertsch, 1933

Ecoregions: 1, 2, 3, 4, 5, 6A and B, 7C and D  
 Collection dates: June; July; Aug.; Sept.; Oct.  
 Total samples: ♀ = 439, ♂ = 572  
 Comment: Nearctic

*Pardosa xerampelina* (Keyserling, 1877)

Ecoregions: 5, 6B, 7D  
 Collection dates: June 17; July 11; Aug. 1; Oct. 8  
 Total samples: ♀ = 7, ♂ = 26  
 Comment: Nearctic

*Pirata bryantae* Kurata, 1944

Ecoregions: 1, 3, 5, 6A and B, 7C and D  
 Collection dates: June; July; Aug.; Oct.  
 Total samples: ♀ = 181, ♂ = 560  
 Comment: Nearctic

*Pirata piraticus* (Clerck, 1757)

Ecoregion: 3  
 Collection date: Sept. 13  
 Total samples: ♀ = 1, ♂ = 0  
 Comment: Holarctic; new record for Labrador

*Trochosa terricola* Thorell, 1856

Ecoregions: 3, 5, 6A and B, 7C and D  
 Collection dates: June; July; Aug.; Sept.  
 Total samples: ♀ = 73, ♂ = 106  
 Comment: Holarctic

## PHILODROMIDAE (4 spp.)

*Philodromus alascensis* Keyserling, 1884

Ecoregion: 7D  
 Collection date: July 11  
 Total samples: ♀ = 1, ♂ = 0  
 Comment: Holarctic

*Philodromus placidus* Banks, 1892

Ecoregion: 6A  
 Collection date: July 5  
 Total samples: ♀ = 0, ♂ = 1  
 Comment: Nearctic

*Philodromus rufus quartus* Dondale & Redner, 1968

Ecoregions: 5, 6B  
 Collection dates: June 17; July 4  
 Total samples: ♀ = 2, ♂ = 0  
 Comment: Nearctic

*Thanatus formicinus* (Clerck, 1757)

Ecoregions: 1, 2, 3, 7D  
 Collection dates: July 11, 22; Aug. 1, 10, 25, 29; Sept. 7, 13; Oct. 27  
 Total samples: ♀ = 17, ♂ = 30  
 Comment: Holarctic; new record for Labrador

## SALTICIDAE (3 spp.)

*Evarcha hoyi* (Peckham & Peckham, 1883)

Ecoregions: 5, 6B  
 Collection dates: July 18, 19  
 Total samples: ♀ = 1, ♂ = 1  
 Comment: Nearctic; new record for Labrador

*Neon nelli* Peckham & Peckham, 1888

Ecoregion: 6A and B  
 Collection dates: June 17; July 4, 5, 19; Aug. 3, 12, 25  
 Total samples: ♀ = 25, ♂ = 29  
 Comment: Nearctic

*Talavera minuta* (Banks, 1895)

Ecoregion: 6A  
 Collection date: July 5  
 Total samples: ♀ = 0, ♂ = 1  
 Comment: Nearctic; new record for the province

## TETRAGNAHIDAE (2 spp.)

*Tetragnatha elongata* Walckenaer, 1841

Ecoregion: 5  
 Collection date: Aug. 7  
 Total samples: ♀ = 1, ♂ = 0  
 Comment: Nearctic and Neotropical; new record for Labrador

*Tetragnatha extensa* (Linnaeus, 1758)

Ecoregion: 5  
 Collection date: Aug. 7  
 Total samples: ♀ = 0, ♂ = 1  
 Comment: Holarctic

## THERIDIIDAE (4 spp.)

*Enoplognatha intrepida* (Sørensen, 1898)

Ecoregion: 2  
 Collection dates: Aug. 10, 25; Sept. 7; Oct. 27  
 Total samples: ♀ = 1, ♂ = 16  
 Comment: Nearctic; new record for Labrador

*Robertus fuscus* (Emerton, 1894)

Ecoregions: 2, 3, 5, 6B, 7C and D  
 Collection dates: June 17; July 5; Aug. 25; Sept. 7, 17; Oct. 27  
 Total samples: ♀ = 7, ♂ = 15  
 Comment: Nearctic

*Rugathodes sexpunctatus* (Emerton, 1882)

Ecoregion: 7D  
 Collection date: Aug. 1  
 Total samples: ♀ = 0, ♂ = 1  
 Comment: Holarctic; new record for Labrador

*Theonoe stridula* Crosby, 1906

Ecoregions: 5, 6A, 7C and D  
 Collection dates: June 17; July 4, 5, 11, 19; Aug. 3, 29; Oct. 8  
 Total samples: ♀ = 7, ♂ = 42  
 Comment: Nearctic; new record for Labrador

## THOMISIDAE (10 spp.)

*Misumena vatia* (Clerck, 1757)

Ecoregion: 1  
 Collection date: July 20  
 Total samples: ♀ = 0, ♂ = 1  
 Comment: Holarctic

*Ozyptila sincera canadensis* Dondale & Redner, 1975

Ecoregions: 2, 3  
 Collection dates: Aug. 5, 25; Sept. 13, 27  
 Total samples: ♀ = 9, ♂ = 1  
 Comment: Nearctic; new record for Labrador

*Xysticus canadensis* Gertsch, 1934

Ecoregions: 3, 6A and B, 7C  
 Collection dates: June 17; July 5, 11; Aug. 29; Oct. 27  
 Total samples: ♀ = 2, ♂ = 12  
 Comment: Holarctic

*Xysticus durus* (Sørensen, 1898)

Ecoregion: 7

Collection date: Aug. 1

Total samples: ♀ = 1, ♂ = 0

Comment: Nearctic; new record for the province

*Xysticus ellipticus* Turnbull, Dondale & Redner, 1965

Ecoregions: 2, 3

Collection dates: July 22; Oct. 27

Total samples: ♀ = 0, ♂ = 15

Comment: Nearctic; new record for the Province

*Xysticus emertoni* Keyserling, 1880

Ecoregions: 1, 2, 3, 5, 6A and B, 7D

Collection dates: June 17; July 4, 5, 11, 22; Aug. 1, 5, 10; Oct. 27

Total samples: ♀ = 6, ♂ = 50

Comment: Holarctic; new record for Labrador

*Xysticus keyserlingi* Bryant, 1930

Ecoregions: 1, 2, 3, 5, 7D

Collection dates: July; Aug.; Sept.; Oct.

Total samples: ♀ = 30, ♂ = 90

Comment: Nearctic; new record for Labrador

*Xysticus luctuosus* (Blackwall, 1836)

Ecoregions: 1, 2, 3, 7D

Collection dates: July; Aug.; Sept.; Oct.

Total samples: ♀ = 5, ♂ = 40

Comment: Holarctic; new record for Labrador

*Xysticus obscurus* Collett, 1877

Ecoregion: 3

Collection date: Aug. 7

Total samples: 3 (sex unknown)

Comment: Holarctic

*Xysticus triguttatus* Keyserling, 1880

Ecoregions: 1, 2, 3

Collection dates: July 22; Aug. 5; Oct. 26, 27

Total samples: ♀ = 2, ♂ = 14

Comment: Nearctic; new record for Labrador

**Discussion***Origins of the Labrador spider fauna*

Most (58.4%) of the species identified in this study have Nearctic distributions; however, a significant Holarctic component was also present (41.6%) (Table 2). Noticeably absent from the collections were introduced species or ones previously known only from Palearctic or other regions.

The frequency of Holarctic species increases as one moves further north in the Nearctic region (Pickavance and Dondale 2005) and our data appear to support this. Of spider species reported for the island of Newfoundland (primarily south of our study area), 33% have Holarctic distributions (Pickavance and Dondale 2005). In a more northerly locality, subarctic and arctic Quebec, the percentage of spider species with Holarctic distribution is nearly 50% (Koponen 1994). Still further north, on Belcher Island, the proportion rises to 58% (Koponen 1992).

*Introduced species*

The absence of introduced species in this study may be attributed to a combination of factors. First, most of

the sample sites were in relatively pristine old-growth forests in remote locations. Collection sites near communities were still well outside town boundaries. Also, the population of Labrador is approximately 29 000, and species introductions may be less likely to occur there than in more heavily populated areas elsewhere. The severe cold of Labrador winters may also limit the colonization and spread of more southerly exotics. With the creation of the new Trans-Labrador Highway, species introductions may increase and it will be interesting to continue to monitor spider diversity in the study area to examine influences of the new highway on species introductions.

*Noteworthy occurrences*

In total, 161 species were identified in this collection, 89 of which are new records for Labrador. Of the 89 new species, 16 species are new records for the province. The former species complement reported for Labrador was 124 (Paquin *et al.* 2010); our addition of 89 species raises the new species total to 213. For the province, the total number of spider species has been raised to 395: 361 (Newfoundland total) + 18 (reported only in Labrador) + 16 (new records).

Of the 16 species records new to the province, almost all can be found as far east as Quebec or New Brunswick and, therefore, it is not surprising that they can be found in Newfoundland and Labrador. However, a few stand out as noteworthy. The collection of *Arctobius agelenoides* (Amaurobiidae) is of interest because, in the Nearctic region, this has been considered a western species (Marusik and Koponen 2005) recorded in Canada from Yukon, Northwest Territories, Nunavut, British Columbia, Alberta, Saskatchewan, and Manitoba (Paquin *et al.* 2010). *Arctobius agelenoides* may have a continuous distribution across Canada or perhaps the Labrador population is disjunct.

*Hackmania prominula* (Dictynidae) is relatively rarely encountered. It is a northern Holarctic species previously reported in western North America from Alaska, Yukon, British Columbia, Alberta, Saskatchewan, and Manitoba (Paquin *et al.* 2010). Our Labrador records are the first for eastern North America.

*Haplodrassus eunis* (Gnaphosidae) is primarily a western species with records from Alaska to California and eastward to the Great Lakes (Platnick and Dondale 1992). Our report indicates that its distribution extends throughout the North of the Nearctic region. Our record of *Gnaphosa parvula* also extends this species range across the north of the Nearctic region.

*Agyreta dynica* (Linyphiidae) is a rarely collected Nearctic endemic reported in Canada only from Yukon, subarctic Quebec, and on parts of the subarctic barrens of the Northern Peninsula of Newfoundland (Pickavance and Dondale 2005; Paquin *et al.* 2010; Dupérré 2013). Our Labrador record helps define the true distribution of this species.

With the addition of 89 species, the total known species complement for Labrador stands at 213. It is

likely that this total is not yet complete; much of Labrador remains to be surveyed. In addition, this survey was largely confined to the ground and, therefore, spiders that make their homes in trees and shrubs are most likely underrepresented. Further, this collection was confined to lower elevations in the southerly latitudes of Labrador. To reveal the full species complement of the northern fauna, further sampling is still required north of 54° latitude and at higher elevations.

### Acknowledgements

We are indebted to Dr. Jaime Pinzon, Dr. Robert Bennett and an anonymous reviewer whose editorial comments and shared knowledge were invaluable in the completion of this work. We thank conservation officer Chuck Porter, senior biologist Rebecca Jeffery, and field technician Ted Pardy for routinely collecting our pitfall trap samples. We also thank Dara Walsh for sorting and collating the collection and Carl Marks for his global information system contributions. Finally, we would like to thank the many natural resource officers who participated in the initial ad hoc survey; their efforts ultimately inspired the completion of the larger survey.

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Received 30 January 2014

Accepted 28 March 2014